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WHOLE No. 1257.

Special Articles.

DR. ADOLF LORENZ AT THE HOSPITAL
FOR RUPTURED AND CRIPPLED,
MONDAY AFTERNOON,
DECEMBER 15.

By V. P. GIBNEY, M. D.,
SURGEON IN CHIEF.

This noted surgeon visited the hospital Monday morning, December 15th, and proceeded without delay to examine a number of cases of congenital dislocation of the hip, selecting three for demonstration. It was interesting to note his method of examination, namely, the grasping of the neck and head of the bone between the thumb and fingers, and how quickly he diagnosticated the shape, contour and size of the head and neck. He was not able to determine by palpation the condition of the acetabulum. He seemed to care nothing for the x ray, remarking that this gave him very little information. He selected children under seven years of age, although he was free to state that some of the most difficult reductions were in children under five. His great confidence in the procedure which has made his name famous was quite remarkable. He seldom failed to give encouragement in the most obstinate cases, declaring that even if the head could not be placed where he desired it most, it could in nearly every instance be brought forward and placed under the anterior superior spinous process. In this position he maintained that there was loss of lordosis, a stable position for the bone, and decided improvement in gait.

I was not prepared in the afternoon at 3 o'clock to see him break down the adductors so quickly and bring the limb into complete abduction. He accomplished this by a pulling with one hand and deep pressure along the muscle with the thumb and fingers followed by blows with the ulnar border of his hand. These blows seemed to be very efficacious. His next move was to make extreme flexion of the thigh, the leg being extended, so as to stretch the capsules and muscles surrounding. The adduction, rotation, and pulling next came in order, and by this time the head of the bone was on a level with the rudimentary acetabulum. The wedge-shaped piece of wood, covered at the top with kid, seemed to be the most important element in the reduction,

for by placing this wedge-shaped piece of wood behind the trochanter major he got a fulcrum which enabled him to bring the head from its old position forward until it rested under the femoral vessels and could be distinctly felt. At this point we had been accustomed to stop, but Lorenz seemed to increase his force here and to force the abducted thigh back of the plane of the pelvis until he stretched the capsule so that the slipping back and forth was easily accomplished.

What impressed the audience most seemed to be the amount of stretching and tolerance of the tissues. His demonstration of the stability of the bone after reduction was admirable. He could bring the thigh into a moderate degree of adduction before the bone would slip back into its former position. The tension of the hamstrings after reduction was most marked, and he did not desist until those had been also stretched.

The next step in the procedure was to adjust the stockinet drawers and place the thigh in complete outward rotation and abduction. This was followed by the application of plaster of Paris, work usually done by his able assistant, Dr. Frederick Müller. In this work the artist was displayed, and the dexterity with which he applied the plaster bandage excited the admiration of the audience. The plaster extended from the internal condyles to the free ribs, cut out in a crescentic way above the genitals and below the stomach, leaving a comparatively narrow bridge of plaster, but very thick, across the lower part of the abdomen. On turning the patient over, it was found that a towel could easily be drawn between the stockinet bandage and the skin, and the ability to keep the skin clean was easily demonstrated. What Dr. Lorenz bears most stress on in the after-treatment is the function of bearing weight. The child is taught to walk, and in this way the head, more or less imperfectly formed and misshapen, induces a certain amount of irritation and encapsulation. The question was asked him why the head itself did not become atrophied as well as the acetabulum, and he replied that there was really no acetabulum, but merely a mass of dense tissue in a position where the head could not slip up and down.

Suffice it to say that the demonstration was so clear that on the following morning three members of the staff, Dr. Whitman, Dr. Warren, the house surgeon, and the writer of this report were enabled

to replace eight dislocated hips within an hour and a half, and two of these were in children over nine years of age. The subsequent treatment is more or less unfamiliar to the majority of your readers, but I am enabled to state from a personal experience that this is comparatively simple. At the hospital we have long since learned that these different positions must be maintained for months, and Dr. Lorenz in all his demonstrations makes this a strong point.

THE "LORENZ HIP REDRESSEUR" AND "LORENZ SPICA."

By CHARLES H. JAEGER, M. D.,
NEW YORK.

Our experience of the present day has forcibly taught us that the success of treatment in orthopædic cases, depends largely on the amount of attention paid to the detail of apparatus and bandaging. A poorly constructed or ill fitting apparatus

show how convenient and simple an apparatus we possess in it, to assist us at all applications of fixation bandages to the hip joint itself or the entire lower extremity. Its usefulness is a complex one: first, with it we correct faulty positions and contractions of joints; and then it holds the limb in this corrected position, firmly and evenly, while the fixation bandage is being applied.

The redresseur may be fastened firmly with thumb screws to any sufficiently projecting table top, thus securing absolute immobility.

Its three main parts are (a) The hip rest, (b) foot and knee rests for the sound leg, which can be fastened to either side of, (c) the extension foot rest for the diseased leg.

The second illustration shows how the patient rests upon the apparatus; in this case the head and shoulders are supported by pillows—usually an assistant will hold that part of the body.

The lower part of the patient's body is fixed quite firmly, the pelvis resting upon the hip piece, the



FIG. 1.

and a poorly applied bandage may not only be a source of great discomfort to the patient, but may, besides, fail to accomplish the purpose for which it was intended. In the specialty of orthopædic surgery the plaster of Paris bandage plays a most important rôle; it is, therefore, not strange that many devices have been invented for the purpose of making its application to any part of the body or extremity more exact and less troublesome.

In presenting the "Lorenz hip redresseur" to the profession, I am prompted, after having in Vienna witnessed its range of usefulness, by the wish to

show how convenient and simple an apparatus we possess in it, to assist us at all applications of fixation bandages to the hip joint itself or the entire lower extremity. Its usefulness is a complex one: first, with it we correct faulty positions and contractions of joints; and then it holds the limb in this corrected position, firmly and evenly, while the fixation bandage is being applied.

The advantages are: 1. It dispenses with unnecessary assistants; for with the aid of one person alone

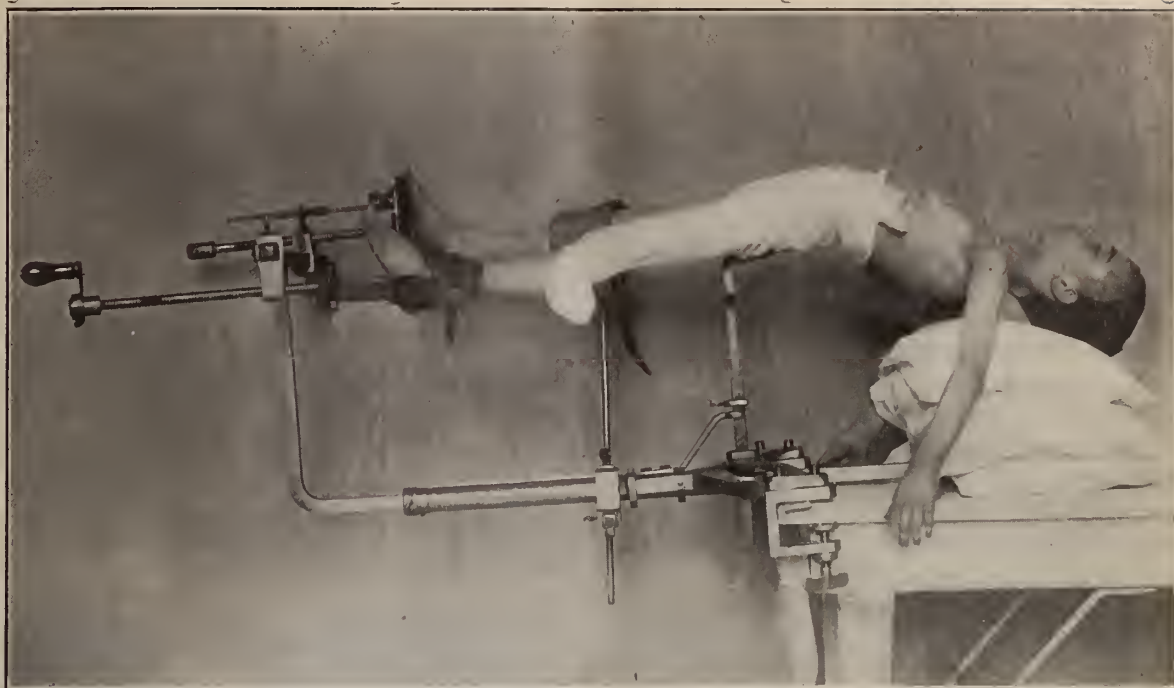


FIG. 2.

to steady the shoulders, the physician can apply the spica.

2. The limb, once placed in its proper position in the redresseur, will remain so fixed until the dressing is completed.

3. The traction is stronger than can be applied

by hand, and is kept up evenly during and until the end of the dressing.

4. The lower extremity can be put up in the plaster bandage in the position of (relative) abduction, without obliging the patient later to walk with the limb held strongly out from the body. This is accomplished in that the traction on the diseased leg and the simultaneous pushing up of the healthy leg cause tilting of the pelvis.

5. The redresseur is also useful for correcting flexion deformity of the knee joint and for applying plaster of Paris bandages to the same.

In connection with the redresseur one must mention the "Lorenz spica"; in Fig. 2 we see one in process of application. The mode of procedure is as follows: The thigh, hip, and pelvis are covered with tight-fitting drawers made of seamless stockinet; under this a strip of muslin bandage is placed, long enough to tie the ends together over the finished spica so as to prevent its loss. This is called the "scratch band"; and by grasping each free end and drawing the band up and down in all directions, the entire part of the body incased in the spica receives its daily cleansing. The padding is now applied; it consists of thin layers of non-absorbent cotton having a sizing of glue on both sides, and obtained in dry goods stores under the name of interlining; it comes in sheets, which are cut into desired widths and rolled up on a bandage roller. The plaster of Paris bandages are now applied equally to between one quarter and three eighths of an inch as the general thickness of the spica; but, by means of reverses they are increased



FIG. 3.

to between one half and three quarters of an inch in thickness in front of the pelvis.

The spica extends from above the crest of the ilium to the knee. It is trimmed out in front and behind the knee, to permit free motion, but has projections left on either side to grasp the condyles closely at the upper edge of the spica low enough to permit freedom of the abdomen, and around the genitals. The salient feature is the painstaking modeling out of crests and spines of the ilia into the spica—as shown in Fig. 3; this insures absolute fixation of femur and pelvis.

The advantages of the Spica: 1. Many patients with hip disease cannot afford to buy a hip splint.

2. After a hip disease is healed and the indications for a hip splint cease to exist, it is often advisable to continue a light fixation bandage, so as to prevent excessive flexion deformity.

3. Adult patients need not always wear a long hip splint; a short, firm spica often suffices to cure the disease.

4. The short spica, in allowing free motion of knee and ankle, does not interfere greatly with locomotion, nor does it inconvenience the patient greatly in sitting.

24 WEST FIFTY-NINTH STREET.

Original Communications.

A CASE OF OVARIAN FIBROMA.*

By H. A. ROYSTER, A. B., M. D.,
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At the last meeting of the American Gynecological Society, Dr. Reuben Peterson, of Ann Arbor, Michigan, read a paper entitled *A Consideration of Ovarian Fibromata, Based on a Study of Two Recent Cases and Eighty-two Collected from the Literature*.¹ A few days after reading this valuable contribution, I came unexpectedly upon a case of this kind and deem it worthy of a simple recital, together with the pathological report and a few clinical facts in regard to this uncommon condition.

CASE.—Mrs. G. (referred by Dr. J. A. Williams, of Reidsville, N. C.), aged fifty-five years, weight 180 pounds, was admitted to Rex Hospital, September 20, 1902. She had borne seven children, all her labors being difficult. Her menses began at fourteen years of age, and gave no trouble at first. After marriage she began to suffer from profuse menorrhagia and metrorrhagia. At the age of twenty-five years, a small growth, probably a polyp,

was removed from the cervix. The menopause came at the age of fifty years, but about two years ago the flow recurred, lasting ten days or more. It was not now so excessive and appeared only at irregular intervals, a space of twelve months having passed since she had had her last severe hæmorrhage. She complained of pain in the left side and around the umbilicus, and of a burning sensation in the chest. Urination was difficult and frequent. Her general condition was good.

Examination revealed a very hard, smooth tumor in the posterior cul-de-sac. It was of about the size of a large orange and was somewhat movable. The uterus, apparently of normal size, was pushed upward by the mass and seemed to be connected with it posteriorly. Diagnosis: Fibroma of the uterus.

Operation: September 23, 1902. The abdomen was opened by a four-inch median incision. A small quantity of ascitic fluid was present. There were no adhesions and the tumor was easily brought up and delivered. It was a dense, somewhat flattened mass, attached by a pedicle to the right broad ligament. This pedicle was tied with a double ligature of silk and the tumor removed. The peritoneal cavity was sponged out dry and the wound closed with the tier suture. The uterus was normal and the left ovary was atrophic. The patient bore the operation exceedingly well, only 25 minutes having been consumed in the entire procedure. The result was an uncomplicated convalescence and restoration to perfect health.

Pathological report by Mr. William DeBerniere MacNider.

Gross Appearance: Upon a single macroscopic examination of this tumor it is noticed at once that there are two seemingly different portions. First, an upper portion, the transverse diameter of which measures 5 cm., and secondly, a lower and much larger portion, the diameter of which are as follows: transverse diameter 8 cm.; vertical, 10 cm. The entire tumor weighs 451 grammes, its greatest circumference being 26 cm. The superior and smaller portion of the tumor consists of five nodular areas which are separated by comparatively deep sulci, and in these sulci are seen dense bands of fibrous tissue which radiate from a common origin on the posterior surface. In the centre of this nodular area there is a depression, and here the several fibrous bands seem to converge and by their contraction form a puckered appearance. Upon sectioning these nodules one is struck with their density, and the creaking sound of the knife is very noticeable, as well as characteristic of this condition.

The lower and larger mass may be divided for convenience of description into an anterior, posterior, superior, and inferior surface. The general contour of this mass is comparatively regular, when compared with the upper, or nodular, portion, but upon palpation numerous hard areas are found, which do not project from the surface of the tumor. The vascular supply of the tumor is rather poor but, especially upon the anterior surface, there can be seen several blood vessels having a very tortuous course.

On the posterior surface there is noticed a dense mass of white fibrous tissue, which is continuous above with the smaller nodular area, and below with

* Read before the Southern Surgical and Gynecological Association at its fifteenth annual meeting, held in Cincinnati, November 11, 12 and 13, 1902.

¹ *American Gynecology*, July, 1902.

the inferior surface where it spreads into a dense layer. Extending laterally from this superficial fibrous layer on the posterior surface are two distinct bands, which pass forward and unite on the anterior surface of the tumor in a sulcus which separates the upper from the lower portion. This sulcus, which is situated on the anterointernal aspect of the tumor, has a depth of one cm. and in the sulcus is situated the pedicle of the tumor measuring one cm. Above and parallel to the pedicle is the right Fallopian tube with its fimbriated extremity, the tube being attached to the pedicle by a portion of the broad ligament. There is no sign whatever of an ovary, and upon section no ovarian tissue is encountered, but in its place is a dense, fibrous mass. Upon making a vertical median incision through the lower and larger portion of the tumor the same tough, dense tissue is encountered for a distance of three cm. After this region is passed, the tissue seems to become much richer in cells, and is not so dense until the upper nodular area is reached,



where the density becomes more marked than ever. On the interior of the tumor, fibrous bands are seen running in different directions, for the most part longitudinally, while some are seen to have a semilunar or whorl-like arrangement.

Microscopical Examination. For the microscopical examination a portion of tissue was taken from one of the nodules and a second portion from the body of the tumor. The tissue from the nodule is characteristic of fibroma durum. It consists of dense bands of fibrous tissue with few cells and blood vessels. The fibrous element is chiefly arranged in whorls, while many of the fibres can be seen running in various directions. The tissue taken from the body of the tumor presents near the surface the same characteristic appearance, but, upon examining that portion of the section nearest the middle of the tumor, it is found that the fibrous element decreases, fatty changes appear, the cells and blood vessels becoming more numerous, until the cellular element predominates.

According to the statistics gathered by Peterson, there are no uniform symptoms of ovarian fibroma. The tumor may be of slow growth and may give no special signs of its existence, or it may increase rapidly in size so that it would be noticeable in a few months. Abdominal pain and difficult micturition are regarded as usual symptoms, while menorrhagia and metorrhagia are not very constant.

In the discussion which followed the paper above referred to, it developed that Mann had seen six cases of fibroma of the ovary, Howard three, Henrotin three, Whitridge Williams three, and Gordon two. Howard also stated that Sir Spencer Wells, out of 1,200 ovariectomies, saw only three cases, and that three fell to the lot of Goodell. Kelly² says that ovarian fibromata are among the rarest of pelvic tumors. In 1,200 abdominal sections he has seen four cases. Some authorities put their frequency down as low as 2 and 3 percent. The case herewith reported is the only solid tumor of the ovary I have encountered in over 250 abdominal operations. Peterson thinks they are not so rare as was formerly supposed.

The frequency and significance of ascites with fibroids of the ovary do not seem to be definitely settled, nor is its cause apparently determined. Peterson believes that ascites occurs in 40 per cent. of cases and that the greatest amount is not produced by the large tumors. It was present in all of Kelly's cases save one, and that tumor was of only the size of a walnut. Laphorn Smith considers the association of ascites with an abdominal tumor as "strong presumptive evidence in favor of its being malignant." Osler is inclined to this view with special reference to solid ovarian growths. Since ascitic fluid occurs with the smaller as well as, if not more frequently than, with the larger tumors, it is probable that pressure has little to do with its accumulation, and it has been suggested, with some reason, that it may be due to local irritation of the peritonæum (Henrotin). In most cases the tumor has a long pedicle, which allows it free play. Discussions of the subject of ovarian fibromata will usually bring out the fact that their diagnosis is a matter of difficulty and that most operators stumble upon them unawares.

THE PRESENT STATUS OF TREATMENT OF HYPERTROPHY OF THE PROSTATE.*

By N. P. DANDRIDGE, M. D.,
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It is not my purpose to attempt any discussion of the relative merits of the various operations upon the prostate which are now seeking popularity; nor shall I present a description of the well known pathology of this condition, though I have, by the courtesy of Dr. Whitacre, placed before you his valuable collection on which the changes in the gland and bladder are very fully illustrated. This collection will well repay careful study, and presents very clearly the anatomical and mechanical problem which is presented for solution to the surgeon. It further illus-

² *Operative Gynecology.*

* Read before the Southern Surgical and Gynecological Association at its fifteenth annual meeting, held in Cincinnati, November 11, 12, and 13, 1902.

trates a fact contrary to the general teaching, that in a considerable proportion of cases that part of the prostate which lies anterior to the urethra shows very marked overgrowth, an overgrowth in which the characteristic glandular structure is present. This fact is of importance in connection with the Bottini operation.

I may, perhaps, introduce what I have to say upon the present status of treatment of hypertrophy of the prostate by the recital of a case recently operated upon in the Cincinnati Hospital.

P. F., aged seventy, entered the hospital October 10th, suffering with retention of urine. Every attempt to enter the bladder with a catheter failed, soft and metallic instruments both being tried. He was relieved by aspiration, and 12 ounces of purulent urine drawn off. The next day attempts at catheterization again failed, but some urine was passed voluntarily. He was kept in bed, the bowels were moved by an enema, urotropin was given by the mouth, and the man succeeded in voiding his urine in the natural way.

The man was of a low grade of intelligence and no very connected history could be obtained. It was evident, however, from his statement that he had suffered for some years with his bladder, and that he had had retention a number of times. About three years ago he was operated on in the Good Samaritan Hospital of this city, a perineal section with drainage having then evidently been made, the cicatrix of which was still visible. This gave him relief for a time. Rectal examination showed an enormous hypertrophy, the right side being the more affected. The man's general condition was fair. For some days he was able to void at short intervals small quantities of purulent ammoniacal urine, but it was found impossible to introduce an instrument into the bladder, though this was attempted for the purpose of ascertaining the amount of residual urine. After some days retention again occurred and had to be relieved by aspiration, 16 ounces only being drawn off. An elbow catheter was finally introduced into the bladder, but it was apparent that no benefit was likely to result from the use of the catheter or irrigation. Retention again occurred and he was again aspirated. It was determined, therefore, to perform a prostatectomy, as no operation less radical seemed likely to afford relief, and the man's condition seemed to justify the risk.

The steps of the operation described by Dr. J. B. Murphy, March 22, 1902, in the *Journal of the American Medical Association* were followed. The man being in the lithotomy position, a Y shaped incision was made reaching from the scrotum well down to either side of the anus. The tissues in front of the rectum were then separated by blunt dissection and by the use of blunt pointed scissors until the prostate was brought into sight. This part of the operation was attended by a significant amount of hæmorrhage. Lateral retractors were now used and the prostate fully separated from the rectum. An incision was made parallel to the urethra on the left side and the lobe was removed by the use of volsella, forceps, sharp-pointed retractors, and blunt dissection. In removal the lobe was torn into sev-

eral pieces. The right lobe was removed in the same way without being torn, and when freed above and externally was cut away with scissors from the commissure. From the mass of tissue thus removed it was assumed that the whole gland had been brought away, but an examination showed that a still larger mass remained behind. This was grasped on the right side with forceps and was easily shelled out, firm pressure by the hand of an assistant from above being of material assistance.

The removal of this last mass was found to have opened the urethra on its floor. The operation was completed by introducing a Watson tube into the bladder and the wound was packed with gauze and one side was closed. The man was put to bed and drainage was secured by a rubber tube attached to the perineal tube. He rallied well and his improvement has ever since been progressive. The perineal drainage was continued for six days, and then a catheter was carried through the urethra into the bladder. This, however, he refused to tolerate, and, being hard to manage, it was given up. In a few days the urine began to come through the urethra and the amount has constantly increased—a small perineal fistula only now remaining. At this date the urine is still materially purulent. It comes almost entirely through the urethra and is passed more fully and with less pain than for two years.

An examination of the masses removed shows an enormous and somewhat irregular hypertrophy affecting all parts of the gland, and no operation short of this complete removal would have removed the obstruction. The middle lobe showed the greatest overgrowth, and readily explained the difficulty of introducing the catheter. The previous perineal section rendered the separation of tissues in front of the scrotum more difficult.

The impression left by the performance of this operation was that it was a severe one, attended by no insignificant amount of hæmorrhage and a very considerable laceration of tissue about the bladder and rectum, and that it required a rather prolonged anæsthesia. Recovery was, however, prompt.

The outcome of this case certainly indicates that we have in prostatectomy a marked advance in the treatment of this most distressing affection, and no other method with which I am familiar could have been followed by so prompt and so successful a result, though it is, of course, too soon to determine how far reaching and permanent this will be. He now passes water twice at night and four or five times during a day.

It is a matter of suggestive interest, and perhaps of some real advantage, to contrast the evolution of operative work on the prostate and on the ovary. When it was found that the ovary and tube could be successfully removed for other lesions without cystic degeneration, the sound ovary was sacrificed as a matter of course lest at some time it might also become the seat of disease. Then as a next step the healthy or even apparently healthy ovary was left

untouched, and the resultant happy motherhood was pointed to by the complacent operator as the result of his forbearance. Then only the diseased portions of the affected organ were removed and every vestige of healthy structure left in the hope of preserving that mysterious something known as internal secretion. So from the extensive removal of ovary and tube, and even uterus, for local disease of either one, there is now the most painstaking care exercised to save as much as possible. The first surgical attack on the prostate was undoubtedly the accidental removal of the middle lobe by the forceps in the extraction of stone in lateral lithotomy, an operation whose untimely extinction is still a matter of regret to some of us. Mercier early in the last century devised his method of biting or gouging out a section of the prostate at the neck of the bladder by his rather awkward forceps, an operation which may be said to survive in the more perfect procedure of Bottini, in which the glowing knife will light the way to its ultimate success or failure.

The next step was temporary perineal drainage, with a rubber tube, either with or without some incision into the prostate, in order to lower the urethral opening to the level of the pus found. The suprapubic then came into vogue, for either a permanent or temporary outlet, and Poncet in an outburst of enthusiasm declared that after this operation success was so great that the bladder of age became once more the bladder of youth. The high opening was very soon supplemented by a perineal drainage. The current of surgical thought and action was diverted for a time by the general record of success which followed the introduction of castration by White and the revival of Bottini's operation by Freudenberg. The mutilating instinct of the surgeon was not, however, fully aroused until Belfield and McGill showed the feasibility of removing part or the whole of the prostate by the suprapubic route. The main line of attack was, however, soon transferred to the perinæum, and the various methods suggested have finally culminated in the carefully studied and well planned operation of Murphy, which seems to accomplish the complete removal of the obstruction with less dangerous disturbance to the parts involved than any of the other procedures yet suggested. Thus from very partial removal or mere incision we have come to advocate the complete removal of the entire organ. We have thus just reversed the course pursued by our friends in abdominal work. Whether we shall have to recede from the position now reached, time alone will tell.

The case I have recorded would certainly seem to show that complete perineal prostatectomy will enable us to deal with a class of most distressing cases in a more satisfactory way than ever before—cases which have remained rebellious to other methods.

It is not, however, to urge the advantage of this

operation that I have chosen the subject of my paper, but rather to utter a warning—protest probably is the better word—against the marked tendency of the present time to subject the victims of prostatic obstruction to mutilating operations. In nearly every discussion which takes place on this subject the necessity for early operation is pointed out, so as to avoid the danger of operating in the presence of damaged, dilated kidneys, for here, as in all operations upon the urinary organs in man, the kidneys dominate the situation. Herein lies the danger, and the very success of the method is likely to sweep us onward with the current into useless and perhaps harmful operations, and lead us to forget the real merits of older and more conservative methods, for I am strongly convinced that the method of choice in the largest proportion of cases of hypertrophy is still the proper and judicious use of the catheter. I recognize its danger, and I always feel the responsibility of urging a patient to commence a catheter life. On the other hand, I have too often seen men continue for many years in active, useful life to doubt the efficacy of the properly used catheter in staying the secondary changes of bladder and kidney. I may mention as a fair type of such cases one now under my care. A college professor, sixty-eight years of age, capable of discharging all of his duties as teacher, and fully capable of active exercise, has recently been under my care for a cystitis with hypertrophy of the prostate. The urine was ammoniacal and contained some pus. This condition had come on within a few weeks and had gradually been growing worse. More than six years ago this man came to me with symptoms that pointed to hypertrophy of some years' standing. There were constantly some ounces of residual urine, with the usual nocturnal frequency of micturition. He had been strongly urged to have castration performed. I advised against mutilation and ordered the catheter used just before going to bed. This for a time sufficed, but within a year he was obliged to rely upon the instrument entirely. For fully five years he has used the instrument four times a day. Two weeks' careful treatment has fully relieved his recent cystitis and he is now apparently where he was before. I present this case as a fair sample of a large, perhaps the largest, proportion of cases of hypertrophy of the prostate, and I contend that most of them will do well with careful attention to proper hygiene and the proper use of the catheter, with or without local treatment for the bladder.

I confess the case I have cited possesses the moral and physical conditions favorable for success. The patient is a self-contained man, capable of understanding and accepting the limitation which his condition places upon him. His sedentary life is likewise in his favor. Certainly now for over six years he appears little, if any, older, and continues fully

capable of performing all his routine duties.

A second case exemplifies the same phase of the subject. A man, eighty years old, the father of a physician, is now in active life, entirely dependent upon his catheter after symptoms of hypertrophy lasting for more than fifteen years.

Another aspect of this subject may be presented in the history of the case the specimen of bladder and kidney form which are now before you.

H. R., age eighty, entered my service in the Cincinnati Hospital on September 26th. He was then suffering from dribbling of urine, which he could not control, and for several years he had had trouble with his bladder, a condition of incontinence with attacks of retention from time to time. He was emaciated and weak in both mind and body, so it was impossible to obtain any connected history from him. His urine dribbled continually. It was purulent, alkaline, of rather low specific gravity, contained some albumin, but no sugar. The ordinary soft catheter failed to pass, but the bladder was readily entered by an elbow catheter and some ten ounces of residual urine found. Rectal examination determined the presence of some slight hypertrophy. The bladder was washed out daily with boric acid, and nitrate of silver was then injected. The general decline was gradual but marked, and he died on October 12th. The specimen obtained at the autopsy, now before you, presents the typical condition of those found in long standing obstructions, a thickened and sacculated bladder and dilatation of the ureter and kidneys. Bladder and kidneys both contained a quantity of pus. The body of the prostate was hardly, if at all, enlarged, and the middle lobe, which presented a slight teatlike prominence, seemed too small to really offer a serious obstruction.

It is a matter of interest to speculate how the sequence of events took place in this case. Had it commenced as a case of simple obstruction from the hardly enlarged prostate, or had infection of the bladder first, and later the kidneys, played the more important rôle, and would active surgical interference some years back have accomplished any better result and prolonged life beyond eighty years? In such a case would not simple perineal drainage or Bottini's operation have been equally efficient with a prostatectomy, an operation which would have been difficult of performance from the small size and indurated condition of the gland? At no time while he was in the hospital did his condition justify operation of any sort.

But no matter how large the number of cases may be in which early and judicious treatment will indefinitely postpone the evil consequences of hypertrophy of the prostate, there still remains a great and distressing class of cases in which surgery must find relief for the obstructed flow of urine and cure of the cystitis. A certain proportion of these will yield favorable results, oftentimes, indeed, complete relief, by simple perineal incision with drainage for

some weeks, as was well shown by Harrison. It is in the large remainder that perineal prostatectomy promises a field of usefulness. It must not be postponed too late, or a large percentage of mortality will surely ensue. It must be looked upon as a grave surgical procedure involving a considerable loss of blood, a notable laceration of tissue, and requiring a somewhat prolonged anæsthesia, all conditions badly borne by this class of persons. That it is possible effective experience already shows; whether, however, permanent immunity will be secured from a progressive cystitis and further involvement of the kidneys remains to be seen, and whether many of those operated on between sixty and seventy will reach the age of eighty is something yet to be determined. The operation of complete perineal prostatectomy is still too young for us to judge of the future of these patients.

Success, indeed marked success, has followed all forms of drainage, only to be followed by an intractable distressing cystitis when the natural channel was resumed. It may prove to be so in cases of prostatectomy, and we may return, as is said to be the case in the Guyon school in France, to the catheter and asepsis.

It has not been my purpose in this brief paper to decry the merits of any of the newer operations upon the prostate, whether they be Bottini's operation or prostatectomy—the latter especially, I am convinced, has a field of usefulness when used with discrimination—but simply to urge most strongly the necessity of our not being carried away by an operative furor which may lead us to the same excess which a few years ago characterized the surgery of the ovary, an excess which is now followed by a marked recoil; and to further urge the fact that the older methods still possess a large field of usefulness, so large, indeed, as possibly to include the majority of all cases of hypertrophy that are seeking relief.

One part of Murphy's experience is, I think, worthy of special notice, and that is the ready manner in which stone in the bladder can be dealt with after a perineal prostatectomy. The necessary opening of the urethra affords a happy opportunity for the extraction of stone.

Hypertrophy does not contraindicate lithotripsy, but certainly renders it less satisfactory and more liable to recurrence of stone and persistence of the cystitis. I can see a large field of usefulness for prostatectomy in these cases, affording as it does an opportunity to remove the obstruction and stone at the same time. Its selection, however, will have to be determined by the vitality of the patient. I have put up a petition that we may be kept from wandering too far from the older faith. From the errors and dangers of successful surgery, Good Lord deliver us.

THE DIAGNOSTIC VALUE OF ABDOMINAL RIGIDITY.*

By JOSEPH A. BLAKE, M. D.,
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For obvious reasons the diagnosis of abdominal conditions, especially the acute ones, is of the greatest interest and importance to both physician and surgeon.

Although, in reaching a diagnosis, we are accustomed to rely upon a grouping of symptoms, yet it is often the accentuation or predominance of one that leads us to a definite conclusion. In an experience of several years in the diagnosis and treatment of acute diseases and injuries of the abdomen occurring in a large hospital service, I have been struck with the value of abdominal rigidity as indicating serious intraabdominal conditions.

The value of a sign or symptom especially in abdominal cases largely depends upon the period of its incidence. For instance, the diagnosis of a well-defined peritonitis is so evident that no single one of the different signs and symptoms is of especial value. On the other hand, any sign or symptom that marks the beginning or diffusion of a peritonitis, or the presence of foreign matter in the peritonæum that may later give rise to a peritonitis, is of the greatest value. Pain is one of the most valuable of these symptoms, as has been recently emphasized by Maurice Richardson¹ in a most interesting and valuable paper. Abdominal rigidity, as I hope to prove to you, is another most valuable sign. In fact, I consider that pain and rigidity go hand in hand together as the cardinal subjective and objective signs of commencing as well as advanced abdominal trouble. In the first place, what is abdominal rigidity? It is the reflex spasmodic contraction of the muscles of the abdominal wall exerted, not only to protect the irritated peritonæum from influences acting from without the body, but also to restrain the movements of the viscera and thus produce rest. It is not the passive resistance produced by masses or effusions in the cavity or by distention of the hollow viscera. It is an active, constantly acting spasm of the muscle, and is not necessarily accompanied by swelling or distention. In fact, the abdomen may be scaphoid, and as a rule the muscular contours are more than usually evident.

It varies in degree as well as in extent. That is, a slight peritoneal irritation produces a moderate degree of rigidity, and a localized irritation a spasm of the overlying muscles only. Thus, its degree and extent are valuable as evidencing a corresponding degree and extent of peritoneal trouble.

When well marked it is unmistakable, but when slight it may be confounded with the voluntary contraction of the muscles exerted by the patient from fright or to protect a tender viscus. Thus the manner of eliciting rigidity is important. The hand should be first laid upon a portion of the abdomen which is most unlikely to be a seat of trouble. Gentle pressure is then made with the flat of the fingers and the hand is slid gradually over the parietes without removing it, the muscles being gently manipulated. In this way the confidence of the patient is obtained and voluntary contraction of the muscles eliminated. The ends of the fingers should never be used. A slight spasm of a muscle is verified by comparison with the corresponding muscle of the opposite side. At the same time the attention of the patient may be diverted by questioning.

Abdominal rigidity is caused, not only by inflammation, but also by irritation of the peritonæum. Thus, it is present in hæmorrhage into the peritoneal cavity and in the escape of urine or the contents of the stomach and intestine, even before there has been time for inflammation to commence.

It is well marked in all pyogenic forms of peritonitis and usually absent in the chronic forms, such as tuberculous peritonitis; but may be present in a rapid extension to previously healthy portions from the rupture of a walled off loculus. As an illustration of this, I have seen a walled off collection of bile which had escaped from a ruptured gall bladder, and which must have amounted to several pints, remain quiescent—the abdomen being soft—finally rupture and cause marked rigidity.

In lead colic there is a certain rigidity, but it is not likely to be confounded with that due to other causes when due regard is paid to the length of its duration and the absence or presence of other symptoms.

The extent of rigidity is a reliable index to the amount of peritoneal surface implicated. This is undoubtedly due to the segmental innervation of the abdominal wall. Thus, a segment of the rectus abdominis may be quite rigid while its neighboring portions are flaccid. The importance of this fact can hardly be overestimated in determining whether a process is extending or quiescent. The different appearances of abdominal rigidity and its occurrence in different abdominal conditions are best shown by taking up these conditions in order.

Abdominal hæmorrhage. Rigidity in abdominal hæmorrhage is well marked and appears coincidentally with the escape of blood into the peritoneal cavity, as is sufficiently shown by the following cases:

CASE I.—A boy, aged twelve years, was run over by a truck, the wheel passing across the lower part of the thorax, and was brought to the hospital in

* Read before the Therapeutic Club of New York, October 18, 1902.

¹*Boston Medical and Surgical Journal*, February 20, 1902; p. 187.

less than an hour after the accident. His condition was that of extreme shock with the symptoms of hæmorrhage, namely, thirst, air hunger, and a rapid running pulse. Contusion of the lower right thorax was noted. The abdomen was not distended, but was as rigid as a board. There were very slight evidences of fluid in the peritoneal cavity. A diagnosis of rupture of the liver or spleen was made, and median laparotomy was immediately performed. A large quantity of clots and free blood was found throughout the peritoneal cavity and a rupture of the spleen extending from the upper pole to the hilum. The liver was large and firm but there was no visible tear of its substance. The hæmorrhage from the spleen was controlled by gauze packing, which was led out through a secondary wound made just below the costal border over the spleen. The abdomen was cleansed of blood and the median wound closed. After the first day convalescence seemed assured, but the patient gradually sank and died on the fourth day. Autopsy revealed that the hæmorrhage from the spleen had been entirely controlled and that there was no peritonitis, but that there was an extensive intracapsular hæmorrhage of the liver with disorganization of its substance.

In this case, although there were other signs of hæmorrhage, the presence of abdominal rigidity emphasized the need of and led to immediate exploration of the abdomen, and if the spleen alone had been injured, the patient would undoubtedly have been saved. It also illustrates the fact that rigidity is coincident with the presence of blood in the peritonæum.

CASE II.—A young man, eighteen years of age, was caught between an elevator and the shaft. In this case there was an extensive laceration of the abdominal muscles and a large subperitoneal hæmatoma. The patient was admitted eleven hours after the injury and was in a condition of extreme shock. The presence of marked rigidity on the left side of the abdomen led to a left lateral laparotomy and the finding of a considerable quantity of blood in the peritoneal cavity on that side, which had entered through a tear of the peritonæum. The abdomen was closed after cleansing, and convalescence was uneventful.

CASE III.—A middle-aged man injured a large inguinal hernia in falling against the corner of a table. The hernia was immediately reduced, but he still suffered great abdominal pain and was brought to the hospital. Marked abdominal rigidity was present, but little tenderness and no rise of temperature. The abdomen was immediately explored. A large hæmorrhage was found proceeding from a tear in the mesentery. There was no injury of the gut. Convalescence was uninterrupted. Rigidity in this case led to a diagnosis of probable rupture of the gut.

Although other cases could be enumerated, these are sufficient to show that rigidity occurs early and is constantly present in abdominal hæmorrhage.

In rupture or perforation of the hollow viscera with escape of their contents. In this class of cases the distinction between a pure irritation and an in-

flammation of the peritonæum as causative factors is almost impossible, inasmuch as the latter always ensues. Yet, I think, the following cases demonstrate that rigidity occurs immediately and before inflammation can have resulted. Necessarily, it is difficult to obtain cases illustrative of this condition, since peritonitis so rapidly ensues, and I am indebted to my colleague, Dr. Brewer, for the notes of one case which was also under my observation.

CASE IV.—A man, forty-one years of age, was struck in the abdomen by the end of a heavy roll of paper. He fell to the ground, felt a severe pain in the upper part of the abdomen, became very faint, and vomited several times. Within two hours he was brought to the hospital. He was in good condition; pulse rapid, but regular and of good force. The breathing was entirely thoracic. The entire abdomen was rigid and retracted, but the right rectus especially so. Percussion was tympanitic. Immediate operation was advised. The patient, however, refused, and it was not until the following morning that he, appreciating that he was getting worse, consented. Laparotomy revealed a tear three inches long in the lower part of the ileum and a general peritonitis. In this case on admission the general rigidity could hardly have been attributed to peritonitis.

In another case there was hæmorrhage as well as the escape of intestinal contents into the peritoneal cavity.

CASE V.—The patient, a man, twenty-four years of age, was shot, the bullet entering the abdomen two inches to the left of the umbilicus. He was immediately brought to the hospital in very good condition. His pulse was strong and only slightly accelerated. The abdomen was retracted and rigid, although he did not complain of much pain. Immediate operation demonstrated eight perforations of the jejunum, a moderate escape of intestinal contents, and a considerable hæmorrhage, the blood, however, being largely confined to the pelvis. There were no evidences of peritonitis. The perforations were closed, resection being unnecessary, and the abdomen was cleansed and closed. The patient recovered.

The blood in the pelvis in this case could not have accounted for the general rigidity.

Another case illustrates the production of rigidity by the escape of urine into the peritoneal cavity. This case has been already reported in full at the New York Surgical Society.

CASE VI.—A marble worker, thirty-four years of age, was injured by a slab of marble falling upon him. He sustained a dislocation of the hip, a fracture of the pelvis, and an intraperitoneal rupture of the bladder. On his admission, although there was rigidity of the abdomen, it was overlooked, the attention of the staff being diverted by the dislocation of the hip. A catheter being passed and no urine obtained, I was immediately sent for. The rigidity was then very marked. Immediate operation was performed, and in the neighborhood of forty ounces of urine were found in the peritoneal

cavity, it having escaped through a tear of the bladder two inches and a half long.

There were no evidences of peritonitis. Suture, lavage, and closure of the abdomen were followed by recovery. Operation would have been performed in this case if no rigidity had been present, but I was so sure of peritoneal implication that the incision was made directly into the peritoneal cavity.

In peritonitis. Rigidity is always present in peritonitis, except in the chronic cases already mentioned and cases of advanced general peritonitis, in which it may be absent or not accentuated. It varies greatly, however, and, as already stated, it is a most valuable sign in estimating the degree and extent of the peritoneal involvement.

In appendicitis, for instance, it is absent in the catarrhal forms, but as soon as the inflammation extends to the peritonæum it appears and increases directly with the amount of peritonæum involved. Hence, marked and extending rigidity appearing early in a case of appendicitis denotes danger and often a rupture of a distended appendix. The following is an example:

CASE VII.—A boy, aged sixteen years, with a history of previous attacks extending over eight years and increasing in severity, was admitted in an attack of thirty-six hours' duration, which had commenced with general pain, nausea, and vomiting. A few hours before admission the pain became localized in the usual position and the vomiting less frequent. His temperature was 101.6° F., his pulse 120, and respirations 32. His breathing was thoracic. The abdomen was not distended but rigid, the rigidity being most marked in the right lower, and least marked in the left upper, quadrant. No mass was felt. Tenderness corresponded with the rigidity. Immediate operation disclosed an extensive peritonitis involving all but the splenic region of the abdomen, the peritonæum being injected and free pus extending throughout the regions mentioned. The appendix was gangrenous and ruptured. Removal of the appendix and cleansing of the abdomen was followed by recovery, the patient being discharged on the sixteenth day. In this case the abdomen was closed without drainage.

This case illustrates well the general points made in regard to the rigidity being an accurate index of the degree and extent of peritoneal involvement, and, as a rule, it may be stated that when we watch a case from the beginning and find rigidity extending, operation is indicated.

The peritonitis resulting from rupture or perforation of the hollow viscera becomes, as a rule, quickly generalized, and accordingly rigidity is well marked and extensive.

When an abscess forms and becomes walled off by adhesions, the rigidity diminishes in extent as the peritonitis becomes localized, and finally disappears in many cases if the abscess becomes quiescent, as they sometimes do, which fact is proved by the ease

with which such collections of pus are mapped out by palpation.

In the secondary abscesses which sometimes develop during convalescence from a diffuse peritonitis, rigidity is, as a rule, absent, and in its place we often find a doughy resistance in the abdominal wall.

In suppurative affections in the neighborhood of the liver, such as hepatic abscess and cholecystitis, rigidity is present when the process extends to the peritonæum, and is confined as a rule to the upper part of the abdomen, thus serving to differentiate them from appendicitis and other inflammations usually found in the lower abdomen.

Rigidity may be present in suppuration of the kidney, as the following case will show.

CASE VIII.—A young woman, twenty-three years of age, was referred to me three weeks after confinement, with an acute suppurative nephritis resulting from puerperal infection. She had, besides other symptoms, a well marked rigidity of the lateral abdominal muscles, which masked the palpation of the kidney from in front, although a mass could readily be made out from behind through the rather soft lumbar muscles.

The absence of marked changes in the urine and the presence of the well marked abdominal symptoms, although a presumptive diagnosis of the renal suppuration was made, led to an exploration of the abdomen through a small incision in the right rectus. The peritonæum was found normal, except that it was slightly adherent to the enlarged right kidney. The other kidney was of normal size. The wound was immediately closed and the kidney removed through a transverse lumbar incision, the entire operation and anæsthesia occupying thirty-five minutes. Convalescence was rapid and uneventful. The kidney was studded with small abscesses, the inflammation extending through the fatty capsule and probably slightly involving the peritonæum, thus giving rise to the presence of rigidity.

Rigidity is not present in intestinal obstruction unless peritonitis is present from ulceration or gangrene of the bowel.

There is one condition in which, it seems to me, it is of great value; namely, as a sign indicative of perforation in typhoid fever. It is manifest as soon as local peritonitis results from implication of the peritonæum by the ulcerative process, and is marked as soon as perforation occurs.

Absence of rigidity in a case of supposed perforation is a contraindication to operation, as is illustrated by a mistake I once made before I was aware of its diagnostic value.

CASE IX.—A woman, twenty-five years of age, was transferred from the medical ward to my service in the third week of typhoid, with a diagnosis of perforation. Suddenly abdominal pain, tenderness, and distention had developed, accompanied by a marked drop of temperature and a condition approaching collapse. The pulse, which had been of good force, became rapid and feeble. There was

no rigidity. Everybody agreed to probable perforation and an exploration was made disclosing a normal peritonæum. The patient went on to recovery.

At the present time I should refuse to operate, but, of course, should now be helped by the examination of the blood.

In thoracic inflammations. Abdominal pain, as is well known, is often present in inflammations of the lungs and pleura, especially when the diaphragmatic regions are involved. Even tenderness and rigidity of the upper portions of the abdomen may also be present. And so, not infrequently, errors in diagnosis have arisen and a commencing pneumonia or diaphragmatic pleurisy has been mistaken for an appendicitis or other abdominal condition. The mistake is not so very reprehensible, since the physical signs of consolidation and pleurisy are generally masked or not present in the early stages of these conditions.

I remember well two cases which were referred to me as cases of appendicitis, in which I could not satisfy myself as to the presence of inflammation in the peritoneal cavity, and so did not operate, and which finally proved to be cases of diaphragmatic pleurisy. The rigidity in these cases is usually confined to the upper segments of the abdominal muscles. It does not involve them so extensively as does peritonitis in the upper part of the abdomen. To a certain extent it is a true rigidity, and is exerted to help control the movements of the diaphragm. Yet it is not always possible to be certain of the presence of true rigidity in the uppermost parts of the abdominal muscles, for several reasons, the chief one being that the slightest contraction of the muscles of this region conveys the impression of marked rigidity because of their thickness and of the support afforded them by their near by attachments to the thorax; the last is especially true of the recti, lying as they do between the diverging costal borders. Also an enlarged liver, especially if the parietes are so thick as to prevent accurate palpation, may give rise to error because of the passive support given by it to the abdominal wall.

For these reasons, one cannot be too careful in passing upon rigidity in this region, especially when the propriety of operating is under consideration. I myself am inclined to the standpoint that peritoneal implication is doubtful unless there is an extension of rigidity of a certain degree to or below the level of the umbilicus.

In conclusion, the following question naturally arises, namely, as to whether rigidity of the abdominal muscles is always present in peritoneal irritation or inflammation. In answer I think we can safely reply in the affirmative, only excepting the before mentioned cases of advanced and chronic peritonitis. On the other hand, as already seen,

rigidity may occur in other than peritoneal conditions, but it is usually restricted to the upper portion of the abdomen. In cases of abdominal injury, when well defined and extensive rigidity is present, my judgment is that it is safer to operate whether other symptoms are present or not.

To summarize. Abdominal rigidity is a constant symptom in all irritations and inflammations of the peritonæum, and is, therefore, a valuable sign in the diagnosis of the presence of foreign materials in the peritoneal cavity, even before inflammation has ensued.

It is a fairly accurate index to the severity and extent of a peritoneal implication, and is, therefore, valuable in observing the course and estimating the severity of a peritonitis. It is a more reliable sign than pain or tenderness in the diagnosis of perforation occurring in typhoid fever.

On the other hand, we must remember that the determination of rigidity in the upper part of the abdomen is not always easy, and that it may be present in inflammations of the pleura, the peritonæum being normal.

MORPHINE HABITUATION AND ITS TREATMENT BY HYOSCINE HYDROBROMIDE.*

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There is probably in the realm of therapeutics no drug more valuable on the one hand, and more pernicious on the other, than opium and its alkaloids, particularly morphine. That morphine habituation exists to an enormous extent, even among medical men, is generally conceded. The responsibility for this condition of affairs lies largely with the physician himself as well as the pharmacist. Instead of morphine being the drug of last resort it is used indiscriminately in all painful states. If known, it seems to be ignored, that in the majority of instances in which morphine is exhibited other drugs would prove even more satisfactory. As a direct pain-relieving drug morphine is superior to any other. This, however, does not mean that the drug will prove more satisfactory than other remedies which have for their object the removal of the cause, and so effect, not simply the relief, but the cure of the pain; these remedies may be classed as indirect analgetics, as, for instance, hyoscyamus, aconite, gelsemium, cannabis, colchicum, belladonna, and their active principles in the form of alkaloids, as

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well as the coal tar preparations judiciously employed. Morphine in many instances saves life, and this use of the drug is often the unavoidable means of habituation. Again, in the chronic neuralgias, sooner or later, recourse is had to morphine, and justly so, as the only drug of relief, but the uses of the drug in these conditions represent only a small share, and the justifiable cases, if they may be so termed, of morphinism. Many avoidable cases of morphine habituation might be traced to the repetition of the prescription, which is often passed on to friends with the best intentions but most serious results. Then, the numerous headaches and pain-relieving powders and preparations sold, containing more or less opium in some form, represent another frequent source of this baneful condition. The pharmacist should always be instructed never to refill or issue copies of prescriptions. This is best assured by having printed some such phrase as: "Not to be renewed or copied." Morphine should not be exhibited by needle when its administration by mouth will answer, as patients usually associate morphine with hypodermic medication—they should be informed that numerous other drugs are employed in this manner. Laws regarding the sale of morphine without prescription should be rigidly enforced, as well as legislation prohibiting the indiscriminate sale of all preparations containing opium in any form.

Before beginning the cure of morphinism, it is particularly important to ascertain whether the condition has ceased for which the drug was originally taken. These cases, fortunately relatively few, are most satisfactory to treat, for the use of the drug here was for a definite purpose, usually the relief of terrific actual pain, such as neuralgia; remove this cause and the cure is comparatively easy. It is the cases where the habit has been formed for no definite reason and where normal sense is low that give the greatest concern. The excuse of many addicted to the use of morphine is that they must take the drug for the relief of an indescribably painful condition; could this be relieved, they would and could voluntarily cease taking it. This is one of the peculiarities of the drug—its cessation intensifies a preexisting pain, and the pains the patient complains of are largely those due to the drug itself. Intentions are good, but as soon as the effects of the drug have passed, the patient is well nigh frantic until another dose is again obtained. Many patients are candid in their statement that the agony of ceasing the taking of the drug is so great that they cannot endure the suffering. Assure these patients that they can be cured, and that quickly and without suffering, and most of them will gladly submit to treatment. While it is a rare exception for

any patient to cure himself of this habit unaided, still this does occasionally occur. I have myself known such a case where the patient received morphine by needle, during a period of several months, for septicæmia; when told that she would have to cease taking the drug, she did so, and her description of the suffering endured forms an interesting, though distressing, chapter in this branch of investigation.

The key to the treatment of morphine habituation lies in the fact that, no matter what the dose the patient has been accustomed to taking, it loses its effect somewhere between six and twenty-four hours. That is, a patient accustomed to the use of morphine will rarely go twenty-four hours before the necessity arises for another dose; after the effects of the drug wear off, the patient begins to suffer from the agonizing train of symptoms due entirely to morphine cessation, for the relief of which recourse is again had to the drug. A method of treatment which will carry the patient some days with the absolute restriction of the drug and without pain must appeal to us as the acme of rationality, and be hailed with extreme satisfaction by all concerned.

It has been frequently observed that the crisis, if it may be so termed, in the discontinuance of morphine, occurs in the first few days, rarely beyond a week, and in the large majority of cases in from two to five days. The so-called cures for drug habit advertised in the lay journals should be denounced and suppressed. They have been shown not only entirely valueless but decidedly harmful, in that many of them contain opium in some form, leaving the patient in even a worse condition after their use than before.

The numerous sanatoria advertised in our medical journals give some idea of the extent to which drug habituation exists. While I do not wish to be understood as questioning the value of these institutions for the treatment of various conditions, still their cure of morphinism has frequently been a failure, shown when the patient leaves and immediately reverts to his old habit, the only difference being that he again takes the drug instead of having it given to him.

In my estimation the actual time for the cure of morphine habituation being short, the patient can be better treated at home, with day and night nurse and the constant supervision of the physician. Routine is to be decried as positively dangerous, for the treatment of this condition requires the greatest discrimination and watchfulness on account of the potency of the drugs used.

Now, in the use of hyoscine for morphine habituation, the personal equation obtains exactly as in the

use of drugs in other conditions. It must be understood exactly what is to be accomplished, and how complications arising are to be met. Hyoscine hydrobromide may be said to be a specific in morphine habituation—not a specific in the sense that quinine is in malaria or mercury and potassium iodide in syphilis, but rather a specific means of accomplishing a definite purpose; this purpose tiding the patient over the, to put it mildly, distressing period resulting from the restriction of morphine.

While we have all used hyoscine as a hypnotic in different diseases, and no doubt it has been used as an occasional dose in the treatment of morphine habituation, its use as a specific means of cure for this condition originated with Dr. M. K. Lott, of Cameron, Texas. It is to all intent and purpose a new treatment, as much so as if the drug employed had never before been used at all. The method has been criticised; why? By others who have used it? No, but, so far as I can see, on theoretical grounds only. Have those who criticised the method had practical experience with it? If so, I fail to see any record of it in the *Index Medicus*. We might well say in the words of Pope: "Be not the first by whom the new are tried, nor yet the last to lay the old aside." But if new, where is the old? Will those who criticise the method offer something better?

In my hands the method of treatment has proved perfectly satisfactory. It should be remembered that all morphine takers are in a condition of more or less neurasthenia, the cure of which requires some time; but the principal thing necessary is to relieve them of their craving for this drug, and experience proves the other resultant condition responds to treatment most satisfactorily. The treatment consists in the frequent hypodermic administration of hyoscine hydrobromide, beginning first with a very small dose, 1-400 to 1-200 of a grain, to determine idiosyncrasy; the dose of 1-200 to 1-100 of a grain is repeated hourly, or frequently enough to keep the patient under its influence. After two days I endeavor to defer the repetition of the dose to every two or three hours, until the third or fourth days, when, depending upon the case, the time for administration may be extended to from three to six hours, and on subsequent days an occasional dose may be given. During this entire period, a nurse must be in constant attendance, and the patient never left alone for a moment; attention must be given to the respiration and heart; the condition of the mouth, which becomes dry with often inability to swallow. As hyoscine has a decided mydriatic effect, the room should be darkened, absolute quiet enjoined, food by the stomach discontinued, and nutrient enemata substituted. The patient is often irritable and will make efforts to leave the bed; he

should not be left alone a moment, but he should be protected from changes in temperature, as occasionally profuse perspiration occurs. The pulse is slowed as much as to 54; for this reason it is well to combine strychnine occasionally with the hyoscine. Respirations are slightly slower than the normal. As active delirium is apt to occur, and is distressing to the patient's friends, they should as far as possible be kept from the room.

Hyoscine, being similar to atropine, dries the secretions and is for this reason particularly valuable in the treatment of morphine habituation, the relief of which often induces a very troublesome diarrhoea, while this often occurs despite the hyoscine treatment. Atropine is probably the most satisfactory drug at our disposal for its control. Pilocarpine I have not found necessary, endeavoring to confine the treatment to the simplest plan, and discontinuing the frequent use of the hyoscine at the earliest possible moment.

Of the cases treated for this condition, all have been successful, the extreme in quantities representing three quarters of a grain a day for about seven months, for an actual sciatica, to thirty grains daily for nine years, for no definite purpose; these represent a minimum and maximum quantities, the details of which may be of interest. Other cases varied in the quantities of morphine taken, ranging from three to twelve grains daily, but as they present nothing of special interest, they will be published at some future time.

CASE I.—The first patient treated by me for morphine habituation had been averaging three quarters of a grain of morphine daily for seven months. She had had septicæmia some seven years before, from which condition morphine undoubtedly saved her life; after convalescence commenced, she voluntarily stopped the use of the drug, having received by needle as much as four grains daily. Her illness was not only preceded by sciatica, but after having been well for about *four years*, she began again to suffer with this painful condition. These attacks of sciatica became more frequent; almost every drug of use in this condition was given, eventually with recourse to morphine as the only drug which gave relief. The fact that this patient never took the drug herself is the reason that the dose administered represented three quarters of a grain daily, though occasionally larger doses had to be given. It is well to emphasize here that the frequent small dose is probably the chief cause of habituation, the larger doses occasionally given for some emergency are, in my opinion, not to be feared. As this patient gave some symptoms of appendicitis I suspected she might have a lesion in the right side, the removal of which might cure her sciatica. Operation disclosed an abnormally long appendix, apparently normal; this was removed, and dense adhesions between the right annexa and intestine were found and severed. There was little manipulation, yet the

patient's sufferings were so intense for the first three days that only large doses of morphine controlled them. This was particularly objectionable on account of the intestinal paresis which supervened and gave the greatest concern; this, however, responded to treatment, and after the first few days the morphine was diminished. I then decided to institute the hyoscine treatment, to eliminate the morphine entirely. This was begun with 1-200, raised to 1-100 of a grain of hyoscine, and was continued hourly for forty-eight hours, then less frequently on the third and fourth days; after which an occasional dose was given, morphine being absolutely restricted; strychnine only was then administered after the hyoscine was discontinued, the patient supposing she was still receiving morphine. She was told during the second week that the treatment for elimination of morphine would be begun the following week, a day having been set; this gave her some alarm, but when the day arrived and she was informed she had not had morphine for about two weeks and had been cured without her knowledge, her satisfaction can better be imagined than described. She made an uneventful recovery and has remained well since, though not cured of her sciatica for which no narcotics, however, have been necessary.

CASE II.—One other case represents the opposite extreme as to quantity used, the patient taking 30 grains of morphine daily both by mouth and hypodermically. He purchased the drug in large quantities, his principal concern in life seemingly being to be well supplied with the drug. His addiction to the drug might be classed as avoidable, codeine having to be given for a troublesome cough supposed to be phthisical; the small doses of codeine were soon increased, then changed to morphine, and subsequently to the hypodermic syringe. He had been taking these drugs for nine years. He had used many so-called cures for his habit and also been treated in sanatoria. Hyoscine treatment was begun with his usual dose of morphine, then continued alone every hour, all morphine being restricted; strychnine was employed frequently, with occasional recourse to nitroglycerin and oxygen, owing to the cyanosed condition which occasionally developed. After the third day the frequency of repetition of hyoscine was diminished slightly and extended to the seventh day. Convalescence from his neurasthenic condition was slow but steady; he gained in weight, color, and appearance, and felt perfectly well, "better in fact than in ten years," as he expressed it. This patient gave most concern on account of troublesome diarrhoea, which eventually responded to atropine.

In conclusion I would say that in the proper use of hyoscine hydrobromide in morphine habituation we possess a safe, certain, and painless method of treatment.

18 WEST SEVENTIETH STREET.

BRONCHIAL PHTHISIS.

By ALBERT ABRAMS, A. M., M. D.,
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Under this designation is generally understood a tuberculous lymphadenitis of the tracheobronchial glands. The writer is not unmindful of the fact that bronchial phthisis has been fully described in the literature, but the scope of such description has been limited in regarding it as an affection peculiar to children with symptoms suggestive of increased intrathoracic pressure. It is the essential object of the writer in this communication to portray a picture of bronchial phthisis occurring in adults, which in all essentials tallies with the tableau of symptoms common to pulmonary tuberculosis, with which it is frequently confounded. The writer has collected within the last four years twenty-five cases of bronchial phthisis, ten of which have been observed in the last year. The preponderance of cases observed within the latter period is due to the fact that the writer is now better able to recognize the disease in question. The cases collected refer to tuberculosis of the tracheobronchial glands only, without involvement of the lungs. Implication of the latter was excluded by careful physical examination of these structures, coupled with the employment of the Röntgen rays.

Before analyzing the symptoms of his cases, the writer wishes to present a succinct review of certain anatomical facts which will assist in the recognition of bronchial phthisis.

The number of the bronchial glands is considerable. Aside from very small ones, twenty can be counted which equal or exceed the size of a bean. They are distinguished from other lymph glands by the fact that they are pigmented. They receive, not only the lymphatics of the lungs, but likewise the vessels of the bronchial mucosa and of the submucous lymphatic bronchial plexus. Some of the glands empty by means of the vasa efferentia into the thoracic duct, whereas others form the bronchomediastinal trunk, which passes to the right and left subclavian veins. A few branches pass directly into the vena azygos. The major mass of these glands, which individually are of about the size of a cherry pit, are located in the space between the right and left bronchi, chiefly below the bifurcation of the trachea. Some of the glands surround the bronchi as far as their first subdivisions and penetrate a considerable distance into the root of the lung.

The relation of the bronchial glands to the chest wall may be determined by studying the relation of the bronchi to the thoracic walls, and in this connection the admirable work done by Dr. J. A. Blake will aid us. The trachea at its bifurcation lies in the right sternal line. This deviation of the trachea is caused by the aorta, which crowds it to the right

The International Historical Congress, which includes a Section on Medical History, will take place at Madrid during the meeting of the International Medical Congress, in April, 1903.

side. The trachea bifurcates at about the level of the intervertebral disc between the fourth and fifth dorsal vertebræ. This point is, however, not absolute, being influenced by the phases of respiration and the posture of the neck and head. In the adult it is below the level of the spine of the scapula and, on the anterior thoracic wall, it is just internal to the junction of the lower border of the second costal cartilage with the sternum. On the posterior thoracic wall, the course of the left bronchus is from a point to the right of the fourth thoracic spine to a point on the eighth rib, three inches to the left of the spine. The course of the right bronchus is from the same point above to a point on the eighth rib, two inches to the right of the spine. On the anterior chest wall the course of the left bronchus is from the lower part of the second right chondrosternal articulation to a point on the fifth rib, just internal to the mammary line. The course of the right bronchus is from the same point above to the intersection of the fifth rib with the parasternal line.

A tuberculous adenitis of the bronchial glands is unquestionably the precursor of pulmonary tuberculosis in the majority of cases; and in children tuberculosis of the lymph glands is exceedingly common. In adults, with whom we are to deal in particular, the bronchial lymph glands may show pronounced tuberculous invasion with few or no signs of the disease in the lungs. It is usually stated by many eminent authorities that tuberculous adenitis of the bronchial glands is always secondary to some focus in the lungs, but this has not been my experience. In 125 autopsies at the Foundling Hospital, New York, the bronchial glands were tuberculous in every case. That the same glands may be similarly affected in adult life while the individual is in apparent health is instanced by the observations of Loomis, who found in eight out of thirty cases in which there were no signs of old or recent tuberculous lesions that the bronchial glands were infective to rabbits. Tuberculous adenitis of the bronchial glands, like tuberculosis of the lymph glands elsewhere in the organism, may end variously:

1. They may heal spontaneously, that is to say, the tuberculous process may remain dormant for years.
2. They may undergo suppuration, probably the result of mixed infection with pyogenic organisms.
3. They may perforate the vessels and lead to systemic infection.
4. They may suppurate and perforate the œsophagus or bronchus. When they perforate the bronchus, the symptomatic picture may be essentially that of pulmonary tuberculosis, and it is to this picture that the twenty-five cases collected by the writer refer.

Summarizing the main symptoms of these cases,

they were found to consist of the following: 1. Mucopurulent sputum containing tubercle bacilli. 2. Dyspnoea. 3. Hæmoptysis. 4. Pyrexia. 5. Paroxysmal, spasmodic cough. 6. Percussion signs. 7. Auscultatory signs. 8. Pressure signs. 9. Röntgen ray evidence.

Analyzing these symptoms, the writer found that the expectoration was frequent but not abundant. As a rule, expectoration was unattended by exertion such as usually attends the dislodgment of sputa in pulmonary tuberculosis. The frequency of expectoration could be explained by the intolerance of the bronchial mucosa to even the smallest amount of adventitious material, whereas the facility of expectoration is readily explained by the ready communication of the bronchi with the oral cavity. Tubercle bacilli were never present in large numbers; in fact, it was often necessary to make repeated examinations before their presence was demonstrated.

The dyspnoea was inspiratory as well as expiratory, and during the latter phase of respiration a whirring sound or thrill could be felt in a few instances when the hand was placed on the region of the manubrium sterni. The dyspnoea was often paroxysmal and was determined chiefly by physical effort, voluntary forced inspirations sufficing to elicit the symptom.

Hæmoptysis was present in about one third of the cases. The blood was always slight in amount, bright red in color, and seemed to form individual pellets.

The percussion signs were characteristic. Dulness was present in the majority of instances over the manubrium sterni, extending to the right and left sternal line, and often along the lines indicating the direction taken by the bronchi anteriorly as well as posteriorly. To accentuate the dulness obtained by percussion it is wise to percuss at the end of forced expiration, to eliminate the resonance obtained from the contiguous lung structure. It is also of importance, while practising percussion over the manubrium sterni, to have an assistant, or even the patient, press forcibly on the lower end of the sternum. The latter manœuvre will accentuate dulness if present, inasmuch as the vibrations of the sternum will be reduced to a minimum and lung resonance will be correspondingly reduced. Posteriorly, dulness will correspond to the fourth, fifth, and sixth dorsal vertebræ, extending to some distance on either side, and it may be continued along the lines previously described, indicating the course of the bronchi. Pressure on the spine with one hand above the fourth dorsal, and with the other hand below the sixth dorsal vertebra will accentuate the dulness. This manœuvre will, like pressure on the sternum, prevent transmission by vibra-

tion of the vertebral column to the underlying lung structure.

The auscultatory signs are nearly always present, even if only to a slight degree. They are provoked by bronchostenosis resulting from pressure of the enlarged glands on the bronchi. If the main bronchus is obstructed, the vesicular murmur on the affected side is diminished or abolished, and the same holds good in relation to vocal fremitus and respiratory excursions. More often, whistling sounds are heard during inspiration and expiration.

Pressure signs may be subjectively experienced as a feeling of weight in the upper chest region corresponding to the bifurcation of the trachea, and this sign, together with a spasmodic cough, was the only pressure sign observed by the writer in all his cases. Other pressure signs peculiar to tumefaction of the bronchial glands, are: swelling of the cervical veins, œdema and cyanosis of the face or arms from compression of the superior vena cava, subclavian, or innominate veins, dysphagia, from pressure on the œsophagus, dislocation of the heart, etc.

Smith and Hare direct attention to the following sign, which is present in enlargement of the bronchial glands, and which they believe to be due to pressure of the glands upon the venous trunks: When the patient throws the head well back and the stethoscope is placed below the suprasternal notch, a "purring" sound is heard during respiration. This sign, in my experience, is by no means common. In all, I have detected it three times, but it could as well have been due to the anæmia which is present in many cases of bronchial phthisis.

Pyrexia was present in several of the cases, but the writer is inclined to believe that it was caused by some complication.

The Röntgen ray evidence is highly characteristic: first, there are the negative results obtained from lung skiascopy; and secondly, there is evidence of enlarged bronchial glands. The latter evidence is more easily elicited by fluoroscopy of the posterior thorax. The chest must be viewed in all directions. The best results are obtained in determining enlargement of the bronchial glands if the target of the tube is so placed that the rays traversing the chest will fall at a point corresponding to either the right or left side of the sternum anteriorly, or to similar points posteriorly, in the region corresponding to a point just below the bifurcation of the trachea. The shadows thus obtained look not unlike those obtained in aortic aneurysm.

Diagnosis. This is not difficult provided the following facts are borne in mind: A history of cough, which is spasmodic in character, and almost suggests the brazen metallic cough of aortic aneurysm; the presence of tubercle bacilli in the sputum; dys-

pnoea which is out of all proportion to the signs obtained by physical examination of the lungs; dullness anteriorly and posteriorly, corresponding to the bifurcation of the trachea; the evidence of comparative good health notwithstanding the long duration of symptoms; and finally, the negative results of pulmonary disease, as determined by physical examination and the demonstration of enlarged bronchial glands by skiascopy. In the differential diagnosis one must not forget other affections which produce enlargement of the bronchial glands, viz.: pseudoleucæmia, actinomycosis, malignant disease, and syphilis. The congeneric symptoms of these affections are characteristic, while in pseudoleucæmia the glands do not soften. Syphilis, is, however, an affection which is likely to lead us into error. Very often, in syphilis, when the bronchial glands suppurate and perforate the bronchus, a picture not unlike that of bronchial phthisis develops. I recall a case observed many years ago, of this kind. It referred to an individual whose family history was that of phthisis, who developed symptoms of extreme prostration, pyrexia, night sweats, purulent expectoration with no tubercle bacilli in the sputa, and dullness corresponding to the middle lobe of the right lung. On the day of his death, a physician, who had formerly treated him, told me that he had contracted syphilis some months before, for which he had taken no treatment. At the autopsy, there was no evidence in the lungs of tuberculosis. The bronchial glands had coalesced into a large mass of about the size of an orange, and extended well into the middle lobe of the right lung. The glandular mass had partially suppurated and perforated the bronchus. Histological examination of the glands demonstrated no tuberculosis. Since then, I have observed a few cases of undoubted lung syphilis with dullness, confined, in the preponderance of patients, to the middle lobe of the lung. This is the conceded point of predilection of dullness in lung syphilis and I am inclined to believe that the dullness elicited is really due to syphilis of the bronchial glands.

Course. It must not be assumed that pulmonary phthisis may not coexist with bronchial phthisis. On the contrary, it is a common occurrence. In the collection of my cases, I have only included those which were unquestionably tuberculosis of the bronchial glands alone, which had perforated the bronchus and presented the symptomatic complex of pulmonary tuberculosis. Only a few of these cases have remained under observation. They were all, however, of long duration. In only one case was a positive cure effected. Four patients who are still under observation have had symptoms of cough and expectoration for more than ten years without any material involvement of their physical well being. Most of the patients dated their period of sickness

from some acute infectious disease, notably measles and pertussis.

Treatment. We must pursue the same course as is pursued in pulmonary tuberculosis, with the object of immunizing the organism, and especially the lungs, against tuberculous invasion. This comprises nutrition, air, sunshine, and a hygienic environment. Cod liver oil is lauded, but there is no reason to believe that it possesses any specific influence beyond promoting general nutrition. Residence at the seaside, which seems to exert such a beneficial influence in all cases of lymph tuberculosis, should be tried in bronchial phthisis. Syrup of the iodide of iron, in continuous and increasing doses, seems to exert some specific influence in this disease. In the only case which the writer succeeded in curing, large doses of potassium of iodide were employed, the patient having given a history of syphilis. It is not unreasonable to assume that in the latter case the tubercle bacilli had fallen on a tissue soil propitious for their growth, and when the soil had been rendered sterile, the growth of the bacilli was inhibited. The writer has lately been employing in bronchial phthisis inunctions of *sapo viridis*, one drachm, rubbed in daily in different portions of the body, after the manner of mercurial inunctions, and he believes with good results. This method is not original with him. He has acquired the fact somewhere in the literature, but where he is unable at this time to state.

THE SUCCESSFUL TREATMENT OF PULMONARY TUBERCULOSIS, MECHANICAL AND MEDICINAL.

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To emphasize the facts I submit about pulmonary tuberculosis I shall briefly compare the present treatment of consumption with that formerly current in angular curvature of the spine and disease of the hip joint. I remember when the accepted treatment of these two diseases consisted substantially in sanitation, nutritious food, cod liver oil, and tonics; but although these excellent measures are essential to the successful treatment of the disorders to which I allude, and which probably did to some extent inhibit their destructive progress, yet children who had Pott's disease and survived always became hunchbacks, and those who suffered from *morbus coxarius* were crippled for life. But when suitable mechanical treatment was added to that previously employed, diseases of the spinal bones and of the hip joint were, for the first time, and have been ever since, treated successfully.

There are few chapters in the history of the healing art more brilliant than those relating to the dis-

covery of the mechanical treatment which has proved effective in these two diseases.

The accepted treatment of consumption consists largely in sanitary environment, fresh air to breathe day and night, nutritious digestible food, often cod liver oil in some form, and various tonic remedies: this is practically the same as that under which cases of Pott's disease and that of the hip joint went from bad to worse until skilful mechanical measures were added by which the treatment was rounded out and placed on a sound scientific and successful basis. And I state with a confidence which is the result of many years' experience in testing the measures here advocated, that if suitable mechanical treatment were added to the tonic and sanitary means now employed in pulmonary tuberculosis, this disease would be treated with a degree of certainty, rapidity, and success, that is at present quite unattainable by the current methods.

Whatever the diversified symptoms may be that are observed in different cases of tuberculosis, there are four morbid conditions present in every case, without exception, the correction of which is absolutely essential to successful treatment.

These four morbid conditions are:

- Restricted respiration;
- Defective blood circulation;
- Depraved nutrition;
- Defective assimilation of fats.

Restricted Respiration.—The volume of air breathed by consumptives in the earliest detectable stage has already declined one third below the amount absolutely required to maintain the normal play of the vital forces. Moreover this notable deficiency steadily declines in a direct ratio with the progress of the disease until respiration finally ceases.

Defective Blood Circulation.—The reduced volume of oxygen supplied to the blood of consumptives, because of defective breathing, powerfully depresses all the vital functions and notably inhibits the blood circulation. The motive power of the capillary circulation is chiefly the affinity possessed by the blood for the sides of these vessels. Now this affinity exists in a normal degree only in blood duly charged with oxygen; a condition which never obtains in the blood of consumptives, except effective means has been taken to develop the respiratory power.

The late Professor Draper says: "The arterialization of the blood in the lungs is the cause of the circulation. I consider that the capillary circulation is the consequence of respiration, and although, in one sense, the minor causes are numerous, all these subordinate actions are referable to the primordial act, and that is the exposure of the blood to the air."

The defective respiration of consumptives is therefore necessarily accompanied by defective blood circulation; and the vital fluid in these subjects has a strong tendency to leave the skin and extremities to form congestions of the internal organs, especially of the lungs.

Depraved Nutrition.—Even in the pretuberculous stage, nutrition is seriously defective, and this is still more gravely at fault when local signs confirm the diagnosis. The retrogressive changes by which dying matter is reduced to those forms that favor the expulsion of waste matters from the organism, and the progressive processes in which food finally becomes living tissue, are both notably disordered. These morbid conditions occur chiefly because the melting down and the building up of the tissues both demand an adequate supply of oxygen, which the restricted respiratory powers of consumptives are quite unable to furnish; normal nutrition is therefore physically impossible. One essential remedy for depraved nutrition is nutritious food, often ordered in a concentrated form; but few if any acquire this disease in our land of plenty because of starvation. Therefore, it is not enough to order a badly nourished but well fed consumptive to subsist on a very nourishing diet and then allow him to work it up into living tissue as best he can. The physician should use therapeutic measures competent to advance the nutritive processes daily a little nearer their normal condition. He must cause the reduction of effete matters to the various forms by which their normal elimination from the body is effected. Effete matters must not be allowed to remain in the system on their downward course half oxidized, to clog the tissues and impede the vital processes. These indications are all quite indispensable to successful treatment, and can be readily fulfilled by the treatment here advocated if employed when a diagnosis is made that pulmonary tuberculosis exists.

Defective Assimilation of Fats.—The digestion and assimilation of fats taken as food by consumptives is very defective, and what is even more important their capacity to evolve fats from carbohydrates is also greatly impaired.

Treatment of Restricted Respiration.—The reduction of the consumptive's respiration in the first stage to about two thirds of the normal volume is due very largely to mechanical impediments. The circumference of his chest is constricted, its walls are unduly rigid, and his respiratory muscles are quite unequal to produce adequate respiratory motions. But all these obstructions to normal breathing are readily amenable to active and passive movements prescribed for, and applied to, the patient, by which the thorax can be expanded, the elasticity of its walls increased, and all the muscles of respiration,

including the diaphragm and those of the abdomen, invigorated. If by these means the volume of respired air can be increased only *three cubic inches* at each tranquil respiration, over and above the reduced volume habitually breathed, the extra amount of air entering the lungs every twenty-four hours would amount to about *fifty cubic feet*—enough to exercise notable curative influence. Pulmonary invalids have been sent north and south, to the seashore and to the mountains, to breathe air believed to have special curative virtues. But this is not necessary; any pure air will do, provided the sufferer's power to breathe enough of it is duly developed by effective mechanical treatment; but if this absolutely essential indication is neglected, little good can be done to consumptives by the purest air when their breathing capacities are thirty-five or forty per cent. below the minimum requirements of the system.

Treatment of Irregular Blood Circulation.—We have seen that the normal blood circulation depends largely on adequate respiration, which is greatly reduced in tuberculosis. Whatever limits the volume of oxygen passing into the blood, profoundly disorders the circulation and causes internal congestions from which the lungs suffer with special severity. By means of passive mechanical movements, prescribed as may be indicated by the patient's condition and applied to him by a competent operator, the blood circulation can be made to flow with absolute certainty to or from any tissue or organ; by this means pulmonary congestions can be promptly dissipated and the breathing powers notably increased. By mechanical movements the capillary circulation can be at once stimulated to a normal degree of regulated activity, even before the respiratory powers have been fully developed. When the latter have been so increased that the normal amount of oxygen is delivered to the vital fluid, the capillary circulation will flow equally throughout the body supplying nutriment to every part.

Treatment of Depraved Nutrition.—Physiologists tell us that muscular effort rapidly hastens retrogressive metamorphosis of tissue in a direct ratio with the amount of exertion—more exercise, more tissue destroyed; but tissue regeneration occurs in an inverse ratio to the nervous energy expended—undue expenditure of the latter renders tissue repair slow and imperfect—and if the nervous powers are greatly reduced, repair may not occur at all until the former have been recuperated by rest. Now, tissue waste can be induced to any desirable extent by passive and active movements applied to patients by an operator; in pulmonary subjects this treatment must be so prescribed and applied that undue tissue reduction shall be avoided. Attention must be given especially to the complete reduction of tissue debris

to those forms that promote complete elimination. Moreover, the treatment here advocated must be so applied that the invalid's nervous energies shall be carefully economized, thus ensuring rapid tissue regeneration.

It is not enough to prescribe nutritious food for a badly nourished consumptive, then leave him to use it as best he may. The treatment I advocate enables a physician to follow the nutritive materials into the system, and there to exercise control over the vital processes by the operation of which the tissues are purified and renewed, so that the invalid's food shall do him the greatest possible amount of good, very much greater than by any other known means.

Treatment of Defective Assimilation of Fats.—Fats, taken as food, serve very important purposes in promoting nutrition, but fats that are produced synthetically in the body from amylaceous, saccharine, and other matters, are said to be endowed with peculiar nutritive properties and to discharge special functions in the system.

The steady loss of weight that always accompanies progressive tuberculosis occurs partly because of the reduced capacity of consumptives to make effective use of fats taken as food, but it is more especially due to their inability to evolve fats from carbohydrates, etc.

Cod liver oil is a useful palliative for these morbid conditions as they occur in tuberculosis; but a palliative only. We need remedies competent to improve the invalid's capacity to digest and assimilate fats occurring in food, and what is, if possible, of much greater importance, that will restore the ability to develop fatty matters from carbohydrates and other food elements. Very fortunately we have medicines possessing these notable virtues in *Verbas-cum thapsus* and *Sticta pulmonaria*. Of these two remedies, particularly the former, I cannot speak too highly as weight increasers in the disease under consideration, especially when they are used by patients who are treated by mechanical movements. They greatly excel cod liver oil even when full doses of the latter agree well with the patient.

In conclusion, I have no hesitation in saying that if the treatment here sketched out, were added to the sanitary measures, excellent as far as they go, now employed in combating the great white plague, the advance in medicine would be almost, if not quite, as great as that which occurred when vaccination, anesthesia, and asepsis were discovered. If the treatment I advocate, mechanical and medicinal, were effectively applied as soon as local pulmonary disease could be positively recognized, the tuberculizing process could be stopped, the damaged lung healed, the general nutrition restored, and the bacilli

extirpated, with almost as much certainty as a diagnosis can be made by an expert diagnostician.

In making these statements I am not advancing crude theories, which, when practically tested, will prove useless, as in the case of so many remedies offered for the cure of tuberculosis. The statements I submit have occupied my attention for many years, and they have been fully verified clinically. I have sketched very briefly the scientific principles on which the treatment is based; but the art of prescribing and applying the mechanical part cannot be stated in this article.

THE PHYSICIAN AND THE PHARMACOPŒIA.

By M. I. WILBERT, PH. G.,
PHILADELPHIA,

APOTHECARY AT THE GERMAN HOSPITAL.

Among the younger physicians it is difficult indeed to find one that has any clearly defined ideas as to what the United States *Pharmacopœia* really is, how it originated, what it represents, or what it contains. Many, even among older practitioners, do not make any distinction between the *Pharmacopœia of the United States of America* and the *United States Dispensatory*; two separate and distinct books, differing radically in their origin, their contents, and their uses. That this has not always been thus, is evident when we remember that the *Pharmacopœia* was originally published by order of the National Medical Convention, composed of representative physicians from different sections of the United States.

The book was primarily intended to be "An authoritative list of drugs and preparations, for the instruction and guidance of the apothecary, with a view of securing greater uniformity in the origin, purity, composition, and strength of the various substances used by physicians in the treatment of diseases." Without going into details as to the history of subsequent revisions, it will suffice to say that after the third decennial revision, when colleges of pharmacy and other incorporated pharmaceutical associations were invited to take part in the national convention, we find a gradual diminution of the interest taken by members of the medical profession. So much so, that at the present time the United States *Pharmacopœia* may practically be considered to be a pharmacists' book, and virtually is such. "A generally accepted list of drugs and preparations, including accurate descriptions and tests by means of which the different substances may be examined, as to their identity, purity, or efficiency."

A singular, and rather interesting, coincidence in

this connection is the fact that, with the gradual decrease of interest in the *Pharmacopœia* on the part of the physician, there has been a corresponding increase in the number of proprietary or patented preparations, ostensibly intended for the exclusive use of the medical profession. These proprietary preparations have, of late years particularly, increased to such an enormous extent, that they have avowedly become an unmitigated nuisance. As a direct result of this exuberant growth in the number of proprietary medicines, we find that in the last three decades practically no important advances have been made in our knowledge of the use and application of drugs, despite the tremendous strides that have been made in the general knowledge of the chemistry and composition of these same substances. The better class of medical men are beginning to realize that no practical advances in therapeutics can be made by putting into a body of which they know little a varying amount of a concoction about which they know less. In this connection it should be remembered that, in many cases, physicians have absolutely no knowledge of the composition, action, or uses of a particular compound, outside of the sweeping claims and vague statements of the manufacturer.

It need not surprise us, therefore, that many of our ablest medical men are taking up again and using simple and reliable remedies, the purity and efficiency of which can be definitely determined by well known and comparatively simple methods.

That a change of this kind will naturally direct the attention of medical practitioners once more to the contents and descriptions of the drugs, as given in the *Pharmacopœia*, goes without saying. A critical review of this book, as it is constituted at the present time, would reveal the fact that there is not a single therapeutic indication that cannot be met and successfully combated with one or more of the drugs or preparations contained in it. One other fact in this connection is perhaps not fully appreciated, and that is that among the untold thousands of patented preparations, not a single one has been demonstrated to be able to produce any physiological phenomena that cannot be produced by one or more substances readily available in the ordinary channels of trade. Indeed, it has often been asserted, and with much truth, that if a physician knew all the possible uses of fifty of the more active official drugs, he would have an armamentarium with which he could practise his profession or art in any part of the world.

It must be remembered, however, that before we can make any valid claims to as much as approximate knowledge of the action and uses of even a limited number of drugs, an untold amount of con-

scientious observation and work must be done on the various substances that are to comprise our ideal armamentarium. For this reason it is incumbent on the physicians, not alone of this country, but of the whole civilized world, again to lend their aid in furthering proper scientific and ethical advances. To do this successfully and effectively, it will not suffice that these observations be made sporadically or locally; they must be made continuously and over a wide area, covering different climatic conditions, different people, and different environments. To do this, and to have the observations made in any one section available in another, it will of course be necessary that the materials used in these observations be similar in strength and composition. An important step in this direction was taken at the recent international convention, held in Brussels, for discussing ways and means for unifying the more potent medicaments. This convention, after deliberating on several propositions that were presented, finally drew up and accepted a protocol covering the variable preparations of upward of twenty active or potent drugs, with a view of having them incorporated in the pharmacopœias of the different countries represented.

Some idea as to the necessity of such action becomes apparent when we realize that, while in the United States, a two-per-cent. solution of absolute hydrocyanic acid is used, in France a one-per-cent., and in Portugal and Spain a ten-per-cent. acid is dispensed under the same name. Tincture of cantharides, according to the British *Pharmacopœia*, is to represent 1.25 per cent. of the drug; according to our *Pharmacopœia*, it represents 5 per cent.; in the German, 10; and in the Belgian as high as 20 per cent. Our own excessively strong tincture of aconite may be quoted as another illustration of the same general variation. According to our *Pharmacopœia* it should represent 35 per cent. of the drug, while the French *Pharmacopœia* contains 20, the German 10, and that of Great Britain but 5 per cent. of the same quality and kind of aconite root.

These few examples, when we bear in mind the excessive potency of the preparations, will suffice to impress the importance of securing greater uniformity in the strength of the more active medicinal preparations used throughout the civilized world. This becomes a question of even more serious moment when we remember how extensively medical literature is being abstracted, and quoted in every section of the globe.

This proposition for international standards is of immediate moment to the medical profession of this country. It will largely rest with them, with their opinions and their actions, whether or not this innovation is to be introduced into the coming edi-

tion of the *Pharmacopæia of the United States of America*. Any action on this proposition should be quick, sharp, and decisive. Under ordinary conditions, the *Pharmacopæia* will probably be in print within a year, and while the necessary alterations or changes would not require any appreciable amount of time, they must be discussed and sanctioned by the committee having the revision in charge.

If local medical societies will adopt resolutions favoring the change or endorsing the action of the Brussels convention, and will forward a copy of these resolutions to the chairman of the Pharmacopœial Revision Committee, there can be no doubt that the Revision Committee will gladly incorporate these proposed international standard preparations in the coming edition of our *Pharmacopæia*. This would give us upward of thirty-eight titles, covering many of the more active preparations in our *Pharmacopæia*, that would agree in substance with more than 68 per cent. of the same titles official in other pharmacopœias at the present time. In addition to this there is every reason to believe that with subsequent revisions these same changes will be adopted in the pharmacopœias of every country represented at the Brussels convention.

Therapeutical Notes.

Ergot in Chronic Bronchitis.—M. Alfred Martinet (*Presse médicale*, December, 1901; *Annales de la polyclinique*, November) speaks highly of the effect of ergot in certain forms of chronic bronchitis. In an old woman affected with long standing pulmonary catarrh, who had repeated hæmoptyses, non-febrile, and consequent on congestion of both bases, the following pills proved very efficient:

- ℞ Extract of hyoscyamus. 0.01 gramme ($\frac{15}{100}$ of a grain);
Quinine sulphate. 0.05 gramme ($\frac{3}{4}$ of a grain);
Ergotin. 0.10 gramme ($1\frac{1}{2}$ grain).
M. For one pill. Send xxx. One to be taken every two hours except at night, or six in the twenty-four hours.

This treatment the author has found of great service subsequently in chronic bronchitis.

M. Renaut, who systematically uses ergot in chronic bronchitis, employs the following treatment: For the first four days of the week he gives balsamics; terpine, syrup of Canada balsam, syrup of Tolu, capsules of Vémie turpentine. The three last days he administers ergot in suppositories combined with opium or hyoscyamus:

- ℞ Extract of hyoscyamus. 0.01 ($\frac{15}{100}$ of a grain);
Powdered crude opium. 0.10 ($1\frac{1}{2}$ grain);
Ergotin Bonjean. 0.30 ($4\frac{1}{2}$ grains);
Cacao butter. q. s.
M. ft. suppos.

Five days weekly, six of the following pills may be given, to be taken two at a time, three times in

the twenty-four hours, together with ho. sugar water containing syrup of Tolu:

- ℞ Extract of hyoscyamus. 0.01 ($\frac{15}{100}$ of a grain);
Terpine. 0.10 ($1\frac{1}{2}$ grain);
Ergotine Bonjean. 0.05 ($\frac{3}{4}$ of a grain).
M. For one pill. Send xxx.

In the bronchoplegia of grippe, the ergot may be reinforced by the following:

- ℞ Strychnine sulphate. 0.001 ($\frac{15}{1000}$ of a grain);
Ergotine. 0.05 ($\frac{3}{4}$ of a grain);
Quinine sulphate. 0.10 ($1\frac{1}{2}$ grain).
M. For one pill. No. 30. One every two hours, except at night, or from six to eight in the twenty-four hours, with an infusion of hot sugar, water and syrup of Tolu, and a teaspoonful of old Cognac.

Physostigmine in Intestinal Troubles.—Noorden (*Rivista critica di clinica medica*, November 1st) advises the internal administration of physostigmine in relaxed intestinal conditions to combat threatened tympanites; also where peritonitis exists, and in typhoid fever, meteorism is favorably influenced. The dose of physostigmine should be half a milligramme (1-130 of a grain) twice or thrice daily. The drug may be prescribed according to the following formula:

- ℞ Physostigmine salicylate. 0.0005 gramme ($\frac{1}{100}$ of a grain);
Sugar of milk. 0.3 gramme ($4\frac{1}{2}$ grains).
M. ft. pil. One to be taken twice or thrice daily.

The Hypodermic Treatment of Syphilis.—Anthony (*Gazzetta degli ospedali e delle cliniche*, October 30th) recommends injections of mercury biniodide according to the following formula:

- ℞ Mercury biniodide. 0.10 gramme ($1\frac{1}{2}$ grain);
Potassium iodide. 0.60 gramme (9 grains);
Sodium phosphate. 1.0 gramme (15 grains);
Distilled water. } 50 cub. cents. (15 drachms).
Normal saline solution }
M. ft. solutio. One cubic centimetre (16 minims) of this solution contains 1 centigramme ($\frac{15}{100}$ of a grain) of mercury biniodide.

Catechu in Diarrhœa.—Huchard (*Journal médical de Bruxelles*, No. 20, 1902; *Gazzetta degli ospedali e delle cliniche*, October 9th) considers that catechu has fallen into undeserved disuse, and recommends it very strongly in rebellious diarrhœas, particularly of that form that demands for some subjects a milk regimen. He uses it in pill form, according to the following formulæ:

- ℞ Powdered catechu. 0.15 gramme ($2\frac{1}{4}$ grains);
White honey. enough to make 1 pill.
M. ft. pil. i. Five or six may be taken daily.

Or this:

- ℞ Powdered catechu. 0.15 gramme ($2\frac{1}{4}$ grains);
Quinine sulphate. 0.15 gramme ($2\frac{1}{4}$ grains);
Powdered opium. 0.01 gramme ($\frac{1}{7}$ grain);
White honey. enough to make 1 pill.
M. ft. pil. i. Two to be taken four times daily.

The author prefers the first form.

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THE HEALTH OF CHICAGO.

Of the large cities of our country, Chicago is one of the few whose people are most able to profit by the workings of the health department, for Commissioner Reynolds's weekly bulletins regularly contain some readily comprehensible comment on the morbidity and mortality of the city. That one of them which deals with the returns for the week ending December 20th contains the reminder that during the week Lake Michigan, from which the city draws its drinking water, was "a sea, not of water, but of mud," and that, tested both bacteriologically and chemically, its quality for drinking purposes was worse than at any other time since the department began its daily investigations. "Its repulsive appearance," continues Dr. Reynolds, "makes the department's warning against its use untreated largely unnecessary. Still, it should be remembered that long after its turbidity has disappeared it will be unfit for drinking purposes until thoroughly sterilized. Continue to 'boil the water.'"

Nevertheless, Chicago's mortality from typhoid fever during the period embraced between the week ending September 20th and that ending December 6th was less proportionately than the aggregate in thirty-six other American cities as reported by the United States Public Health and Marine Hospital Service. In the thirty-six cities, having, according to the last census, populations amounting in all to 9,694,110, there were 14.4 deaths to each 100,000 of population, while in Chicago, having, according to the same census, 1,698,575 inhabitants, there were only 12.9. The typhoid fever morbidity of Chicago has of late been more than usually marked among those members of the community who are so pros-

perous that they can be treated at their own homes, while the number of hospital cases has shown a very decided decrease. It happens every year that many a wealthy denizen of a great city comes back to town from his summer sojourn in the country with the germ of typhoid fever in his system; it would be interesting to know how many of the poorer classes among the people of Chicago get their infection from short trips into the surrounding country rather than by drinking the tap water of the city.

On the whole, the present mortality rate of Chicago is high, but Dr. Reynolds finds compensation for this fact in the recent awakening that seems to have taken place in the matter of sanitary legislation. "Within a short time," he says, "the City Council has either enacted or favorably considered ordinances looking to the prevention of death from burns caused by the explosion of the 'parlor match'; for the amelioration of the environment of infant and child life by a provision for the supervision by the Health Department of public nurseries—the so called 'baby farms'—the mortality in which has been as bad almost as Herod's; for some adequate care and shelter for the contagious diseases of childhood; for more healthful living in tenement houses; and for further restriction of the smoke nuisance." We congratulate the people of Chicago on having so progressive and conscientious a health commissioner as Dr. Reynolds.

ABNORMAL MOBILITY OF THE KIDNEY.

As a rule, we object to the arbitrary division of abnormal conditions into "degrees" or "stages." Take the case of a burn, for example. Burns have been divided into those of the "first degree," or rubefaction, those of the "second degree," or vesication, and those of the "third degree," or actual destruction of tissue; but how exceptional, not to say phenomenal, must be that burn of the "third degree" in which some parts of the area involved do not show injury to the extent only of vesication or, indeed, of mere rubefaction! So, too, of "degrees" of retroversion of the uterus; any one of them may merge into another, and all measured amounts of variation from the real or assumed normal posture of the organ owe their comparative importance to concomitant conditions. Classification must not be too strict.

We are led to these remarks by the perusal of an article entitled *Injurious Renal Mobility* ("Nephrospasis") in *Relation to Gynæcology, Founded on the Examination of One Hundred Consecutive Patients*, by W. F. Victor Bonney, M. S., M. D. (Lond.), F. R. C. S., M. R. C. P., assistant physician to the Chelsea Hospital for Women, London, which we find in the December number of the *Edinburgh Medical Journal*. In examining the right kidney, says Dr. Bonney, with the patient recumbent on the back and the knees drawn upward and slightly toward the side to be examined, the fingers of the left hand are placed over the twelfth rib behind while the thumb gently grasps the anterior parietes immediately below the costal margin. The patient being told to breathe quietly, the loin is now gently compressed until the thumb can feel the anterior surface of the quadratus lumborum while internally its tip rests against the ridge formed by the spine and the psoas muscle. This compression being maintained, the patient is told to take two or three deep but quiet breaths. If the kidney can then be grasped between the thumb and fingers, but cannot be prevented from receding on expiration, "this is the first degree of renal mobility." Presumably, from the title of his article, although he does not make the express statement, this "first degree" of renal mobility is considered by Dr. Bonney as "injurious," but we think there are many experienced gynæcologists who would dissent from this view.

If the kidney thus seized can be held in place during expiration, Dr. Bonney regards it as injuriously mobile in the "second degree," and if, during expiration, the continued compression forces it still farther downward, he looks upon it as injuriously movable in the "third degree." How comprehensive must be this "third degree" if it includes, not only cases in which the kidney is found low in the abdomen, but also those in which it can be squeezed down a little below the point at which it was grasped! Therefore, what is the use of this "degree" in classification?

If we thus demur to Dr. Bonney's division of nephroptosis into "degrees," it does not follow that we dissent from the greater part of what he has to say on the subject; on the contrary, we commend his article as being most instructive to the inexperienced gynæcologist. It is only in the matter of classification that we question the author's wisdom.

DUST AND OCCUPATION DISEASES.

New York's commissioner of street cleaning, Dr. Woodbury, did well when he lately directed his attention to ascertaining the comparative prevalence of bacteria in the air of various streets and at different heights above the pavement, for the connection between disease and germ-ridden dust is a close one and one constantly in action in large cities. But dust *per se*, quite apart from any contamination with pathogenic microorganisms is something with which we must reckon in seeking to extend our knowledge of the causes of disease and to combat its prevalence. This was quite graphically brought out by Sir James Crichton-Browne, M. D., LL. D., F. R. S., in an address entitled *The Dust Problem*, delivered before the Section in Sanitary Science and Preventive Medicine of the Sanitary Institute Congress held in Manchester, England, last September.

Speaking of dust as "dust and nothing more"—meaning dust that was injurious by its physical properties, and not by being in itself poisonous or as the vehicle of pathogenic organisms—Sir James remarked that the mortality of the principal dust-producing occupations, compared with that of agriculturists, who lived and worked in an atmosphere virtually free from dust, was excessive to a startling degree. He did not maintain that this excess was to be ascribed to dust alone, for no doubt, he said, various factors contributed to it, but the facts that it was due mainly to respiratory diseases, that it was distributed among the several occupations pretty much in proportion to their dustiness, and that it had diminished in some instances in which dust had been effectually dealt with justified the conclusion that it was largely dust-begotten. From carefully prepared statistics of the comparative mortality from specified causes in certain particularly dusty occupations he showed that there were twenty-two industries in each of which the mortality from respiratory diseases was more than double that of the agriculturists, and that these twenty-two occupations included eight (giving employment to more than 100,000 men) in which the total mortality from these diseases was from three to four and a half times as great as among the agricultural class. Among potters there were 1,001, among cotton workers 540, and among bakers 392 deaths from respiratory diseases to every 221 among the agriculturists. Surely

this is a showing that should make us redouble our efforts to limit the production of dust in industrial occupations.

EXPERT TESTIMONY AGAIN.

A curious addition to the controversy on this well worn subject comes to us from England, in the shape of a judicial decision in the case of *Waters and Wife v. the Brighton Gas Company*. According to the *British Medical Journal* for November 29th, the plaintiffs brought suit against the company to recover damages for injury done to their health by a gas leakage in their bedroom, due to the negligence of the defendant company's servants. Medical evidence for both the complainants and the defendants agreed that the former were suffering from lung trouble, but differed as to whether the lung trouble was in any way due to the gas leakage. The jury gave a verdict of \$2,500 in the case of the husband, whose ailment was serious, and of a lesser amount in that of his wife, who had suffered less severely. The judge, however, refused to allow costs for the medical witnesses, remarking, "I will give nothing to the medical witnesses." Under these circumstances, therefore, the complainants, though winning their case, would be unable to recover from the defendants any part of the fees paid to the medical witnesses called by their counsel. Now, it must be obvious that the essential point in this case was whether the injury had been caused by the gas leak, and further that, medical evidence apart, the jury could have had absolutely no data upon which to arrive at the conclusion at which they did arrive; consequently, in spite of the conflict of testimony, they must have put faith in the medical evidence for the complainants, whatever views they may have held in regard to the motives that influenced the medical witnesses for the defense in their view of the case. It is clear, therefore, that an injustice was done to the complainants and to those physicians who testified in their behalf. Either the judge, then, disagreed with the jury in his estimate of the relative trustworthiness of the two sets of expert evidence, or he must have wished to express his disapproval of a conflict of expert testimony in such cases. In the former case, we have no means of knowing on what grounds such an antagonism was based, and even if we had, we doubt the propriety of the course followed; in the latter, we should like to ask the learned judge whether he would approve of withholding fees from all counsel in cases where an opinion as to the legality of a proposed course is subsequently shown by a court ruling to be unsound; or better still, what he would say if judges were mulcted in costs whenever their judicial opinion was reversed, or, in the case of

a bench, a majority and not a unanimous decision was given. The latter seems to us a pretty close parallel, and instances in which it could be brought to issue are almost as common as those of conflict of opinion between expert witnesses, and have not one whit more excuse, indeed, not half so much. We are as sensitive of the dignity of the medical profession as ever the lawyers are of theirs, and are as anxious as anyone that some means should be devised, if possible, to put an end to the unseemly conflicts of medical evidence that are only too common; but we are distinctly of opinion that neither lawyers nor judges, particularly judges, can afford to throw stones at us until they come out of their own glass houses.

A PROPOSED CONSOLIDATION OF THE GOVERNMENT MEDICAL SCHOOLS.

Dr. J. A. Nydegger, of the United States Public Health and Marine Hospital Service, in a letter that he has been good enough to send us, makes what seems to us a very sensible suggestion, namely, that the Army Medical School, the corresponding naval school, and the laboratory for the instruction of young officers of his own corps be virtually consolidated. Since they are all situated in Washington, he says, their amalgamation would be feasible. Concentration of teaching resources is always to be aimed at, and in the absence of objections of which we are not aware, we think Dr. Nydegger's scheme would prove beneficial.

SPECIAL EDUCATION FOR THE MENTALLY DEFICIENT.

The report recently made by the principals of public schools in Greater New York at the direction of the Board of Education indicates that about 8,500 children out of some 500,000 attending school are mentally subnormal. This would give a percentage of about 1.7 of children who from their mental deficiencies are not able to reap the proper advantages of class education, who probably suffer seriously from the overstrain that must necessarily attend their coeducation with their brighter fellows, and who no doubt react unfavorably on the progress of those with whom they are associated. The figures are, of course, only approximately accurate, but making very considerable allowance for error on the side of excess, it would seem that here is a class of children who, in the interests alike of themselves, their fellows, the teachers, and in later life the community at large, urgently need special provision as regards educational facilities. These children are not to be classed with idiots, imbeciles, or epileptics, for whom the State already makes provis-

ion. They are children in possession of normal faculties, though in a very deficient degree, so that they imperatively need an amount of special individual attention that cannot possibly be given them in the ordinary schools, save at the expense of their normally intelligent schoolfellows. On economic grounds the subject is one that urgently calls for attention at the hands of our statesmen, and from the standpoint of public health demands the earnest attention of physicians. Special classes with training on an altogether different plan from that in vogue in the public schools would seem in a general way the direction in which efforts at improvement should tend.

AGAIN THE DOCTOR IN GENERAL LITERATURE.

Our desire that medical men should figure largely in general literature is well known to our readers. During the last few weeks we have been very much pleased to receive two non-medical books written by physicians. One of them is by Dr. William S. Gordon, of Richmond.¹ Dr. Gordon, in his little book, has given us, not only a charming collection of reminiscences of the South as it was before the days of the civil war, but by far the best exposition of negro dialect and negro habits of thought that we have ever met with. A short essay on The Negro Dialect, introductory to the body of the book, is an admirable synopsis of the subject, one quite worthy to rank with the best productions dealing with such matters. Future writers who have occasion to introduce negro dialect into their works will do well to consult Dr. Gordon's very pleasing book.

The other book that we have in mind is by a New York physician, Dr. Ralcy Husted Bell,² and it, too, deals with language, though not particularly with dialect. Dr. Bell's work is much on the order of books by Professor de Vere, Dean French, and Mr. George Washington Moon, and it will not suffer by comparison with any of them. We are proud that a member of our profession should have given such a book to the world.

MALARIAL DISEASE AND THE NEW YORK HEALTH DEPARTMENT.

We have often praised various boards of health for disseminating among the people trustworthy information concerning matters pertinent to the health of their several communities. We now take great pleasure in recording the fact that the New York board has published three circulars concerning malarial disease. The people of the city trust their health department, and they will therefore learn from these circulars much that they might otherwise have missed.

News Items.

Society Meetings for the Coming Week:

MONDAY, January 5th.—New York Academy of Sciences (Section in Biology); German Medical Society of the City of New York; Morrisania Medical Society, New York (private); Brooklyn Anatomical and Surgical Society (private); Utica, N. Y., Medical Library Association; Boston Society for Medical Observation; St. Albans, Vt., Medical Association; Providence, R. I., Medical Association; Hartford, Conn., Medical Society; South Pittsburgh, Pa., Medical Society; Chicago Medical Society.

TUESDAY, January 6th.—New York Neurological Society; Buffalo Academy of Medicine (Section in Surgery); Elmira, N. Y., Academy of Medicine; Hudson, N. J., County Medical Society (Jersey City); Androscoggin, Me., County Medical Association (annual, Lewiston); Baltimore Academy of Medicine; Medical Society of the University of Maryland (Baltimore).

WEDNESDAY, January 7th.—New York Academy of Medicine (Section in Public Health); Society of Alumni of Bellevue Hospital; Harlem Medical Association of the City of New York; New York Genitourinary Society (annual); Medical Microscopical Society of Brooklyn; Medical Society of the County of Richmond, N. Y. (annual, New Brighton); Penobscot, Me., County Medical Society (Bangor); Bridgeport, Conn., Medical Association.

THURSDAY, January 8th.—New York Academy of Medicine (Section in Pædiatrics); New York Academy of Medicine (Section in Otolaryngology); Society of Medical Jurisprudence and State Medicine, New York; Brooklyn Pathological Society (annual, election); Medical Society of the County of Cayuga, N. Y.; South Boston, Mass., Medical Club (private); Pathological Society of Philadelphia; Church Hill Medical Society of Richmond, Va.

FRIDAY, January 9th.—New York Academy of Medicine (Section in Neurology); Yorkville Medical Association, New York (private); Brooklyn Dermatological and Genitourinary Society (private); German Medical Society of Brooklyn; Medical Society of the town of Saugerties, N. Y.

SATURDAY, January 10th.—Obstetrical Society of Boston (private).

Change of Address.—Dr. Henry C. Williamson, formerly of Sailor Snug Harbor, Staten Island, to No. 59 West Ninety-seventh street, New York City.

The Manila Medical Society has been organized in Manila, P. I., along the lines proposed for local organization by the American Medical Association and has made formal application for recognition as an affiliated body.

A Medical Library at Atlanta.—The Atlanta Medical Society has arranged with the Carnegie Library officials of that city to have the library authorities care for a collection of medical works to be presented by the medical society as a basis for a medical library.

The Mt. Sinai Alumni.—The Alumni Association of Mt. Sinai Hospital will give the annual dinner on January 15th at the Arena. Besides the members of the association several guests will be present, among whom will be the president and the vice-presidents of the hospital.

A Medical Museum, intended to illustrate the development of medicine in Holland, was formally opened at Amsterdam, on November 15th. The Museum contains four rooms which are arranged respectively, a pharmacy, a laboratory, a "restraint" room and a lying-in room. The whole forms part of the Communal Museum of Amsterdam.

¹ *Recollections of the Old Quarter.* By William S. Gordon, M. D. Published by Moose Bros. Company, Lynchburg, Virginia, 1902.

² *The Worth of Words.* By Dr. Ralcy Husted Bell, with an Introduction by Dr. William Colby Cooper, The Grafton Press, New York.

To Raise the Grade of Preliminary Requirements in Wisconsin.—The Committee on Legislation of the Wisconsin State Medical Association has in course of preparation a bill which will be presented at the next session of the Legislature requiring that all candidates for admission to the medical schools must have taken a four years' course at a standard high school.

City Hospital Changes.—The old amusement hall on Blackwell's Island is being altered for use as a hospital for convalescents at an expenditure of \$10,000. An isolation hospital for children is to be erected on Randall's Island opposite One Hundred and Twenty-second street. The plans provide for three one-story frame buildings, each covering an area of twenty by forty feet.

The International Congress for the Prevention of Industrial Diseases is to be held in Milan in 1904 coincident with the festivities of the Simplon tunnel. The prime mover in the organization of the congress is Dr. M. de Critoforis, who is a member of the Italian Chamber of Deputies. An exposition of hygienic and sanitary appliances will be held in connection with the Congress.

A Dinner to Dr. Casey A. Wood.—The professors and lecturers of Bishop's Medical Faculty recently gave a dinner to Dr. Casey A. Wood, now of Chicago, formerly of Montreal. Among those present at the dinner were Dr. Roddick, Dean of the McGill Medical faculty, Dr. H. S. Birkett, president of the Medico-Chirurgical Society, and other well known physicians of Montreal.

A Sanitarium for the Isthmian Canal Commission.—The New York Academy of Medicine at its meeting on December 18th, adopted resolutions recommending that the President appoint a medical officer as a member of the Commission which is to be in charge of the Isthmian Canal. The resolutions further express the opinion that the amplest powers should be given to medical officers connected with the work.

The New Haven Medical Association will celebrate the one hundredth anniversary of its organization on Tuesday afternoon, January 6th, in the lecture room of the New Haven Historical Society, on Grove street, at the foot of Hillhouse avenue in that city. Addresses will be delivered by Dr. William Osler, of Baltimore, and Dr. Francis Bacon, of New Haven. On the Monday evening preceding a reception will be tendered the orators at the Yale School of the Fine Arts.

The Temple of Asclepius at Cos has recently been discovered by Dr. Rudolph Hertzog, of the University of Tübingen, who has been making excavations in the island of Cos. The temple measures about a hundred feet in length by forty-five in breadth. It was built of native marble and has a large number of fine columns. A number of interesting inscriptions have been brought to light, and also a fragment of a marble bas relief representing Hygeia with a large snake, the symbol of medical science.

An International Medical Congress at the St. Louis Exposition.—An Executive Committee for an International Medical Congress, to be held in St. Louis in 1904, has been appointed by the President of the St. Louis Exposition commission on the recommendation of Howard J. Rogers, Director of Congresses. The committee will include Dr. W. E. Fischel, Dr. L. H. Laidley, Dr. K. Tuholske, Dr. F. J. Lutz, and Dr. William G. Moore.

The Medical and Surgical Society of the State of California was incorporated recently at San Francisco. The directors are Dr. C. A. McQuestren, Dr. Marion Thrasher, Dr. J. B. Gerino, Dr. A. B. Nelson, Dr. V. J. Stearns, and Dr. C. W. W. von Tiedemann. The West Coast Medical College of California was also incorporated with a capital stock of \$100,000, all of which is subscribed. The directors of the last named institution are Dr. C. W. W. von Tiedemann, Dr. J. B. Gerino, Dr. F. and Dr. E. J. von Tiedemann, and Dr. F. B. Josephs.

The Plague Inoculation in India.—A central bacteriological laboratory is to be established at Bombay independently of the Plague Research Laboratory which is devoting its attention almost exclusively to the manufacture of prophylactic serum. Laboratories for bacteriological work are also to be established at Naini Tal and Wellington. It is reported that trouble is being experienced in the Punjab in carrying out the prophylactic inoculation for plague because the upper class natives decline to allow men to inoculate the women of their household. The Indian government has so far declined to recognize this prejudice by furnishing women operators.

Medical Clerks Wanted.—Examinations will be held by the United States Civil Service Commission at Washington, D. C., on January 27th and 28th, for the establishment of a list of medical clerks eligible for appointment in the Pension Bureau. The examinations will be open to persons over twenty years of age, the department desiring to secure those between that age and thirty years. The subjects on which the applicant will be examined include penmanship, letter writing, copying from rough draft, anatomy and physiology, diagnosis, general and special pathology, surgery and surgical pathology. Persons who desire to compete should apply to the civil service commission or the secretary of the board of examiners not later than February 17th. The position of medical clerk pays from \$900 to \$1,000 per annum.

The Medico-Legal Society of the District of Columbia was recently organized in the city of Washington, with the following officers: President, Dr. Robert Reyburn; vice-president, Dr. William Hughes; secretary, Dr. Charles M. Emmons; treasurer, Dr. C. Robinson, and attorney, Edwin Forrest. Among the charter members are: Dr. J. Ramsey Nevitt, Dr. Robert Reyburn, Dr. Benjamin Beall, Dr. William D. Hughes, Dr. C. R. Dufour, Dr. Charles Emmons, Dr. Yetton, Dr. Walmer, and Messrs. E. Richard Shipp, Edwin Forrest, C. Meeks, and Scoggs, the Hon. Simon Wolf, Edwin Padgett, Dr. Montgomery, and others. The next meeting

will be held the second Monday in January, when the subject for discussion will be "The Best Method of Commitment, Discharge, and Trial of Lunatics in the District of Columbia." Membership is limited to fifty.

Defective Ambulance Service in London.—A correspondent writes to a recent number of the London *Lancet* narrating the difficulties he experienced in endeavoring to secure an ambulance for the transportation of a private patient to a hospital. The total inadequacy of the ambulance service as brought out in this communication is almost incredible to one familiar with the excellent ambulance service of the larger cities of the United States. This subject is also made the topic for an editorial note in a recent number of the *British Medical Journal*, which urges upon the municipal authorities of London the necessity for providing efficient ambulance service somewhat after the fashion of that provided in the United States. In the note referred to attention is directed to the fact that Mr. Reginald Harrison twenty years ago pointed out the inadequacy of the ambulance service in the cities of Great Britain as contrasted with the character of the service rendered in the United States and Canada. While there has been some improvement in Liverpool since the publication of Mr. Harrison's address on this topic, the conditions in London are practically unchanged.

Professor Lorenz Has a Busy Week.—Professor Lorenz left New York City for Boston on Monday, December 22d, after spending a very busy week in this city. As stated in our last issue he operated on private patients on Sunday, the 14th. On Monday afternoon he held a clinic at the Hospital for Ruptured and Crippled Children, an account of which was published in our issue for December 20th. On Tuesday he operated at the Polyclinic Hospital, on Wednesday at the Post Graduate, on Thursday afternoon at the Cornell University Medical College, on Friday at the Bellevue Medical College and at the College of Physicians and Surgeons, on Saturday at the Kings County Hospital, and at the New York Orthopædic Hospital, and on Sunday at the New York State Hospital for Crippled and Deformed Children at Tarrytown. In addition to holding these clinics, which alone would furnish occupation for a fairly energetic man, Professor Lorenz was the guest of honor at half a dozen dinners and receptions, including one at the New York Academy of Medicine, and made a brief address at a meeting of a branch of the New York Hospital for Ruptured and Crippled Children. At the clinic at Cornell University Professor Lorenz operated on a case of club foot in which both feet were involved. The only mishap which occurred during his visit took place at the clinic at the Kings County Hospital, where a patient was administered an excess of ether and as a consequence respiration was suspended for a short time. Fortunately the patient recovered without any serious consequences. Altogether Professor Lorenz has performed about one hundred and twenty-five operations since he landed in this country. In Boston he received a cordial welcome,

and after operating at the Hospital for Children returned to this city. His last week in America was devoted to social engagements and to operating on a few private patients. On Tuesday he was tendered a reception at the City Hall by the Mayor and Board of Aldermen, when he was formally presented with the freedom of the city, together with an engrossed resolution of thanks. In acknowledging the receipt of the resolutions Professor Lorenz said:

When I first put my foot on this soil, three months ago, I had a sense of oppression because of the greatness of this place. A feeling of clumsiness came upon me. I had no idea then of the magnificent leave-taking you had prepared for me in this hour. Nor could I have any idea of the reception that would meet me everywhere in this country from the Atlantic to the Pacific Coast.

In olden times the freedom of cities used to be given to Princes and victorious warriors. To-day you are conferring the freedom of the city upon a poor and humble physician. This makes me think of the great changes that have taken place in the last few centuries. Not only Princes are honored to-day, but every man whose work tends to benefit mankind is, in your eyes, worthy of this honor. I take it gratefully from your hands. Need I assure you that this document will be the most precious reward of my efforts. This token of your esteem is a proof that in America wealth or position are not esteemed higher than work done for the relief of suffering humanity. This token of your esteem is a further proof that this city is not only unique in its wealth, but also unique in its charities.

I rejoice in this great honor all the more because I am far from regarding it as a personal one. I am proud to belong to a profession to which this honor is due. In honoring me you have honored the profession. I thank you from the bottom of my heart, and I assure you that I leave your glorious country with great regret and with the highest admiration for America and American people.

Dr. Lorenz sailed for Europe on Wednesday morning accompanied by his assistant, Dr. Müller, who is expected to return and take up his residence in this country.

The Abolition of the Office of Coroner has been recommended by the special committee of the New York County Medical Society which had been appointed for the purpose of investigating the subject. This committee, which was composed of Dr. William M. Polk, Dr. John W. Brannan, and Dr. Frank Van Fleet, presented their report at a meeting held on December 22d as follows:

Our investigation leads us to believe that the office of coroner is one whose work could be better accomplished if the office were abolished and its functions intrusted in others in such a way as to separate its medical and judicial duties. We believe a vast amount of scientific information is lost under the present system which, if it could be collected and properly preserved, might be made to serve a valuable purpose.

We believe that the system of medical examiners as in force in Erie County, this State, and in Massachusetts, would, with certain modifications in the method of appointment, be an excellent substitute for the present system in this city.

We desire to emphasize the statement that this report is not intended to reflect in any way on the present coroners of the City of New York. The system is inadequate and inefficient, but the present Board of Coroners, so far as we have been able to learn, has fulfilled the duties of the position as well as could be expected under such a system.

The report was accepted, but after some discussion a formal vote on a resolution calling for the abolition of the office was postponed.

Official News.

Infectious Diseases in New York:

We are indebted to the Sanitary Bureau of the Health Department for the following statement of cases and deaths reported for the two weeks ending December 27, 1902:

DISEASES.	Week end'g Dec. 20		Weekend'g Dec. 27	
	Cases.	Deaths.	Cases.	Deaths.
Typhoid fever.....	99	18	75	18
Scarlet fever.....	178	11	135	4
Cerebro-spinal meningitis....	0	0	0	2
Measles.....	145	7	127	10
Diphtheria and Croup.....	383	44	356	43
Small-pox.....	1	0	0	0
Tuberculosis.....	202	139	245	148

Public Health and Marine Hospital Service:

Official List of Changes of Station and Duties of Commissioned and Non-commissioned officers of the Public Health and Marine-Hospital Service for the Seven Days ending December 15th, 1902:

PARKER, H. B., Assistant Surgeon. Granted leave of absence for fourteen days from December 22.

WHITE, M. J., Assistant Surgeon. Granted leave of absence for fourteen days from December 23.

LLOYD, B. J., Assistant Surgeon. Relieved from duty at San Francisco Quarantine and directed to report to Surgeon A. H. GLENNAN, San Francisco, California, for duty.

BALLARD, J. C., Acting Assistant Surgeon. Granted leave of absence for five days from December 28.

GOLDSBOROUGH, B. W., Acting Assistant Surgeon. Leave of absence for three weeks granted by Department letter of November 22, 1902, amended so that said leave shall be for twelve days only.

LEONHARDT, S. C., Acting Assistant Surgeon. Granted leave of absence for one month from January 1.

Public Health and Marine-Hospital Service Health Reports:

The following cases of smallpox, yellow fever, cholera, and plague were reported to the surgeon-general during the week ending December 27, 1902:

Smallpox—United States.

Location.	Dates.	Cases.	Deaths.
California—Los Angeles.....	Dec. 7-14	1	
California—Sacramento	Dec. 6-13	2	
California—San Francisco	Dec. 7-14	3	
Georgia—Atlanta	Dec. 10-17	3	1
Illinois—Chicago	Dec. 13-20	2	
Indiana—Elwood	Dec. 14-21	1	
Indiana—Indianapolis	Dec. 13-20	22	4
Kentucky—Lexington	Dec. 13-20	1	
Louisiana—New Orleans	Dec. 13-20	1	Imported from Monroe, Louisiana.
Massachusetts—Boston	Dec. 13-20	16	6
Massachusetts—Everett	Dec. 13-20		1
Massachusetts—Lawrence	Dec. 13-20	2	
Michigan—Grand Rapids	Dec. 13-20	6	
Missouri—St. Louis	Dec. 7-14	14	
Nebraska—Omaha	Dec. 13-20	5	
New Hampshire—Manchester.....	Dec. 13-20	7	
New Hampshire—Nashua	Dec. 13-20	15	
New Jersey—Camden	Dec. 13-20	3	
New Jersey—Newark	Dec. 13-20	2	
New York—Buffalo	Dec. 13-20	2	
New York—New York	Dec. 13-20	1	
Ohio—Cincinnati	Dec. 12-19	1	
Ohio—Cleveland	Dec. 13-20	9	5
Ohio—Dayton	Dec. 13-20	7	
Ohio—Hamilton	Dec. 13-20	2	
Pennsylvania—Erie	Dec. 13-20	6	
Pennsylvania—Johnstown	Dec. 13-20	8	2
Pennsylvania—McKeesport	Dec. 13-20	1	
Pennsylvania—Philadelphia	Dec. 13-20	15	
South Carolina—Charleston	Dec. 6-13	3	1
Tennessee—Memphis	Dec. 6-13	2	
Washington—Tacoma	Dec. 7-14	2	
Wisconsin—Milwaukee	Dec. 6-20	15	

Smallpox—Foreign.

Austria—Prague	Nov. 22-29	9	1
Belgium—Antwerp	Nov. 22-29	1	1
Brazil—Bahia	Nov. 15-29	4	1
Ecuador—Guayaquil	Nov. 22-29		2
Gibraltar	Nov. 23-30	1	
Great Britain—Birmingham	Nov. 29-Dec. 6	1	
Great Britain—Edinburgh	Nov. 29-Dec. 6	1	
Great Britain—Leeds	Nov. 29-Dec. 6	3	1
Great Britain—Liverpool	Nov. 29-Dec. 6	18	4
Great Britain—London	Nov. 22-Dec. 6	10	
India—Bombay	Nov. 11-25		4
India—Calcutta	Nov. 15-22		1
India—Madras	Nov. 8-15		1
Italy—Palermo	Nov. 22-29	4	1
Mexico—City of Mexico	Nov. 30-Dec. 7	6	2
Russia—Moscow	Nov. 15-22	7	
Russia—Odessa	Nov. 22-29	1	
Russia—St. Petersburg	Nov. 22-29	4	1
Straits Settlements—Singapore	Oct. 8-25		1
Turkey—Constantinople	Nov. 23-30		3
Uruguay—Montevideo	Nov. 1-8	16	1

Yellow Fever.

Ecuador—Guayaquil	Nov. 29-Dec. 6		4
Mexico—Coatzacoalcos	Dec. 6-13	1	
Mexico—Tampico	Dec. 6-13		8
Mexico—Vera Cruz	Dec. 6-13	13	4

Cholera—Insular.

Philippines—Manila	Oct. 19-Nov. 1	33	20
Philippines—Cebu	Oct. 30		1
Philippines—Provinces	Oct. 19-Nov. 1	7,764	4,806

Cholera—Foreign.

Egypt—Alexandria	Nov. 22-29		11
India—Bombay	Dec. 11-25		1
India—Calcutta	Nov. 15-22		26
Java—Batavia	Oct. 24-Nov. 8	81	68
Straits Settlements—Singapore	Oct. 18-25		17

Plague.

China—Hongkong	Nov. 1-8	1	1
India—Bombay	Nov. 11-25		253
India—Calcutta	Nov. 15-22		9
India—Karachi	Nov. 16-23	19	18

Naval Intelligence:

Official List of Changes in the Medical Corps of the United States Navy for the Week ending December 27th, 1902:

BERTOLETTE, D. N., Medical Inspector. Ordered to duty as Fleet Surgeon of the Pacific Station.

GREEN, E. H., Medical Inspector. Detached from duty as Fleet Surgeon of the Pacific Station and ordered to the Wisconsin.

Births, Marriages, and Deaths.

Married.

BOYER—BOWMAN.—In Demascus, Maryland, on Wednesday, December 24th, Dr. George Milton Boyer, of Washington, and Miss Annie Marie Bowman.

MACKLIN—MAXWELL.—In New York City, on Monday, December 29th, Dr. Walter Fullarton Macklin and Miss Elaine Rogers Maxwell.

PFAHLER—HAYS.—In Kansas City, Missouri, on Tuesday, December 16th, Dr. William H. Pfahler and Miss Mayme Hays.

SOHMER—MUESER.—In New York City, on Friday, December 26th, Dr. Alphonse E. Sohmer, of Buffalo, N. Y., and Miss Elizabeth Mueser.

Died.

BEELER.—In Baltimore, Maryland, on Tuesday, December 23d, Dr. George B. Beeler, in the fiftieth year of his age.

BRADY.—In New York City, on Wednesday, December 24th, Dr. Frederick L. Brady, in the thirtieth year of his age.

BROWNELL.—In New Bedford, Mass., on Sunday, December 28th, Dr. William E. Brownell, in the forty-third year of his age.

HUNTSMAN.—In Kansas City, Kansas, on Wednesday, December 24th, Dr. E. D. Huntsman, of Argentine, Kansas.

LOUGHLIN.—In Philadelphia, on Saturday, December 27th, Dr. Denis J. Loughlin, in the fifty-sixth year of his age.

VAN MAGNESS.—In Chelsea, Mass., on Monday, December 23d, Dr. Benjamin Van Magness.

VENN.—In Chicago, on Wednesday, December 17th, Dr. Ferdinand Venn, in the thirty-second year of his age.

Pith of Current Literature.

PRACTICE OF MEDICINE.

Notes on Sleeping Sickness. By C. A. Wiggins, M. R. C. S. (*Lancet*, December 13th).—The author states that the sleeping sickness is very common on the shore of Kavirondo bay in Lake Victoria Nyanza; although it had only been there for fifteen months, yet half the population was affected. He took notes of 150 cases; in none of them did he find *Filaria perstans* in the blood. The most striking sign of the disease is the expression; at the end of the first month the sufferer has a vacant expression with a drooping of the lower lip showing the teeth. At the end of the second month the manner gets listless, the face becomes puffy, and the upper eyelids begin to droop. Later, saliva drips from the hanging lip and the whole body is filthily dirty. There are marked tremors in all the limbs and the patient is likely to fall suddenly and helplessly to the ground. At the end of the fourth month the sufferer cannot get about at all, but lies on the ground in one of three positions: (1) Flat on the ground with the face downward and resting on the hands; (2) doubled up on the left side with the limbs curled up; or (3) kneeling down and leaning forward. During this last month horrible sores develop, and the patients defecate as they lie, and a heap of saliva accumulates by the head. The eyes are closed and the patients seem unable to open them. They are also unable to speak at this stage, which lasts from a fortnight to a month, when they die. The appetite during the first two months is immense, yet there is no gain in weight. The skin is nearly always dry and scaly, sixty per cent. of the cases suffering also from *kra-kra*. The most constant symptom is a remarkable quickening of the pulse: the average pulse-rate being 133 beats per minute. The superficial glands are enlarged in every case, more constantly on the left side than on the right. There is no complaint of pain. The author treated a few of the cases with arsenic during his short stay in the neighborhood, with apparently beneficial results.

A Report on Tuberculin as a Means of Diagnosis. By J. D. Madison, M. D., (*American Medicine*, December 20th).—Dr. Madison's experiments were made at Danvers Insane Hospital. For two years and a half all those admitted to the female wards were injected, unless the condition of the patient rendered it impossible or undesirable. This series of consecutive cases numbered 400. Other patients were also used, bringing the actual number up to 525. The author used Koch's original tuberculin and had it imported from Germany. The technics of the method employed in making the tests is fully given. Eight cases which came to autopsy and which are of special interest are also given. Dr. Madison reviews the work that has so far been done, by many observers both at home and abroad, to determine the place tuberculin should hold as a diagnostic aid, and analyzes the results alleged. His own conclusions are as follows: (1) Patients may react to tuberculin and no evidence of tuberculosis be found at autopsy. (2) Apparently completely healed tuberculosis may react. (3) Cases of proved

tuberculosis may not react to the maximum doses. (4) The evidence is not conclusive that other diseases than tuberculosis may react to tuberculin. (5) The margin of error of the tuberculin test is considerable and probably not less than 10 per cent. (6) The maximum dose should be higher than 4 milligrammes, and not more than 10 milligrammes. Small increasing doses are not advisable, as the reaction is not so likely to be distinct, on account of the tolerance which may be produced. An initial dose of from 3 to 5 milligrammes, followed by the maximum dose, is better. (7) The temperature should usually be normal before injections are given. When the temperature is distinctly above normal a negative result is of no value, as these patients will frequently not respond at all, even to large doses. (8) It seems quite certain that the glycerin extract of tuberculin deteriorates, and a fresh bottle should frequently be opened, care being taken to keep it in a cool, dark place. The 5 per cent. carbolic acid solution should be made up on the day it is used if possible. The deterioration of tuberculin is the principal factor in producing delayed reactions. (9) It cannot be said that tuberculin injections are entirely without ill effects, but their use among suitable patients is no more dangerous than the use of chloroform and ether for diagnostic purposes, and is quite as justifiable, as an early diagnosis of tuberculosis is of the greatest importance. (10) About 40 per cent. of all female patients admitted to the hospital reacted to tuberculin.

A Case of Angina Pectoris, with Autopsy. By Beverley Robinson, M. D. (*Medical Record*, December 20th).—The case is an unusual one and the cause of the angina is not very clear. The subject was a man sixty-four years old with a rather gouty history. The kidneys were normal, and there was no history of alcohol, syphilis, or malaria. He had suffered from anginoid attacks for a number of years. The fatal attack was of four days' duration, with remissions due to morphine and exhaustion. He was at times violently maniacal. For the last three quarter hours of his life, he was more or less under the influence of chloroform or ether. The autopsy, which is recorded quite fully, gives the following data of special interest. The heart was large and well nourished, and was both hypertrophied and dilated. The coronary arteries, though sclerosed, were patulous throughout. "The important thing was the general arteriosclerosis. I have never seen a case in which it was so generally distributed." The kidneys, though congested, were not diseased. In the attacks witnessed by Dr. Robinson, and he did not witness the last one, there was high arterial tension, and the attacks were not brought on by over-exertion. Dr. Robinson in reviewing this case expresses the following opinions: ". . . I regard the repeated attacks of angina as probably of so-called uræmic origin, and the final maniacal seizure as being of this origin also . . . Of course, the general arteriosclerosis was the anatomical feature of the case, which rendered the uræmic symptoms possible and ultimately fatal. The mere fact that the kidneys showed possibly only passive congestion, does not, to my mind, render the attacks different, essentially, from what they would have been with more advanced structural changes in these organs."

Some Points on the Ætiology of Tuberculosis. Dr. Arthur Latham (*Edinburgh Medical Journal*, November, 1902) in an extended article brings out the following points: (1) Hereditary tuberculosis is so rare as to be a negligible factor. (2) It is not proved that tuberculous patients hand down to their children tissues which are especially receptive to tuberculosis. (3) Tuberculosis always results from a preexisting case of the disease, and the bacilli are conveyed by the mouth spray, by the expectoration or other discharge, and by means of foodstuffs, more especially milk. (4) It is improbable that infection often takes place from air respired through the nasal passages. (5) The tubercle bacilli, whether the infection is through the air or the food, enter the new host by the mouth in the majority of cases. (6) The bacilli may then be destroyed by the natural defensive actions of the body in the respiratory and alimentary tracts, or they may pass into various parts of the body in the following ways—(a) By direct inhalation into the alveoli of the lungs. (b) By being brought in contact with the mucous membranes of the parts common to the respiratory and alimentary tracts, such as the tonsils, and then by passing through these mucous membranes, either with or without local changes, to the lymphatic vessels, and so to the cervical, tracheal, bronchial or other glands. (c) By being carried to the stomach and intestines. (7) The spread of tuberculosis within the human body is not by the blood stream, save when generalized miliary tuberculosis is found. (8) The spread of tuberculosis within the human body is by the lymphatic vessels and lymphatic lacunæ. This fact may explain why the lungs are chiefly affected in the adult, and the bronchial glands chiefly affected in the young child, as the age at which the change begins corresponds with the age at which a considerable alteration in the lymphatic paths in the neighborhood occurs, owing to the involution of the thymus.

A Case of Typhoid Spine. By Leonard W. Ely, M. D., (*Medical Record*, December 25th).—Dr. Ely's case is very much his own, as he was the patient he now writes about. Typhoid spine was first reported in 1889 by Gibney. Dr. Lord, of Boston, has collected twenty-six more cases, dating from Dr. Gibney's report to January 1, 1902. The author of the present paper has found three additional cases in the literature. The probable ætiology is infection by the typhoid bacillus. The pathology is conjectural as no cases have yet come to autopsy. It is reasonable to suppose, however, that the symptoms are due to an osteitis and a periosteitis of some part of the spinal column. Typhoid spine bears the same relation to typhoid, that Pott's disease does to tuberculosis. Osler's views of the pathology of typhoid spine differ from those generally held; he considers the complaint a neurosis and reports six cases. Dr. Ely thinks these cases either very mild ones or cases of mistaken diagnosis. The chief symptoms are, pain, weakness, stiffness, disability and muscular spasm of the lumbar muscles. Local tenderness has been observed in eighteen cases. The pain may be in the back, groin, abdomen, hip, or thigh. The symptoms are much like those of lumbar Pott's, but they are more acute, and have the history of a previous typhoid fever. Lateral curvature has been ob-

served in three cases. Diagnosis with our present knowledge is apt to be difficult, but any severe lumbago following typhoid fever should be treated as typhoid spine. The prognosis is good, in all the recorded cases recovery ensued; two or three patients had relapses. The treatment should be by rest and possibly by fixation. Osler holds different views owing to his different conception of the pathology and recommends massage, electricity, and general tonics.

A Case of Adiposis Dolorosa, with Involvement of the Joints. By F. X. Dercum, M. D., (*Philadelphia Medical Journal*, December 20th).—The value of the case is due to the joint complications. This complication is exceedingly rare. One other instance has been placed on record by Renon and Heitz, in 1901. In their case there were, in addition to painful fatty masses upon various portions of the arms and legs, marked pain, creaking, and limitation of movements in numerous joints. A skiagraph of the left knee failed, as it did in Dercum's case, to reveal any alterations of the articular surface. Symptomatically the case reported by the French observers is almost paralleled by the Philadelphia case. Dr. Dercum, after a careful examination of the joints in his case, concludes that there was present a marked thickening of the synovial membranes and possibly of other structures in the neighborhood of the joints. There was a marked tendency to the formation of fringes and rice bodies. There was probably also a chronic synovitis. Rheumatism does not afford an adequate explanation of the condition found, while rheumatoid arthritis is excluded by the absence of changes in the bones and cartilages.

SURGERY AND ANATOMY.

The Surgery of Acute Appendicitis. By C. B. Lockwood, F. R. C. S. (*Lancet*, December 13th).—The main points to be taken into consideration before deciding to operate in acute appendicitis, are: (1.) The mode of onset, including the intensity and duration of the pain, the rigor, and the vomiting. (2.) The pulse, temperature, and respiration. (3.) The degree of constipation or obstruction. (4.) The condition of the abdomen as regards tenderness, rigidity, hardness, distention, œdema, redness, and mobility of the abdominal walls and of the intestines. (5) Micturition. (6.) The inflammatory swelling. (7.) The presence or absence of complications, such as colitis, nephritis, cystitis, pleurisy, pneumonia, subdiaphragmatic abscess, hepatic abscess, septicæmia, pyæmia, tubercle, actinomycosis, and malignant disease. Pregnancy is an occasional and serious complication. When in doubt operate. The author does not favor the use of morphine or of purgatives. A small dose of opium given by the rectum is all that is required, and that not often. Enemata are as effectual as purgatives, and much safer. In operating during acute appendicitis the presence of abscess is always to be reckoned with. As regards the question of searching for and removing the acutely inflamed, perforated, or gangrenous appendix when pus is present, the author holds that it is better to make a determined effort to remove the appendix than

deliberately to leave it behind. He recommends biniodide catgut for securing the bleeding vessels, the mesoappendix, the stump of the appendix, the omentum, and the layers of the abdominal wall. When pus is encountered the wound should be drained by means of rubber tubes and gauze. The three chief complications to be feared are shock, vomiting, and flatulent distention.

A Case of Exophthalmic Goitre Treated by Bilateral Resection of the Superior Ganglion of the Cervical Sympathetic.—Upon the successful treatment of exophthalmic goitre by this method, E. Nuñez (*Revista de Medicina Y Cirugia de la Habana*, November 10th) bases an argument in favor of the operation, rejecting partial or complete thyroidectomy on account of its gravity and possible unfavorable after effects. In old and degenerated goitre alone, does he consider the operation indicated. Exothyropexy, he reserves for cases in which a rapid operation for the relief of distressing symptoms is imperative, or for goitres occurring in the young; in such cases the prospect of atrophy of the tumor following the operation is very good. As a preliminary to an ultimate thyroidectomy he also considers this procedure advantageous. But, in cases of a small goitre without symptoms of compression though accompanied with exophthalmos, cardiovascular symptoms, tremor, pronounced digestive disturbances, and general prostration, sympathectomy is considered the most desirable operation. The immediate effect of cervical sympathectomy upon exophthalmos, tremor, tachycardia, and diminution in the size of the tumor, constitute therapeutical advantages which are more or less permanent, and should, in the author's opinion, place this operation in the front rank among the curative measures for exophthalmic goitre. A case illustrative of its advantages is cited by the author.

The Practical Side of Electrothermic Hæmostasis. By Andrew J. Downes, A. M., M. D., (*American Medicine*, December 20th).—Dr. Downes has performed over 100 operations in which he has used electrothermic hæmostasis. Of these there were 15 hysterectomies, 50 appendectomies, 22 salpingophorectomies, many ovarian cysts, hæmorrhoidal and other operations, there was never in any case secondary hæmorrhage. The advantages claimed for the method are: Absence of all ligatures, thus reducing the danger of infection and hæmorrhage (from their slipping or absorption) to a minimum; the absence of subsequent adhesions, of pain from nerves tied in the stumps, and of shock; the method as a whole is rapid and quick and quite practical. The instrumentarium consists of three practically indestructible forceps or angeiotribs, a small artery forceps electrotherm, a cautery knife requiring the same ampèrage as the platinum in the angeiotribs, a transformer for the alternating current, and the same with a motor in connection for the continuous current. The following practical points are to be borne in mind when using this method: The pressing surface of the blades must be smeared with sterile oil before each application. The field should be dried and freed from blood and the surrounding tissues protected from the outer surface of the blades. After each removal

of the blades from a hæmostased track all charred adhering blood must be removed from their surfaces. Too short an application should be avoided. No error is committed if the time is half a minute longer than required. It should be distinctly understood that the term cauterized does not apply to the method of hæmostasis by electrically heated pressure instruments. To cauterize is to burn. In this process we cook the compressed ribbon of tissue, a vastly different thing from burning it.

The Value of Rest Induced by Operation in the Treatment of Certain Diseases of the Alimentary Canal. Dr. A. E. Maylard (*Glasgow Medical Journal*, November, 1902) suggests the following methods by which rest can be efficiently obtained for the different regions of the alimentary canal, when affected with certain intractable diseases or particular gross lesions: (1) the œsophagus is given rest by the performance of a gastrostomy; the gastric fistula is one which will close at any time when it is deemed advisable that it should do so. (2) The stomach is given rest by the performance of a gastrojejunostomy; the gastrojejunal fistula either closes subsequently or remains open according to the patency of the pyloric orifice. (3) The colon is given rest by the temporary formation of an artificial anus in the right iliac region (a cæcal or right colonic anus). (4) The rectum is given rest by the establishment of a temporary artificial anus (a sigmoid or left colonic anus). In both these last instances the artificial orifice can be closed when this is considered needful.

Surgical Treatment of Pulmonary Tuberculosis.—Professor A. Ländlerer (*Münchener medizinische Wochenschrift*, November 25th) concludes a clinical paper by saying that tuberculous subjects stand thoracoplastic operations very well. Thoracoplasty is a justifiable operation, since cavities once formed are rarely stationary, while the operation may bring about a complete cure or a decided amelioration. The operation is especially feasible in tuberculosis of the lower lobes.

Treatment of Fractured Patella. By Professor von Mikulicz-Radecki (*British Medical Journal*, December 13th).—Fractures of the patella are divided into those which occur from direct violence from blows, and those brought about by indirect violence—e. g. the wrenching apart of the patella as a result of a powerful contraction of the quadriceps. In fractures due to blows, only the patella is broken—the accessory ligaments remain attached to both sides of the patella. In fractures due to a tear or laceration, these parapatellar ligaments are torn apart. The continuity of the quadriceps tendon is quite interrupted, and the two fragments of the patella tend to separate widely. The diagnosis between these two varieties of fracture—the “blow” and the “tear” fractures of the patella respectively—is a most important one. In blow fractures the fragments are held together by the parapatellar ligaments, and the operation of suturing is rarely called for. In tear fractures the patient usually loses consciousness and the fragments of the patella are widely separated, yet the only real criterion is the behavior of the quadriceps as regards function. If the

continuity of the tendon is preserved the knee can be straightened. But the diagnosis is at times very difficult; moreover it must be made at the latest by the end of the first week, as further delay renders the success of the operation very doubtful. In cases of blow fracture medico-mechanical treatment is called for—immobilization of the joint for a short time with elastic compression, to hasten reabsorption of the effused blood, massage of the kneejoint, and the patient to get up at the end of the first week with a removable plaster-of-Paris splint, which is laid aside at the end of the third week. Cases of tear fracture call for suturing, which is performed in the usual way. The author uses brass wire instead of silver wire; the accessory ligaments should be sutured on each side as well as the patella. The after-treatment is the same as that of the unsutured cases. Of forty-five cases sixteen were treated without operation; fifteen were recent and one an old fracture. This last case was not operated on because of the existence of nephritis in the patient, and was not improved by treatment. Of the remaining fourteen, nine were followed up later, the result in eight being good, in one moderate. Suture was performed in twenty-nine cases. In seventeen recent cases which could be followed up later, the result in twelve was good, in four moderate, in one unsatisfactory. In eight cases of late suture, which were investigated later, the functional result was good in three cases, moderate in four, and unsatisfactory in one.

Both methods—operative and non-operative—give equally good results with a right interpretation of indications and a correct technics. But the methods are not alternatives; each supplements the other, and has its own definite indications.

Plugging with Iodoform Gauze in Operations Performed in Cavities of the Body. By Professor E. von Bergmann. (*British Medical Journal*, December 13th).—Cure of wounds may be counted upon everywhere, if they are protected from contact with all outside morbid agents tending to produce inflammation and suppuration, and if the blood and products of transudation are conducted from the wound into dressing material well suited to absorb them and neutralize their action. Inside the body cavities the wound must be packed with pieces of sterile gauze impregnated with iodoform powder. The author describes the method in three operations in which the pharyngo-oral cavity has to be opened—(1) resection of the upper jaw, (2) operations on the tongue, and (3) total extirpation of the larynx—in order to determine whether by its means infection of the wounds can be avoided. Out of seventy resections of the upper jaw, the wound became infected in but one case, where erysipelas supervened. Total or partial removal of the tongue for carcinoma was performed in 159 cases: 131 recoveries took place and twenty-eight patients died, but not one of cellulitis of the throat or floor of the oral cavity. A decided advantage is gained by plugging with iodoform gauze after total extirpation of the larynx. The large wound cavity on either side of the pharynx, between it and the lateral muscles of the neck, is most neatly and tightly packed with the iodoform gauze, which very soon adheres firmly by suction. In forty-eight cases of

excision of the larynx in which this method was practised, not a single case of cellulitis of the throat occurred. The influence of plugging with iodoform gauze is, however, best shown in excisions and resections of the rectum. Excision of the rectum was performed in sixty cases. In nine of these death occurred shortly after the operation, but in no case was death caused by either infection, peritonitis, or cellulitis of the pelvis. In sixty-five cases of resection of the rectum, the peritonæum was laid open in nearly all. Thirty patients died soon after the operation—in five of these cases death was due to peritonitis brought on by infection of the wound, and in one to pelvic cellulitis.

Infective Arthritis. The Bradshaw Lecture. By H. Marsh, F. R. C. S. (*British Medical Journal*, December 13th).—Infective arthritis may occur in the great majority of specific diseases. It was first noted in pneumonia, Cave publishing a series of thirty-one cases. The majority of cases occurred in males, and seventy-five per cent. terminated fatally. This high mortality is due to the fact that the pneumococcus produces a general systemic infection—an acute and profound septicæmia of which the arthritis is only a local manifestation. There are three forms of joint disease met with in typhoid fever: (1.) Rheumatic typhoid arthritis—cases in which at the commencement of the illness, the patient complains of severe pains in the knees, elbows, or other joints, with varying degrees of swelling, which usually disappear in a few days. (2.) Typhoid arthritis proper is met with in the acute stage of typhoid fever or towards its decline. One or several joints may be involved. There is pain and swelling due to infiltration and effusion into the joint cavity. The attack may subside and recovery take place, the joints may undergo fibrous ankylosis, or suppuration may ensue, necessitating free incision and irrigation. In the uniauticular variety the hip is the joint usually involved. (3.) Septic arthritis. In the so-called "typhoid state" septic arthritis is a very dangerous complication, being generally fatal. It is an instance of the common form of septic infection, being due to the presence of staphylococci or streptococci. The arthritis which is associated with scarlet fever occurs in two forms. The first is often indistinguishable from acute rheumatism, and makes its appearance quite early in the disease, or during the stage of desquamation. It involves several joints and is not severe. The second form is more severe and often ends in suppuration. It is a part of secondary sepsis or a general pyæmia. The author records two cases of arthritis complicating influenza. The arthritis met with in connection with erysipelas may occur as—(a) transitory synovitis attended with serous effusion and involving many joints; (b) a plastic form tending towards fibrous ankylosis, which may be persistent for many weeks; and (c) an acute suppurative arthritis by which the joints are rapidly disorganized.

Prognosis and Treatment. (1.) In transient synovitis attended with limited effusion, prognosis is favorable, the only treatment required being a suitable splint and warm fomentations. (2.) Where the joint cavities contain fluid, the treatment is the same as that called for in gonococcal infection. The fluid must be at once removed and the joint freely

irrigated with antiseptic solutions. If the fluid proves to be purulent the joint must be freely opened, and all adhesions broken down before irrigation. (3.) In plastic arthritis the prognosis is distinctly unfavorable, as a large amount of new fibrous tissue develops between the articular surfaces and in the circumarticular tissues, and the joint is converted into a massive scar, so that firm fibrous ankylosis results. The best treatment is complete rest, with warm fomentations, followed later by massage. (4.) In septic arthritis the prognosis is, of course, highly unfavorable, the arthritis being but one of the manifestations of a general septicæmia. Often the arthritis is rendered comparatively unimportant by the speedy death of the patient.

OBSTETRICS AND DISEASES OF WOMEN.

The Necessity and Desirability of Inducing Abortion in Tuberculous Working Women.—Dr. C. Hamburger (*Berliner klinische Wochenschrift*, November 17th and 24th) says that the fight against pulmonary tuberculosis will be useless as long as the question is undecided: What shall be done with the pregnant working woman? The importance of this question is enhanced by the fact that in Prussia over seventy-five per cent. of working women have an income of not over 900 marks (\$180), and are therefore compelled to live under conditions in which useful treatment, even during menstruation, is out of the question. Hamburger advises induction of abortion in these women because it is a misfortune for them to be pregnant; because treatment during the time of the pregnancy (since they are compelled to work) is an impossibility, and is therefore time lost; and because their children are likely to be tuberculous and in their environment every additional tuberculous individual is an additional danger. The pregnancy is dangerous to the mother, to the family and to the community. He would limit the operation to those in whose sputum tubercle bacilli are found. The author concludes by saying that a great step forward would be made in the fight against tuberculosis if his attitude could be made clear in obstetric textbooks, and he recommends to the next congress on tuberculosis the adoption of this formula: "If a wife is suffering from tuberculosis recognizable by emaciation, loss of strength, constant cough, and purulent or bloody sputum, pregnancy is to be avoided by every known means. If the woman becomes pregnant, however, the physician is to have a consultation with another, with a written and signed agreement, to decide whether the continuance of the pregnancy is dangerous to the life of the mother."

Injurious Renal Mobility ("Nephrospasis") in Relation to Gynæcology: Founded on the Examination of One Hundred Consecutive Patients. Dr. W. F. Victor Bonney (*Edinburgh Medical Journal*, December, 1902) finds three classes of abnormal renal mobility: (1) Those cases in which the condition is solely one of exaggerated diaphragmatic movement. Expiratory return is present and inward rotation absent. These cases give rise to no symptoms. (2) Those cases in which the diaphragmatic attachments of the perinephric structures are

relaxed or gone, with consequent failure of expiratory return, but as the perinephric and retroperineal fat still continues to support the organ from below, inward rotation is not present. These cases give rise to none, or only very slight symptoms, but are the first step toward injurious renal mobility, into which they may eventually pass. (3) Those cases in which, from loss of both its upper and lower supports, the kidney comes to drag directly on its pedicle, as evidenced by inward rotation as well as absence of expiratory return. These cases are always accompanied by symptoms, and it is to them that the expression "injurious renal mobility" properly belongs.

In examining any woman for the cause of alleged abdominal pain, close investigation should be made of the condition of the kidneys, remembering that the finding of uterine displacements, or even inflammatory conditions in this region, does not, except in the clearly ascertained absence of other abnormalities, warrant us in instantly assigning all the blame to the pelvic organs. Our diagnosis rests upon the presence of the typical backache, together with the detection by frequent examination, of the physical signs of injurious displacement.

As for palliative treatment, drugs are useless though purgatives have some slight value, seeing that constipation accentuates the pain. Any form of living that makes for obesity is good, but the most valuable palliative agent is a well fitting belt. Nephropexy is indicated in all cases in which a belt fails to bring relief; in all cases in which the severity of the symptoms makes relief urgent, in all cases in which hæmaturia or pain resembling renal colic makes it possible that there may be a calculus in the movable kidney; and, generally, in all cases in which there is obvious enlargement of the organ. The commonest operative error is to fix the kidney too low in the loin, the next error is to fix it too far outward. It is always well to give the slightest degrees of injurious renal mobility the benefit of a belt before subjecting them to operative procedure.

NERVOUS AND MENTAL DISEASES.

The Clinical History and Symptoms of 120 Cases of Exophthalmic Goitre. By Dr. G. R. Murray. (*Lancet*, December 13th).—Of the 120 cases of exophthalmic goitre here tabulated and reported, 110 were in women and 10 were in men. Of the 110 women, 57 were married, 1 widowed, and 42 single. The youngest patient was 15 years of age, the oldest 65. The great majority occurred between the ages of 15 and 35 years, being fairly equally distributed in the four five-year groups between those ages. There was no history of exophthalmic goitre in either of the parents in any case. Two of the patients were brother and sister, while a third had lost a sister from the disease. In some of the cases sudden or prolonged grief and anxiety appeared to have a definite relationship to the onset of the disease. Overwork, acute illnesses, such as influenza or scarlet fever, sudden cessation of menstruation, played a part in some cases. In only two cases did an accident contribute to the development of the disease. The onset was usually gradual, but in one case the disease developed in a fortnight. In 43 out of 87 cases, enlargement of the thyroid

gland was the first sign of the disease. In only 3 cases was there entire absence of enlargement. A thrill was felt in only 14 cases, a bruit in 33 cases. The frequency of the pulse was increased in all cases. In over half the cases it was between 120 and 150 to the minute. It was usually regular, small, and compressible. Heart murmurs were frequent. A pulmonary systolic murmur was heard in 17 cases, and an apical systolic in 16.

Exophthalmos was present in 79 cases, and was noted as absent in 32—over 25 per cent. A fine regular tremor of the hands is one of the most constant symptoms of the disease. It was present in 111 cases: in 6 cases it was also present in the feet. Suppressed nervous excitement, which is characteristic of the disease, was present in 70 cases. The skin generally felt warm; in 76 cases it was unusually damp, and in 55 of these there was profuse sweating. Pigmentation of the skin was noted in 22 cases, loss of hair in 10. Dysmenorrhœa was present in 23 cases, amounting to amenorrhœa in 10. Wasting was a common symptom. The course of the disease was usually slow and protracted. In no case was the disease followed by myxœdema.

The Pathogenesis of St. Vitus's Dance and Athetosis, and on the Connection between these two Affections.—Dr. M. I. Breitmänn, (*Roussky Vrach*, November 9th) says that there is a distinct pathogenic relation between chorea and athetosis. Hemichorea is distinguished from hemiathetosis according to the author, in the following manner:

Hemichorea.

Affects, not only the extremities, but also the face, the trunk, and in general one half of the body. The fingers are less affected than any other part of the extremities.

The movements are rapid, irregular, sharp, jerky, sudden, purposeless, and atactic.

They are exclusively clonic without tremors and convulsions, and attempts to suppress them are futile.

Sometimes there is hemianæsthesia, but there is no atrophy of the muscles.

The author believes that athetosis and chorea are not distinct diseases but expressions of one and the same condition, only differing in the degree of the atactic disturbances. When parts endowed with more abundant innervation are affected, the movements are more purposeful and the contractions are continued to the end of a motion, flexion or exten-

Hemiathetosis.

The small muscles of the wrist and ankle are most often affected. The face is rarely involved.

The movements are slow, rythmical (Seeligmueller), often regular (Wallenberg) and purposeful, i. e., comprehensive, etc.

The movements can be diminished or even entirely abolished by the exercise of will power.

Sometimes hypertrophy of the muscles and hemianæsthesia are present.

sions, etc., as in athetosis. When the innervation is not so strong, the movements are more irregular and less orderly, as in chorea.

DISEASES OF CHILDREN.

"Hardening" of Children.—Dr. Hæcher (*Münchener medicinische Wochenschrift*, November 18th) says that the method of hardening children by means of cold baths is not only unnecessary, but is often injurious. It increases rather than diminishes their susceptibility to "colds," thus inducing coryza, throat affections, bronchitis, and pneumonia. Anæmia may result, with nervousness, loss of appetite, disturbed sleep (*pavor nocturnus*), irritability, with a subsequent change in character, such as moodiness, violent temper and uncommunicativeness. Catarrh of the large intestine may result from it and it causes a longer duration of incident illnesses, especially of pertussis. Hæcher would advise instead of the cold baths, accustoming the child to the room temperature by occasional stripping and permitting him to run about naked before retiring, running barefoot, avoidance of uncovering during the night. The child should sleep near an open window only during the summer. He urges that children should be sent out-of-doors at all times except when it is very stormy and especially not when there is a north-east wind. Older children should have airbaths and sunbaths in the summer and should go barefooted. The clothing should always agree with the weather with no fixed rules. Children should wear no furs and should usually have the neck uncovered. The legs should be uncovered only in the summer, and in thin children, never. As to cold water, it should be employed only when none of the above-mentioned disagreeable phenomena appear. Ablutions are preferable to baths and should be given but once daily. All "hardening" should be done gradually, in somewhat the same manner as electricity is clinically employed, and should follow the idiosyncracies of the child. The process must not be begun too early. Nurslings are always to be kept warm. No child should be subjected to cold water baths until anæmia and nervousness have been excluded and all children should be submitted to a physician's examination before any hardening process is begun.

OPHTHALMOLOGY.

The Bactericidal Properties of Tears and of the Liquid of the Anterior Chamber of the Eye.—Dr. Felix Rymovitch (*Roussky Archiv Patologii, Klinicheskoy Meditsiny i Bakteriologii*, October 31st) in this research sought to determine (1) Whether the tears and the liquid of the anterior chamber of the eye contain cytases. (2) Whether they contain the fixator in immunized animals. (3) Whether they possess in immunized animals the property of agglutination. The tears and liquids of the chambers of the eyes of two dogs were used in his experiments, one of these dogs being immunized against typhoid, and the other against the cholera vibrio. The serum of the first dog gave a well marked agglutination reaction in the proportion of 1:1000, that of the other in the proportion of 1:2000. In order to determine the presence of cytase, the author made use of the reaction of hæmolysis and

the phenomenon of Pfeiffer (with sensibilized cholera vibrios) by substituting tears of anterior chamber liquid for cytases in the tests. The results were all negative, the conclusion being that tears and the anterior chamber liquid do not contain cytases. As regards the fixators, the author employed the reaction of Bordet (removal of cytase) and the phenomenon of Pfeiffer, by replacing sensibilizing serum by tears and anterior chamber liquid. The two reactions gave negative results, so that the liquids investigated do not contain any fixator in immunization. Neither the tears nor the liquid of the anterior chamber of the eye exercise any agglutinating influence on the bacteria against which the animal in question was immunized, as shown by the reaction of their serums.

Ablation of the Crystalline Lens to Rectify High Myopia. By Sir W. J. Collins. (*Lancet*, December 13th).—The author reports a series of nine cases in which the crystalline lens was removed to rectify high myopia. In all there was some improvement of vision, and, in some, very great improvement. The improved vision without resort to glasses proved a great boon to the patients and enabled some to take situations which previously were not open to them. In no case was the operation followed by untoward symptoms. The operation in a limited class of suitable cases is so reasonably safe and attended often with such brilliant results that it should be regarded as a recognized procedure in the treatment of high or advancing myopia in young persons.

The Microbiology of the Normal Conjunctiva.—Dr. Felix Rymovitch, (*Archiv Patologyi, Klinicheskoy Meditsiny i Bakteriologii*, September 30th) examined the normal conjunctivæ of 100 persons, in order to determine the frequency of pathogenic microorganisms, especially the presence of the pseudo-diphtheria bacillus in such conjunctivæ. The medium chosen for the study of these germs was coagulated glycerinated beef serum, four drops of sterile salt solution being injected into each conjunctiva and removed with a pipette and planted in the usual way. In the 100 persons examined he found in the conjunctivæ:

The pseudodiphtheria bacillus.....	94
Pneumococcus	9
Streptococcus pyogenes.....	5
Diplobacillus Morax-Axenfeld.....	6
Staphylococcus pyogenes aureus.....	8
Staphylococcus pyogenes albus.....	6
Staphylococcus albus non liquefaciens.	79

The relative frequency of these microbes in the normal conjunctiva renders self-infection probable in a certain number of sporadic cases of conjunctivitis.

GENITO-URINARY DISEASES.

Failures in the Irrigation Treatment of Gonorrhœa. By Ferd. C. Valentine, M. D. (*American Medicine*, December 20th).—Dr. Valentine holds that the failures of the irrigation method are due to two chief sets of causes. (a) Those due to the physician, and (b) those due to the patient. Among the first set the most important are: the personal

equation, which incapacitates certain men for specific methods; the comparative novelty of the method which leads to misunderstanding; the using of unsuitable solutions; and finally, lack of expertness in the necessary manipulations which, by producing uncleanness and sloppiness in the office and much waste of time, leads the ordinary practitioner to slight the details. The second set of causes fall into three classes: (a) Those due to the patient's disposition and mode of living; (b) those due to congenital deformities; and (c) those due to acquired defects and complications. Rebellious patients or those whose business or lack of funds make the necessary number of office visits out of the question are among the hardest to treat. In the latter case much good can be attained by the use of an autoirrigator. Congenital deformities, such as tight preputial orifice, stenotic meatus, intraurethral abnormalities, epispadias and hypospadias and periurethral and paraurethral fistulas must be overcome, either by using appropriate nozzles, or by operative intervention. Acquired defects and complications, such as balanitis, balanoposthitis, chancre and chancroids, cicatrices, condylomata, fistulæ, herpes, infiltrations, paraphimosis, phimosis, prostatitis and spermato-cystitis, strictures and urinary abnormalities, such as phosphaturia must all receive appropriate attention if the irrigation method is to result successfully. If the above points are kept in mind and skilfully met, irrigation in gonorrhœa will be found a highly satisfactory method.

The Systemic or Constitutional Character of Gonorrhœa; Illustrated by Five Cases of Iridochoroiditis. By Charles Stedman Bull, M. D. (*Medical Record*, December 20th).—The constitutional character of gonorrhœa is made probable by some of the complications. Whether the general system is invaded by the gonococci themselves or by the toxins developed from them, is, however, still a mooted point. Gonococci do, however, at least occasionally, invade the general system and they do this either by way of the blood, or lymphatic vessels. They have been found in the blood, both in cases of ulcerative gonorrhœal endocarditis and in cases of gonorrhœal rheumatism. A specific urethritis can be the starting point of a fatal septicæmia. Dr. Bull gives the history of five cases of systemic eye infection. While in all, the symptoms seem to justify alarm, yet a gonorrhœal iridochoroiditis is not apparently a very dangerous complication. All the patients recovered with practically normal vision. The inflammation of the uveal tract never seems to follow the urethritis immediately, but is invariably preceded by an arthritis, usually of the knee joint. The treatment of the condition should be vigorous and of two kinds. First, local treatment of the urethritis, and secondly local treatment of the eye. Concerning the first nothing is said. The following routine treatment for the eyes is deduced from the histories of the reported cases. Two or three leeches should be applied to the temple of the affected side. Hot fomentations, of half an hour's duration, should be repeated every two hours and at equal intervals a two-per-cent. solution of cocaine and a one-per-cent. solution of atropine should be instilled. By the mouth from five to ten grain doses of sodium salicylate should be administered at

intervals of one hour until the stomach rebels. After the pain is relieved and the acute inflammation has subsided the above treatment is stopped and the patient is put on from ten to twenty grain doses of potassium iodide three times a day until practically recovered.

MATERIA MEDICA, PHARMACY, AND THERAPEUTICS.

The Alkaline Extracts of the Organs of Healthy Animals as Immunizers Against Anthrax Infection.—Dr. F. Tusini, of Rome (*Riforma medica*, September 24th), recently completed an investigation upon the immunizing value of alkaline organic extracts in anthrax infection. His experiments were conducted as follows: He prepared extracts of the lungs, livers, kidneys, etc., of rabbits, by triturating them and allowing the mass to pass through sieves under aseptic precautions, and then dissolving in a one-per cent. solution of sodium carbonate, precipitating with alcohol, after having filtered the solution through paper, drying the precipitate, and dissolving it in 0.25 per cent. solution of sodium carbonate and 0.85 per cent. solution of sodium chloride. The extracts, which proved to have the least coagulating effects when injected into the veins of rabbits were those of the spleen and the kidneys, and therefore these were employed in the experiments. He began injecting these extracts into rabbits at intervals of forty-eight hours, choosing at first the largest non-coagulating dose that could be given to the animal, this dose varying with the weight of the animal. The dose was daily increased in some of these rabbits, but they did not bear the increase well so it was allowed to remain stationary in the remainder. After a time the rabbits were bled, and the coagulating power of their serum was tested on the serums of normal rabbits and of rabbits that had been similarly treated. Finally, he studied the effect of these injections on the immunization from anthrax. He found (1) That the alkaline extracts of the organs of animals had a coagulating action when injected into the veins, and that the least coagulating action was present in the extracts of the spleen and of the kidneys. (2) That these extracts, when injected into the veins in non-coagulating doses, produced a serum whose coagulating effect on the serums of other animals of the same species was diminished as compared to that of normal serum, and that the bactericidal power of the serum of the animals treated with these extracts was slightly increased. (3) That the serum of animals so treated with injections of alkaline extracts raised the resisting power of these animals to the action of anthrax virus. Alkaline extracts of the same organs (spleen and kidneys) of other species of animals on the contrary diminished the resistance of rabbits against anthrax.

The Behavior of Iron in the Healthy Organism, in Leucæmia and in Chloroanæmia.—Dr. Carlo Bartoletti concludes a report of an extensive research (*Riforma medica*, October 1st to 7th) on this subject as follows: (1) The urine of a normal individual contains appreciable quantities of iron. (2) The amount of iron in the urine depends upon the diet of the subject investigated. Under mixed

diet this amount varied from 2.89 to 2.14 milligrammes. Under meat diet it was 5.19 milligrammes. (3) In the same individual the variations in the amount of iron in the urine day by day were slight, depending upon the amount of urine excreted in twenty-four hours and the color of the urine eliminated. (4) This gives rise to errors in estimating percentages of iron eliminated if the amount of urine in twenty-four hours is not taken into account. (5) Hypodermic injections of iron in a healthy man caused an increase in the iron eliminated in the urine, but this increase was noted only during the first day after the injection. The amount of iron returned to normal thereafter and 6.78 per cent. of the amount of iron injected was eliminated. (6) The amount of iron found in the urine of persons with leucæmia is slightly less than that found in healthy persons. (7) In chloroanæmia the amount of iron eliminated is less than normal, varying with the amount of urine passed from 1 to 3 milligrammes. (8) The amount of iron eliminated is always in relation to the amount of urine passed. (9) Injections of iron in anæmics produce an increase in the amount of iron in the urine, but as in health only during the first day after the injection. The amount of iron eliminated out of the quantity injected is less than in health, namely from 2.57 to 4.14 per cent. (10) The blood of a healthy adult contains 42.84 milligrammes to the hundred; in leucæmia 31.36 milligrammes to the hundred, and in chloroanæmia, from 35.28 to 28.00 milligrammes to the hundred. (11) The diminution of the iron in the blood in these cases is not in proportion with the diminution in the red cells and the hæmoglobin. (12) The iron eliminated through the urine does not bear a constant relation to the iron of the blood, even in the same individual. Some persons may eliminate more iron in the urine than others whose blood is richer in iron. The elimination of iron in the urine is therefore subject to laws that are as yet unknown, but the author believes that the variations are dependent upon the functional capacity of the kidneys, or on the temporary accessions of blood from the organs which store iron (liver, spleen, kidneys) into the general circulation.

Antitoxine and Diphtheria.—Dr. John H. McCollum (*Providence Medical Journal*; *Gaillard's Medical Journal*, October, 1902), instructor in contagious diseases, Medical Department of Harvard University, concludes a thorough comparative statistical research as follows:

From a comparison of the health reports of Boston before and after the introduction of the antidiphtheritic serum, from a comparison of the health reports of other cities, from a study of hospital reports, from a clinical observation of more than 10,526 cases of diphtheria, the following conclusions are justifiable: (1) That the ratio of mortality of diphtheria per 10,000 of the living was very high in Boston previous to 1895. (2) That the ratio of mortality per 10,000 has been very materially reduced since the introduction of antitoxine. (3) That the percentage of mortality in the South Department is lower than that of any of the hospitals taken for comparison. (4) That since larger doses of antitoxine have been given the death rate has been

materially reduced, this reduction having occurred in the apparently moribund cases. (5) That no injurious effect has followed the use of the serum. (6) That to arrive at the most satisfactory results in the treatment of diphtheria, antitoxine should be given at the earliest possible moment in the course of the disease.

PHYSIOLOGY AND PATHOLOGY.

New Doctrines Relating to the Alkalinity of the Blood. A Preliminary Communication.—Dr. V. F. Orlovsky (*Roussky Vrach*, November 9th) finds that the alkalinity of the blood plasma is a constant quantity which the organism jealously preserves unchanged. Marked lowering of the alkalinity of the plasma was only found by him in cases of advanced cancerous cachexia, in saccharine diabetes, and in marked anæmia. The alkalinity of the blood itself, however, undergoes considerable modifications. These variations depend upon the fact that the alkaline constituents of the blood are contained, not only in the plasma, but also in the red blood cells. As the number of the latter is not constant, not only in different diseases, but in the same person during the course of the same disease, such variations are easily accounted for. The question as to whether the alkalinity of the whole blood also depends upon the number of white cells has not been solved, the few researches on the subject being too scanty to justify definite conclusions. The author has therefore undertaken to investigate this subject, using the blood of rabbits, dogs, and human beings for his experiments. He studied the blood of the animal, then induced a leucocytosis in various ways, so as not to get results dependent upon the cause of the leucocytosis. He found, however, that even when the number of white cells increased to the extent of seventy-five per cent., there was no variation in the alkalinity of the blood. This confirmed his theory that the alkalinity of the blood plasma is a constant figure. His researches will be published in detail later on.

The Injection of Gelatin as a Probable Source of Tetanus Infection. Dr. N. A. Sadnikoff (*Roussky Vrach*, November 9th) reports a case of tetanus which occurred in a man, aged thirty-one years, who had been getting subcutaneous injections of gelatin solution for hæmoptysis. He improved markedly and rapidly under this treatment. At the site of the injections there developed, however, a spot of redness, swelling, and tenderness; and eight days after the injections, the symptoms of tetanus set in, the patient dying on the same day. A mouse was inoculated with some of the pus found in the abscess at the site of puncture and in five days the animal developed a well-marked picture of tetanus, but no tetanus bacilli could be found in this mouse or in any of the secretions of the patient's body. The author thinks that the probable source of the infection in this case was the punctures for gelatin injections. The probability is that the tetanus bacilli were present in the gelatin, and the author cites a number of cases in which there occurred tetanus infection from injections of such gelatin solutions. The case teaches that the greatest care should be ex-

ercised in sterilizing gelatin solutions intended for subcutaneous injection.

The Incidence of Alkaptonuria: a Study in Chemical Individuality. By Dr. A. E. Garrod. (*Lancet*, December 13th).—The constant feature of alkaptonuria is the excretion of homogentisic acid, to the presence of which substance the special qualities of alkapton urine, the darkening with alkalis and on exposure to the air, the power of staining fabrics deeply, and that of reducing metallic salts, are alike due. Alkaptonuria is not the manifestation of a disease, but is rather of the nature of an alternative course of metabolism, harmless, and usually congenital and lifelong. An individual either is frankly alkaptonuric or conforms to the normal—either several grammes of homogentisic acid are excreted daily, or none at all. The peculiarity is congenital in the great majority of cases, and is likely to appear in two or more brothers or sisters whose parents are normal. Thus of thirty-two examples, no less than nineteen occurred in seven families. Of the forty subjects hitherto recorded twenty-nine have been males. Among the families of parents who do not themselves exhibit the anomaly, sixty per cent. are the offspring of the marriages of first cousins. Two conditions analogous to alkaptonuria, in that they may be considered as "sports" or alternative modes of metabolism, are albinism (failure to produce melanin pigments) and cystinuria.

Observations on Certain Cerebral Localizations. By Professor F. Durante (*British Medical Journal*, December 13th).—The author reports a series of eight cranial operations, six for dural and cerebral neoplasms and two for remote post-traumatic conditions, with eight cures, of which five were complete and three with defect. From a consideration of these cases the author formulates the following conclusions: (1.) That lesions, especially those determined by neoplasms, of the frontal lobes are nearly always accompanied by very grave phenomena of altered intelligence; which proves that the frontal lobes, and particularly the prefrontal, must be considered as the seat of the most elevated functions of the mind. (2.) That the cortical centre for hearing is situated in the temporal lobes, that each centre is in relation with both auditory nerves, and that the direct auditory bundle must be very much less active and smaller than the crossed auditory bundle. (3.) That the site of the centre for general sensibility and for muscular sense is in the parietal lobes, and that disturbances of general sensibility and of the muscular sense may occur in the limbs independently of any disturbance of motility whatsoever. (4.) That for the solution of various problems concerning the functions of the several regions of the human brain, operative surgery and pathological anatomy are more useful than experimental physiology, which has animals only at its disposal; the functional arrangement of the brains of such animals has some analogy with that of man, but certainly cannot be compared with it in every respect.

Letters to the Editor.

TYPHOID FEVER AND THE BALTIMORE WATER SUPPLY.

BALTIMORE, December 23, 1902.

To the Editor of the NEW YORK MEDICAL JOURNAL:

Sir: I have read with considerable interest the article by Professor Seibert, of New York, on Typhoid Fever and Drinking Water, which appears in the current number of the *Journal*. In that article the following statement is made as to the conditions in this city! "A second similarity we notice between the charts of Philadelphia and Baltimore. These cities also have no filtering plants. They take their drinking water from larger streams in close proximity to densely populated districts, the sewage of which empties into these waters, which therefore contain more impurities than the reservoirs of New York, Brooklyn, and Boston, and accordingly Philadelphia and Baltimore have a much higher typhoid mortality (about 1 to 5,000). Possibly the somewhat warmer climate may also add to this showing by inducing the inhabitants to drink even more of this decidedly impure water than the people of the three larger cities. The number of habitual water drinkers may also be greater."

I do not know where the information was obtained on which the statements in this article as to Baltimore were based, but they certainly were not obtained from the present officials of the Water Department. As the intimations actually made in this statement and the inferences that would naturally be drawn from it are absolutely incorrect and are such as might do this city a great deal of harm in many ways by being published broadcast, I am sure that you will give equal publicity to any statement of facts in regard to our water supply.

In the first place, Philadelphia and Baltimore cannot be classed together, because the conditions as to population and pollution in the water sheds and as to the method by which the water is brought to the consumer are entirely different in Baltimore from the conditions and methods prevailing in Philadelphia. In Philadelphia the water supply is taken from the Schuylkill and Delaware Rivers, two large streams with swift currents, having immediately at their banks several large cities and towns within a few miles of the points of intake of the pumping stations. A considerable portion of the supply is pumped from these rivers directly to the consumers.

The water supply of Baltimore is taken from two streams having water sheds in which there is not a single town with more than 1,500 population. In the whole 300 square miles of both water sheds there are not over 10,000 people, not over 3,000 of whom live near enough to any stream or ditch draining to the two sources of supply to allow any possible pollution. Water is not pumped or fed from these two streams directly to the consumers. It is first impounded in reservoirs containing about fifteen times the daily consumption. It is then run through tunnels from four to seven miles long into storage reservoirs having total capacities of from seventeen to thirty times the daily consumption, before it reaches the consumers by gravity or by pumping from the pumping stations. Our water sheds are

most carefully and systematically patrolled and inspected. Every conceivable effort and plan are tried to secure abatements of pollution, and not over 320 cases of pollution now remain unabated.

Now, as to typhoid fever: I do not know what the conditions are in Philadelphia, but I do know what they are here in Baltimore. There are not over fifty cases of typhoid fever a year in the whole of our water sheds. Every one of these cases is most carefully watched by the inspectors of this department to see that all excreta and other contaminated matter are properly disinfected and buried in such a way and place as to eliminate all possibility of pollution. There is not the slightest accurate evidence anywhere that any of the cases of typhoid fever in this city can be attributed to the city water supply. The only attempt, so far as is known, ever made to trace the sources of typhoid fever in this city was made by employees of this department under my direction. This investigation was made as carefully as possible under the circumstances, and it showed that about 65 per cent. of all cases in the city were infected from sources outside of the city and came into the city with the disease in their systems. This leaves polluted well water, ice, milk, vegetables, etc., dust, bathing in polluted waters in the city, and secondary infection, to which a certain unknown proportion of the other 35 per cent. of the cases must be attributed. The small amount of pollution in the water sheds, the limited number of typhoid fever cases there, the great care taken to prevent contamination from such cases, and the unfavorable conditions that any typhoid germs which might possibly get into our water supply would be subjected to in their passage from the nearest point of pollution to the consumer, all tend to discourage the idea that much if any of the typhoid fever in this city can be attributed to the city water supply.

ALFRED M. QUICK,
Water Engineer.

Book Notices.

A Textbook of Insanity. By CHARLES MERCIER, M. B., M. R. C. P., F. R. C. S., Lecturer on Insanity at the Westminster Hospital Medical School, London, etc. New York: The Macmillan Company, 1902. Pp. xiv-222. (Price, \$1.75.)

Some time ago we had the satisfaction of expressing our appreciation of the present author's *Psychology, Normal and Morbid*. In his *Textbook of Insanity* he has given us a much less pretentious, but still very useful little volume. The book is divided into three parts entitled respectively the Institutes of Insanity, the Forms and Varieties of Insanity, and the Legal Relations of Insanity. The term institutes of insanity is a very apt parallel to that of institutes of medicine, applied in certain universities to physiology. In it the author considers conduct, mind, certifiability, and fitness to be at large, also the cause of insanity. The study of insanity is, for the author, the study of the individual, not *per se*, or *simpliciter*, but in relation to the world in which he exists and in which he has to maintain his existence—in other words, a study of conduct. "If we discover a disorder of mind that has no influence

upon conduct, we cannot regard it as an indication of insanity." "Disorder of mind without disorder of conduct, if it were possible, would be unimportant; if it were important, would be unrecognizable; and thus the first essential to knowledge of insanity is an enumeration of the main features of conduct, and of the ways in which conduct may be disordered." In the chapter on Mind is given a brief exposition of the author's views on normal psychology, as more fully expounded in the textbook on that important and fascinating subject to which we have already referred. Of the causes of insanity, the author treats with lucidity. When a person becomes insane, "it is because either his nervous organization was not strong enough to withstand ordinary stresses, or he has been subjected to stresses of extraordinary severity."

On the subject of the hereditary transmission of insanity the author expresses sound common sense when he says: "If marriage is to be prohibited in all cases in which a clean bill of health cannot be shown for all the individuals in, say, three generations, the practical result would be to prohibit marriage altogether. . . . The children of any individual who errs from the general standard of the race in any respect exhibit, in the great majority of cases, a return to the standard. The children of giants are not so tall, nor are the children of dwarfs so short, as their respective parents. And very many of the children of the insane are as sound in mind as they are vigorous in body." All through the book, indeed, the author strikes what is to us a sound note, in avoiding exaggeration in regard to those influences which, while they are undoubtedly great and require statesmanlike consideration, *e. g.*, alcoholism, masturbation, consanguinity, etc., are wont to be magnified out of all proportion by faddists and by those who regard restrictive legislation as a panacea for all social diseases. Indeed, it is an evidence of the great difficulty of preserving a wholesome mean that in some respects, in spite of a most obvious effort to be judicial in his views, the author is apt to fall into the other extreme. For instance, in his chapter on the forms of insanity, he finds it desirable to give many and various instances of the ways in which each form may manifest itself. To be sure, he gives no detailed cases, because, as he explains in the preface, he thinks "that our knowledge of insanity has reached a point at which its various forms and varieties, like those of bodily diseases, can be described as types, without having recourse to descriptions of illustrative cases, which bulk so large in most textbooks on the subject." Still, instances of the various ways in which the different forms of insanity have shown themselves are cited in ample variety. Yet, at the end of the section on moral perversion, we find this astonishing statement, presumably aimed particularly at such works as those of von Krafft-Ebing, Havelock Ellis, and other pioneers in the field of sexual psychopathy: "The consideration of moral perversion would not be complete without mention of the subject of perversion of the sexual instinct, about which such a redundant amount of literature has lately been produced. There is no doubt that there are abnormal beings of both sexes whose sexual inclinations are toward members, not of the opposite, but of their own sex, and these inclina-

tions they gratify by various disgusting quasi-sexual proceedings. The fact being recognized, all has been said that need be said." Now, if such a statement means anything at all, it means either that such cases are so exceedingly rare that they may practically be altogether neglected; or that ignorance concerning them is as meritorious as knowledge of all other forms. We presume that such sufferers are not worth the trouble, in Dr. Mercier's eyes, of an attempt to cure them, for in the medical science of to-day, a rational therapeutics means one based on a thorough understanding of the morbid condition. Perhaps Dr. Mercier would also blot out from the science and art of medicine all mention of venereal diseases, dismissing them with the remark that "the fact having been recognized, all has been said that need be said." It is true that the interests of innocent sufferers may be adduced in relation to venereal diseases, but it is equally true that sexual perversion claims many innocent victims also, for all sexual perverts are not sterile, by any means, and a careful and scientific study of sexual perversion may surely be granted a *raison d'être*, if only in their interests. If, on the other hand, Dr. Mercier's meaning is expressed by the former hypothesis, then when a man of Dr. Mercier's undoubtedly wide experience is so hopelessly in error on this point, it is surely time that works were published by competent observers, which, by the number of cases and the varieties of manifestations adduced, might enlighten those who were ignorant of the facts, if they would not shut their eyes and stop their ears.

The author lays stress on his distinction between "forms" and "varieties" of insanity. "By a form of insanity is here meant a certain aggregate of symptoms that a case of insanity presents at a given time; by a variety is meant a specific course that a case may run from beginning to end, usually combined with an assignable cause." The following is the author's classification: Forms of insanity: weak-mindedness; stupor; depression; excitement; exaltation; suspicion; systematized delusion; obsession and impulsiveness; and moral perversion. The varieties are as follows: Idiocy and imbecility; dementia; stupor; acute delirious mania; acute insanity; fixed delusion; paranoia; folie circulaire; insanity of reproduction; insanity of times of life; insanity of alcohol; general paralysis; insanity of epilepsy; and insanity of bodily disease. Thus, according to the author's subdivision, "a form of insanity corresponds with what is called in ordinary medical phraseology a symptom; a variety corresponds with what is called a disease, which may exhibit different symptoms at different times or at the same time." This classification, though it may be open to exception from a purely scientific standpoint, is a convenient one for the purposes for which the book was written.

Save in the section on general paralysis, we look in vain for any reference to the morbid anatomy of insanity in any of its varieties. This is, perhaps, the natural outcome of the author's view of the study of insanity as a study of conduct. On the subject of treatment, in some cases it is laid down with as much fulness as could be expected in a small textbook of this character, in others it is very meagre, and in yet others it is altogether absent.

The particular merits of this book are its clear-

ness and conciseness, its fulness of clinical illustration, and the convenience of its classification. It is well suited to the purposes for which it was written, viz., as a clinical manual for the student, giving him a bird's eye view of an outlying domain of medicine, and as an introduction to larger works for the general practitioner, but the psychiatrist has little, if anything, to learn from it, save the author's views on certain points in which they are at variance with commonly accepted views.

The American Textbook of Obstetrics for Practitioners and Students. Edited by RICHARD C. NORRIS, M. D., and ROBERT L. DICKINSON, M. D. Second Edition, Revised, Philadelphia and London: W. B. Saunders & Company, 1902. Volume I. Illustrated. Pp. 7 to 554. Volume II. Illustrated. Pp. 7 to 547. (Price, \$3.50, each volume.)

The fact that a new edition of this work has been called for must be gratifying to the gentlemen who have contributed to its pages. As we said some six years ago, when the first edition appeared, it was at that time the finest collection of obstetrical essays which we had seen in any language; and we have had no occasion to modify this view since that time. Some of the plates printed in the first edition have been supplanted by others of more artistic character, and the text has been modified to a considerable extent to bring it into harmony with the change of views which the years have brought. Dr. J. Clarence Webster has been added as a contributor, but the chapters written by him have unfortunately not been specified.

The homogeneous character of this variorum work is still as striking as ever, and the editing has been of a high order of excellence. Some errors in the text still remain, such, for instance, as attributing puerperal sepsis to a dead rat in the cellar and the continued belief of the writer of the article on sepsis in contamination by the air. A modern textbook of obstetrics might be more valuable with such things stricken out.

The work retains, however, its very high grade of excellence, and will undoubtedly continue to be a popular exposition of the subject. The illustrations are remarkable for their beauty and correctness.

Biological Laboratory Methods. By P. H. MELL, Ph. D., Director of Alabama Experiment Station, etc. New York and London: The Macmillan Company, 1902. Pp. xii-321. (Price, \$1.60.)

Dr. Mell's work is a suitable one for the beginner, and for him it is written. The reproduction of scores of cuts from manufacturers' catalogues and the very simple directions for the fixing, staining, and other preparation of tissues for microscopic examination will give it an interest solely to the novice. Each one of the phases which the author discusses might properly occupy a volume by itself. While there is very little that is original in the book, it will and can serve the purpose for which it has been written. It is noticeable that a number of important omissions have been made, such as the formula for Uhlmann's fixing solution for chitinous material. The chapters on photography and the preser-

vation of marine forms are especially good. For the student learning biological methods the book is sure to be helpful; for the advanced worker it is almost useless.

A Reference Handbook of the Medical Sciences. Embracing the Entire Range of Scientific and Practical Medicine and Allied Medicine. By Various Writers. A New Edition, completely Revised and Rewritten. Edited by ALBERT H. BUCK, M. D., New York City. Volume IV. Illustrated by Chromolithographs and Eight Hundred and Fifty-nine Halftone and Wood Engravings. New York: William Wood & Company, 1902. Pp. vi-873.

The fourth volume of this excellent work covers the ground lying alphabetically between Ergot and Infiltrations, and as compared with the earlier volumes of the series it is fully up to the high standard they have set. As we have already said, it is difficult and well nigh impossible to criticize such a work as this in detail, or even to give an adequate idea of its contents. Among the articles most conspicuous for their quality and completeness are those upon the eye and upon gunshot injuries. The very large number of illustrations that the volume contains and their very excellent quality add greatly to its value.

The Johns Hopkins Hospital Reports. Volume X. Nos. 3, 4, and 5.

The present number of the *Johns Hopkins Hospital Reports* contains articles on The Pathological Changes in Hodgkin's Disease, with Especial Reference to its Relation to Tuberculosis, by Dr. Dorothy M. Reed; Diabetes Insipidus, by Dr. Thomas B. Fletcher; Observations on the Origin and Occurrence of Cells, with Eosinophile Granulations in Normal and Pathological Tissue, by Dr. W. T. Howard and Dr. R. G. Perkins; and Placental Transmission, with a Report of a Case During Typhoid Fever, by Dr. Frank W. Lynch. Five plates illustrate the papers, and, as usual, there are full bibliographical references.

Dr. Lynch's study of his case permits him to draw the conclusions that it is possible for the typhoid bacillus to pass from the mother to the child in utero, resulting in a foetal septicæmia. Hæmorrhages of the placenta are usually found in such instances, and the death of the child supervenes either before and or soon after birth. Placental transmission of this "ap-the rule, however, in typhoid; and even malar dyspepsia takes place, the Widal reaction is not a part of a clinical ent in the foetal blood. When it is present. Accord-not be shown whether it is due to agglutination (most frequent), stances which result from the presence of its persistence, bacilli or whether these have filtered through years, during centa from the mother's blood. A number "appendicular may transmit agglutinating substances neurasthenia and but the reaction in the nursing's blood of the and is weaker than in the mother's. Recognized clinically:

While the other papers do not lend themselves readily to review, they are all on the more abortive attacks of scientific endeavor which we have more in the region of pect from the Johns Hopkins H ports are always worth preserving.

The Medical Record Visiting List for 1903. New York: William Wood & Co., 1902.

This Visiting List is as complete as a little pocket-book of this kind can well be. A convenient obstetrical table, and the introduction of the decimal system in addition to the apothecaries' system, add to the value of this useful publication. The data contained and the convenient book-keeping methods make it one of the best of its kind.

BOOKS, ETC., RECEIVED.

A Reference Handbook of the Medical Sciences embracing the Entire Range of Scientific and Practical Medicine and Allied Science. By Various Writers. A New Edition, completely Revised and Rewritten. Edited by Albert H. Buck, M. D. Volume V. Illustrated by Chromolithographs and Five Hundred and Seventy-six Half-tone and Wood Engravings. New York: William Wood & Company, 1902. Pp. vi-873.

Manual of Antenatal Pathology and Hygiene. The Fœtus. By J. W. Ballantyne, M. D., F. R. C. P. E., F. R. S. Edin., Lecturer on Midwifery and Gynæcology, Medical College for Women, Edinburgh, etc. New York: William Wood & Company, 1902. Pp. xvi-527. (Price, \$5.)

How to Succeed in the Practice of Medicine. By Joseph McDowell Mathews, M. D., LL. D., President of the Kentucky State Board of Health, etc. Louisville: John P. Morton & Company, 1902. Pp. ix-215. (Price, \$2.)

Medical Microscopy. Designed for Students in Laboratory Work and for Practitioners. By T. E. Oertel, M. D., Professor of Histology, Pathology, Bacteriology, and Clinical Microscopy, Medical Department, University of Georgia. With 131 Illustrations, some of which are Colored. Philadelphia: P. Blakiston's Son & Company, 1902. Pp. xii-17 to 362. (Price, \$2.)

Regional Minor Surgery. Describing the Treatment of those Conditions daily Encountered by the General Practitioner. By George Gray Van Schaick, M. D., Attending Surgeon to the French Hospital, New York. New York: International Journal of Surgery Company, 1902. Pp. 5 to 226. (Price, \$1.50.)

Obstetrical Nursing for Nurses and Students. Being an Elaboration of the Lectures in Obstetrics to the Pupils of the Training School for Nurses of the John N. Norton Memorial Infirmary and the City Hospital of Louisville. By Henry Enos Tuley, A. B., M. D., Professor of Obstetrics, Kentucky University, Medical Department, etc. Chicago: G. P. Engelhard & Company, 1902. Pp. 9 to 198. (Price, \$1.)

The Mattison Method in Morphine. A Modern and Humane Treatment of the Morphine Disease. By J. B. Mattison, M. D., Medical Director, Brooklyn Home for Narcotic Inebriates. New York: E. B. Treat & Company, 1902. Pp. 7 to 40. (Price, \$1.)

The Physician's Visiting List for 1903. Philadelphia: P. Blakiston's Son & Company. (Price, \$1.)

Transactions of the Royal Academy of Medicine in Ireland. Volume XX.

Transactions of the American Otological Society. Thirtieth Annual Meeting, New London, Conn., July 16, 1902. Part I.

Report of the Medical Association of the Greater City of New York. June, 1902.

Report of the Department of Health of the City of New York for the Year ending December 31, 1901.

Report of the Chief Health Officer of the Department of Health, New Zealand, 1901-1902.

Technique chirurgicale des opérations courantes. Par le Professeur agrégé à la Faculté de médecine. Avec 448 figures dans le texte. Paris: A. Maloine, 1902. Pp. vii-541.

Physiologie générale. Par Marcel Labbé, Médecin à Paris, etc. Avec figures dans le texte. Paris: Baillière et fils, 1902. Pp. 5 to 95.

Maladies médico-chirurgicales du tube digestif. Par le Docteur A. Maloine, 1903. Pp. 426.

La tuberculose considérée comme maladie du peuple. Des moyens de la combattre. Par le Docteur S. A. Knopf, de la Faculté de Paris, et de Bellevue Hospital College, New York, etc. Traduit et annoté par le Docteur G. Serisyon, Médecin consultant à la Bourboule, etc. Paris: G. Naud, 1902. Pp. 93.

La gymnastique de chambre sans appareils. Avec 32 figures explicatives. Par le Docteur de Frumerie, de la Faculté de Médecine de Paris, etc. Paris: A. Maloine, 1903. Pp. 5 to 106.

L'énergie de croissance et les lécithines dans les décoctions de céréales. Par le Docteur Maurice Springer, Ancien chef de Laboratoire, etc. Paris: Masson et Cie, 1903. Pp. 5 to 165.

Manual Teórico y Práctico de las Enfermedades de la Laringe. Por el Professor Ramón de la Sota y Lastra. Doctor en Medicina y Cirujía y en Filosofía y Letras, etc. Sevilla: Escuela Tipográfica Salesiana, 1902. Pp. xiii-691.

Tratado Teórico Práctico de las Enfermedades de los Niños. Por el Doctor Francisco Criado y Aguilar, Catedrático de Enfermedades de la Infancia con su Clínica, etc. Madrid: Imp. del Asilo de Huérfanos del S. C. De Jesús, 1902. Pp. viii-1135.

Experimentelle Untersuchungen über die entzündliche Neubildung von Bindegewebe. Von Dr. med. Alexander Maximow, St. Petersburg. Mit 13 Tafeln und 1 Figur im Text. Jena: Gustav Fischer, 1902. Pp. vii-262.

Anleitung zur Diagnose und Therapie der Kehlkopf-, Nasen- und Ohrenkrankheiten. Vorlesungen gehalten in Fortbildungscursen für practische Aerzte. Von Dr. Richard Kayser, in Breslau. Zweite vermehrte und verbesserte Auflage. Mit 130 Abbildungen. Berlin: S. Karger, 1902. Pp. 178.

Experimentelle Beiträge zur Pathologie des Blutes. Von Dr. P. Schmidt. Jena: Gustav Fischer, 1902. Pp. iv-41.

Veröffentlichungen des Komitee's für Krebsforschung. Herausgegeben von dem Vorstand, Professor Dr. E. v. Leyden; Professor Dr. Kirchner; Dr. Wutzdorff; Professor Dr. v. Hansemann; Professor Dr. George Meyer. Jena: Gustav Fischer, 1902. Pp. 32.

Taschenbuch der Massage. Für Studierende und Aerzte. Von Dr. Erich Ekgren, an der III. medicinischen Universitätsklinik zu Berlin. Mit 11 Abbildungen. Berlin: S. Karger, 1902. Pp. 90.

Miscellany.

Congenital Dislocation of the Hip.—At a meeting of the Section in Orthopædic Surgery of the New York Academy of Medicine, held on November 21st, Dr. Royal Whitman presented a patient who had been operated upon five years before by the open method with enlargement of the acetabulum. But one side was operated upon, an ankylosis appeared probable. Now the patient, a girl, aged eleven years, limped on the side unoperated upon and considered the ankylosed limb the "good one." It was two inches longer than the other and was much larger. There was no deformity, and practically no motion in the joint. This Dr. Whitman considered as bearing out his contention, advanced some years ago, that in the treatment of unilateral dislocation secure reposition—even if motion was very limited as the result of operative interference, provided there was no deformity—was a great improvement over unreduced displacement. He mentioned three cases similar to the one presented and stated that he thought all the patients had asked for operation on the other limb.

Noisy Shoulder.—At the same meeting Dr. Reginald H. Sayre presented a patient seen two months before, giving the history of slight curvature of the spine accompanied by crackling of the mus-

cles over the scapula on moving the shoulder up and down; there was also pain over the deltoid on the same side. The impression was given that the scapula was sliding over some substance. The case was presented for diagnosis and suggestions for treatment. Dr. Sayre referred to a somewhat similar case in an athlete who after violently lifting weights, stated that he had pain along the erector spinæ muscles with muscular cracklings.

Dr. V. P. Gibney said he had had a similar case under observation in a young woman, aged twenty, who had a noisy shoulder for a year. She had intercostal neuralgia and hysterical spine. He regarded the symptom as hysterical and prescribed the Paquelin cautery with rest; marked improvement followed.

Dr. Whitman had seen several such cases and been impressed by the fact that the patients always wanted to produce the noise. He thought it was caused by a snapping tendon or possibly by a bursa beneath the scapula.

Dr. Homer Gibney stated that in giving exercises to patients he had noticed these crackling sounds in many cases, especially in one exercise for lateral curvature. He also thought it was a snapping tendon.

Dr. Elliott said he had seen similar cases and at present was treating a girl for lateral curvature of the spine who had the noisy shoulder to a marked degree. When he first saw her the scapula was quite immovable. She had been taking rather vigorous exercises under treatment, and as a result the scapula had become quite mobile, and the noise was very marked. The slipping of tendons did not satisfactorily explain this objective symptom.

The Labia Urethræ and Skene's Glands.—At a meeting of the Philadelphia Obstetrical Society held on December 4th, Dr. Howard A. Kelly, of Baltimore, read by invitation a paper entitled *Some Practical Points in the Examination and Treatment of Diseases of the Urethra, including Skene's Glands*. Under the term labia urethræ Dr. Kelly described a well defined important anatomical structure which had escaped the attention of clinicians. These labia consisted, not in the rounded margins of the external urethral orifice which had been termed labia erroneously, but in well defined lips, or labia, which projected from two to four millimetres beyond the external meatus and by their mutual approximation covered and protected the orifice from the bacterial flora constantly bathing the vulva. If a trivalve speculum was introduced into the vagina and the blades were separated, the labia urethræ were also separated and the urethra was exposed.

They also exercised the physiological function during coitus of protecting the urethral orifice. Sometimes these labia projected beyond the urethral orifice on either side like long elephant ears, much more conspicuous relatively than the labia minora in relation to the vaginal outlet. Sometimes they were long and narrow. In other instances one lip was long and the other short. The margin was generally an even one or slightly crenated. In one case a fimbriated margin was found. They disappeared with age and with mechanical injuries.

Skene's glands lay just within the urethra, at the bases of these labia. The function of these glands was clearly to moisten the urethral labia, particularly during coitus at the time, and the violent displacement of the labia with the urethral orifice up into the vagina, when the labia urethræ needed constant lubrication to obviate the injurious effects of attrition; in this way they occupied a position relative to the urethral orifice corresponding to Bartholin's glands in their relation to the vaginal orifice.

Their affections were catarrhal or gonorrhœal. The author cited one case which was possibly one of cyst of the left gland due to a closed duct.

They might be treated by injection, incision, or excision. In order to inject them Dr. Kelly used a little syringe which fully met all the requirements, consisting of a delicate blunt-pointed cannula about five cm. long and one mm. in diameter; a piece of simple rubber tubing drawn over the end of the larger cannula after closing the open end, then made an excellent syringe, serving by the elasticity of the walls of the tubing to draw a few drops of fluid up the cannula. With a simple syringe of this sort the amount of fluid injected was also fully under control. After citing a number of cases treated by injection and by excision, Dr. Kelly referred to an interesting case in the hands of Dr. Hunner, his associate, in which smegma bacilli were found in the abundant secretion from one of these glands, showing how readily tuberculosis of the urinary tract might have been inferred even though the vulva had been cleansed before the patient passed her water.

Speaking of the delicacy of touch required for examining such structures, Dr. O. H. Allis said he had been especially interested in a point that Professor Dickson used to speak of, that all physicians should wear gloves, and that their hands should be kept very delicate and very sensitive. For many years when the speaker had been at the seashore he had amused himself with washing his hands with the sand and had found how thoroughly it took off the outer coat, the tough and corneal portion. He liked to wash his hands with sand about once a week. Unless the fingers were very delicate they were apt not to detect such a foreign body as a needle, for instance.

Appendicular Dyspepsia.—Dr. L. Longuet (*Gazette de gynécologie*, September 15th), in a paper on three cases of appendicectomy for appendicular dyspepsia, arrives at the following conclusions: (1) There are dyspepsias engendered by certain chronic appendicular inflammations. Thirty-one observations, all verified by surgical intervention and its results, justify the positive affirmation of this "appendicular dyspepsia." (2) Appendicular dyspepsia shows itself by a gastrointestinal atony of a clinical character, and somewhat varied in form. According to the case it is intestinal (the most frequent), gastric, or even buccal. It is grave by its persistence, lasting for 6, 8, 10, 12, or even 30 years, during which the patient declines into an "appendicular cachexia," complicated or not by neurasthenia and hypochondria. (3) The appendicular origin of the dyspepsia in question may be recognized clinically: (a) by a history of one or more downright appendicular attacks; (b) by one or more abortive attacks; (c) by the recognition of a tumor in the region of

the appendix; (d) by tenderness at McBurney's point. Of these four signs, of which one or more are generally wanting, the last has the greatest semiological value, both from its constancy and from its significance. (4) However, McBurney's point may be lower down than ordinarily, thus suggesting a utero-ovarian dyspepsia; or more external, simulating a nephroptosis; higher, suggesting a cholecystitis, calculous or not; badly defined, which may lead one to think of an enterocolitis; so many questions may ensue that it is sometimes difficult to decide. (5) By their pathogenesis, appendicular dyspepsias are of various kinds; the author distinguishes three groups: (a) toxi-infectious (bacterial neurotoxine) or toxic (stercoræmia); (b) pure reflex; (c) mechanical (adhesions of the colon or small intestine). (6) "Appendicular dyspepsia" tends to surgical intervention, but without urgency. Besides, the medical treatment had failed in the patients handed over, in desperation as to the cause, to the operator. In 26 cases (out of 31 operated on), a prompt and radical cure was effected, and in the five remaining cases great amelioration followed the appendicectomy. These figures enforce the conviction that this novel and important therapeutic resource must be regarded as established.

A Case of Complete Atresia Vaginæ.—Cases of complete atresia vaginæ, though mentioned in the literature, are so rarely seen, that *Pædiatrics* for October considers the following case worth describing: The girl, a young Russian immigrant, had reached her fourteenth year without menstruating. About two weeks before her mother brought her to the clinic the child had begun to suffer with pelvic pains—severe enough for a few days to affect her appetite and sleep, and afterwards disappearing. Her bowels had been irregular, but not seriously blocked. Otherwise the history was negative. Her personal appearance was good, general condition excellent, urine normal. Palpation of the abdomen revealed a tumor in the middle of the pelvis, rounded and slightly fluctuant, also some irregular fecal masses in the descending colon or sigmoid flexure. Rectal examination showed an elongated sausage-shaped tumor lying just in front of the rectum and descending easily when pressure was made on the mass above the pubes. The urethra was normal, while the vagina was entirely imperforate, the hymen being a firm, tough, rough membrane completely occluding the orifice. The examination caused no pain. The mother could not be persuaded of the gravity of the girl's condition, declined operation and took her away.

Another case is reported by Dr. Lucien Lofton in the *Medical Record* for October 18th. It is that of a child four years of age. On examination Dr. Lofton found "a complete occlusion of the vaginal outlet and canal," but at the upper commissure he found a pin-like opening from which dribbled a viscid substance. This opening would not admit a fine probe, however. The labia minora were not distinguishable, the outer lips atrophied and irregular.

The operation performed in this case was rather unusual. Separating the inner lips with a curved blunt-pointed bistoury, to introduce a pair of scissors, the tissue was slit down to the posterior fourchette. By dull dissection, with the index finger, what

adhesion existed was broken up down to the vault of the canal. Cutting away the tissue of the labia minora, and trimming it smoothly, the author inverted the labia majora as far down in the cavity as they would reach, and stitched them to the lateral walls of the canal, the attachment being practically at the bottom of the vaginal outlet. An uninterrupted catgut suture was employed on both sides. The entire canal was packed with a sterile tampon of wool, anointed with carbolized vaseline, which was held in position by a large wad of sterile gauze and a T-bandage tightly drawn up and against the parts. No provision was made for passing the urine, as this could do no harm in the face of the complete inunction given to the parts prior to the outer toilet. The patient progressed nicely.

In regard to the growth of hair to be expected, the author regards it as of slight moment for the growth of hair is practically confined to the upper and outer edge of the labia majora. He looks also for some gradual stretching of the parts as the child grows older, and the tendency will be, in his opinion, upward and outward.

The Treatment of Nasal Deformities by Subcutaneous Injections of Paraffin.—Dr. Junius F. Lynch (*Virginia Medical Semi-Monthly*, November 7th) reports four cases of this method of treatment, which, judging from the profile portraits "before and after," that accompany the article, indicate a very extended employment in the future for Gersuny's addition to aesthetic surgery of the face. The author describes the technics followed by him as follows:

The paraffin used is the *soft* paraffin or white vaseline, and *not* the hard substance from which candles are made. It should have a melting point above 99° and below 104° F., for if it is too soft it will be taken up by the lymphatics, and if too hard necrosis will result.

The technics is very simple. The field of operation is prepared as for any other surgical procedure, and the instruments and paraffin thoroughly sterilized. The author usually precedes the paraffin injection by the injection of a few drops of a four-percent. solution of cocaine. The melted paraffin is then drawn into the syringe and allowed to cool until it emerges from the needle as a worm-like mass; the needle should be inserted above the site of the depression, and as the injection is made the nose should be moulded to the shape desired. After the withdrawal of the needle an antiseptic collodion dressing over the puncture is all that is necessary. The reaction is very slight—usually a feeling of fullness and tension and tenderness of the nose for a day or two. No unsightly bandages are necessary, no time is lost from business, and in each of the author's cases the patient left the operating room and went immediately to work.

After a time the paraffin becomes encapsulated and of cartilaginous consistence. The injection is absolutely free from danger if properly done, and with the exception of the author's first case, in which a small superficial area of necrosis resulted, he has had no trouble whatever. As a rule, only one injection is necessary, unless the tissues are hard and dense; then the injection of a very small quantity at a time will be necessary, to prevent sloughing.

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Lectures and Addresses.

COLORADO CLIMATE AND EASTERN PATIENTS.*

By W. A. CAMPBELL, M. D.,
COLORADO SPRINGS, COLO.

Recognizing Colorado as the Mecca to which many weary travelers come seeking health, I have thought it well that we consider what we are offering them. What may they expect to find, and what are we doing for them? These are vital questions to those who have left home and friends behind. We, who have been practising for years in this great health resort, fail at times to fully appreciate the patient's position in many of the details. Our environments are common to us, and we forget the newness of things to the recent arrival or the one contemplating a trip. If I can in a short time to-day group together and give you a reminder of our advantages, and what we are doing, I may thereby stimulate you to keep in mind the recent arrival in our midst, and be able to advise him properly and judiciously.

Natural Advantages of Colorado as a Health Resort.—The eastern slope of the Rocky Mountains has a worldwide reputation as a health resort. In the plains we have an elevation of 3,000 to 5,000 feet, which would be an ideal intermediate altitude could we have a sufficient supply of good water for domestic purposes. Nearer the mountains we reach an altitude of 5,000 to 6,000 feet. Should a higher altitude be desirable, we can easily and quickly gain an elevation of from 7,000 to 10,000 feet, and find fine parks with suitable accommodations. Our cities are located in the foothills at an altitude of 5,000 to 6,000 feet, and enjoy many advantages. Our distance from a great body of water and the topography of our country are factors that guarantee a minimum of precipitated moisture and clouds. Our rainfall amounts to about 15 inches annually. Of this amount, 34 per cent. falls during July and August, and 80 per cent. falls during the summer months. Thus it will be seen that the greatest moisture occurs when it is most tolerable to the diseased patient. Our proximity to the mountains with their snow-clad peaks is a guarantee of good,

pure water. Analyses furnished by the health department of Colorado Springs show the water to be remarkably free from organic matter and deleterious salts. The character of our soil and the rolling surface insure good natural drainage.

Our latitude and altitude, coupled with the lack of moisture, give us a minimum of cloudy days and a warm sunshine. Records show that we have from 265 to 300 clear days every year. This does not include those days in which the sun has shone less than three hours. The sun's rays are very bright and penetrating. Our lowest temperatures are during the night and early morning. The thermometer may register several degrees below zero, and one may be out without discomfort, owing to low humidity. The climate is not a severe one, but is just cold enough to be bracing. The highest mean temperature for eighteen years was 68.8°, in August, and the lowest 26.5°, in January.

Our mountains not only furnish us with pure water in abundance, and contribute in controlling the winds, moisture, and temperature by their position, size, and altitude, but they also give us fishing and hunting, and a varied mountain scenery second to none.

'Tis true that with all these good things we may have winds and sudden changes of temperature, but where on earth can perfection be found? The winds may be blessings in disguise, ventilating our homes and purifying our streets. Where can two more potent factors in disinfection be found than circulating air and sunshine? To these two elements we may attribute the immunity that exists in our cities to tuberculosis. Of this we shall have more to say later.

Acquired Advantages.—Having spoken of the natural advantages of Colorado as a health resort, I will now call your attention to the acquired advantages. Our cities are well located, and in architecture diversified enough to meet the fancies of the most fastidious. They are clean and well sewered.

Our water supplies are protected from contamination. Each household is supplied with an abundance of water for domestic purposes. The plumbing and sewerage are under the control of the health department. Our sidewalks are washed and our gutters flushed frequently. Our schools are unsurpassed, and our churches meet the beliefs of all people. Our hotels and boarding houses are first-

* The president's address delivered before the Southern Colorado Medical Association, December 3, 1902.

class and ample to meet all present need. Our people are hospitable and broad-minded. The health of the resident population is excellent. Our mortality rate in Colorado Springs, exclusive of the tuberculous cases, is very low. During the year 1901 it was but 9 per 1,000, which is about the average for the past five years. How many cities of our country with an equal population can compare with us? All matters pertaining to the health of our cities are under the control of efficient local health officers. These, in turn, are under the guidance of State health officers. We are often asked as to the dangers to healthy persons coming to our cities. I attempted to answer this in a paper read before the State society a few years ago, in which I showed that one living in the middle states was thirty-seven times as liable to have tuberculosis as one living in Colorado. Dr. Gardiner has also shown the immunity of those living in Colorado surrounded by tuberculous subjects. He states that one in every six people in Colorado Springs either has tuberculosis or has come to Colorado for tuberculosis in the family, and yet only one case of tuberculosis is contracted here to sixty cases in an equal number of people living in the East.

With all these natural and acquired advantages, we believe our country merits the name that it enjoys abroad, and is one of the greatest sanitariums on earth.

How Can We Further Improve Our Health Resort?—This is a question that ought to be considered seriously by us individually and collectively. As individuals we should assist our local health officer to make his work more thorough. We should report promptly all contagious diseases, including tuberculosis. In case of death, report to him at once that he may see to disinfection. We should make special effort to get suitable laws enacted to regulate the practice of medicine and surgery in our State. One of the most disgusting conditions exists in our State, wherein the most illiterate, unscrupulous persons may pose as medical men. They advertise extensively and promise cures in incurable cases. The shrewdest men, recognizing only the almighty dollar, engage in the healing art in this way. It is a stain on the profession of our State. We should now have a law in our statutes limiting this nefarious business had it not been for the political stupidity of an ex-governor. We are glad to see that he has been relegated to the rank and file of his profession, and his political aspirations have come to naught. We should see our newly elected representatives in the State legislative bodies, and ask them to aid us in upholding the right. Now is the time to act. Let us be up and doing.

We should be active in all public works that will enhance the name of our country. We should ob-

serve closely the various effects of our altitude on disease, especially pulmonary tuberculosis, and give our observation to our professional brothers. Ignorance of climatic conditions, and ignorance of the character of cases to be sent to Colorado, is one of the most prolific causes of the poor results in cases sent to us. We have to educate our Eastern confrères in the results of our observations. All classes of patients are sent to us without any discrimination. Deductions as to the benefits of our climate are drawn therefrom which are compared with home sanitarium treatment where the cases are carefully selected. This is unfair to the climate and unjust to the patient. He is endeavoring to find a place to reside with his family where those who are ill may improve, and the remaining members of the family may be placed under the most favorable conditions to prevent the disease.

The Pulmonary Patient in General.—The pulmonary patient is rather a peculiar one, or is treated in a peculiar way by his physician. With the mass of the profession there is a hesitancy in telling the afflicted one his true condition. The incipient symptoms are often quite masked, but with the modern methods of diagnosis the wide-awake doctor should arrive at an opinion before the patient does. The physician should not let himself be persuaded out of his own opinion. He should state plainly to the patient that he has incipient tuberculosis, and give him an opportunity to act before it is too late to be benefited. He may lose his patient for the time being, while another less conscientious or ignorant physician may call the disease "bronchitis," and succeed in gaining a patient. The patient is not wholly to blame in seeking the advice of another. For generations he has been taught that consumption is incurable, and he does not feel that he has an incurable disease. In this he is not unlike those people in all walks of life who proclaim to the world that they are well, when we know that many of them are harboring in their bodies diseases that will finally get the mastery. They try to advocate or declare that they are cured by thinking they are well.

The diagnosis having been made, what is to be done with the patient? This question at once confronts the Eastern physician. We who have practised in the East, know of the futility of trying to put tuberculous patients under proper restrictions in their homes. They will not, and many cannot, do as they should when surrounded by sympathetic friends in unsuitable homes. Without the observance of strict methods in eating and exercise, little can be expected in the treatment of tuberculosis. To get the best results, it is necessary to put them in sanitariums, where every movement is directed and the diet is closely observed, or send them to more favorable climatic surroundings. The results of

treatment in home sanitariums are most excellent. Their statistics show a large percentage of cures. The cases permitted to enter our Eastern sanitariums are selected ones; hence the percentage of cured and benefited is greater than if the doors were thrown open to all classes to enter. Cases in all stages come to Colorado, and when we look at the cured and benefited, we at first sight think the results are not so good as they should be when the climate is so highly praised. When percentages are compared, it should be with our first stage cases and those just entering the second stage. If this is done, I think the balance will tip in favor of Rocky Mountain climatic resorts.

What of the cases sent to Colorado? We, who are in active practice in Colorado, see quite a variety of pulmonary cases. One will come to us with a diagnosis of "bronchitis" who has large cavities and with sputum loaded with bacilli. He has been promised a cure in three months if he would come to Colorado. Another will come to us with a diagnosis of "la grippe" who has a lung rapidly breaking down and a sharp daily rise in temperature due to mixed infection. A few weeks ago I read a paper before the Mississippi Valley Medical Association at Kansas City in which I gave an analysis of 250 persons with tuberculosis that came to me for examination soon after their arrival in our city. Of this number, 70 were in the first stage of the disease, 110 in the second stage, and 70 in the third stage. The benefited and cured were 92 per cent. in the first stage, 54 per cent. in the second, and 13 per cent. in the third. The large percentage in the later stages of the disease and the poorer results obtained should be an incentive to more active efforts in getting the patients to Colorado in the earlier stages of the disease.

Our Duty to our Patients.—What is our duty toward these patients who come and consign their broken down health to our care? What are we doing for them? Are we doing all we can to protect them from the charlatan? Are we doing all we can to remove from our midst those who are willing to give them examination free but who always find they are badly diseased and recommend their treatment at so much per month? This treatment is recommended to cure them, but to enjoy its beneficence they must pay from one to three months in advance. The treatment may consist of internal medication with certain remedies or combinations of medicines known only to the administrator! Many of these on analysis are shown to be remedies long ago demonstrated by the medical profession to be useless in the treatment of tuberculosis. It may be that the discovery is an inhalant of fumes or vapors destructive to the tubercle bacilli. Or it may be an x ray with a new magnifying fluoroscope which will

reveal the presence of the disease and enable one to make out its exact location, and thereby be a great help in combating the enemy. Or it may be a cabinet electric bath that will stimulate the skin to perform its functions in a wonderful way. Or it may be the actinic and parasiticide action of the ultra-violet rays, or it may be the electro-violet rays which will penetrate the chest, search out the bacillary intruders, and wage war with them. It matters little whether it is internal medication, inhalation, x ray, or violet rays, there is hardly a rap of justification for their claims, and we should have laws made regulating their existence and limiting the harm done by them. This can only be done by concerted action by the honorable members of the profession who are making the health of the patient the issue of paramount importance, rather than the dollars they may extort from them. As stated before, the pulmonary patient is a peculiar one; he never believes he is as severely ill as he is. He is not satisfied, and chafes under the necessarily slow process of cure. He reads on our street cars, on hand bills, and in our daily press of the remarkable cures. He is told in our boarding houses and in places of business of the wonderful cures of Dr. So-and-So, little suspecting that his informant will get a percentage of the money he may pay the doctor should he seek his services. Such conditions ought not to exist. It is a duty our State owes to the invalids that come within her borders that she protect them from this class of vampires.

Our Patients.—Our patients come to us as entire strangers. They often, too often, come to us with suspicion written on their countenances. They have been furnished with a pocketful of prescriptions by their home physician, have been told to come West, to live out of doors on horseback, and steer clear of the health resort physician. We are glad to note that each year lessens the number of patients coming with this advice. This shows that the Eastern physician is realizing the folly of his past admonitions. Having got the confidence of our new patients, it is often our duty to at once disabuse their minds of preconceived ideas as to their having bronchitis, and that they can return home in a brief period cured. This may so disconcert them that they may seek the advice of several physicians before they become convinced of their true condition and reconciled to remain indefinitely in Colorado.

Our first duty after making a diagnosis is to determine if they are suitable subjects to remain at high altitudes. We take into consideration the extent of lung tissue involved; if quite extensive, is there enough good lung left to give the patient comfort in breathing our rarefied air, or is the destructive process going on so rapidly as to make it unsafe to remain?

If extensive fibrosis has taken place, has the patient sufficient breathing space left to be comfortable? Is there mixed infection with high temperature and weakened heart? Is there dilatation of the heart without compensatory hypertrophy? Is there endocarditis or myocarditis? Has the patient acute miliary tuberculosis? Has he Bright's disease? In my experience I find the foregoing conditions indications sufficient to advise the patient to seek an intermediate altitude or the sea level. These things ought to have been determined before the patient left home, but failure in this respect is so prevalent that we cannot take anything for granted, and we should make a thorough examination of all cases coming to us for the first time. Having found the patient a suitable one to remain in our State, it becomes our duty to at once assume control of all his movements.

Our Duty to our Patients.—We should see that the boarding house is the best the financial condition of the patient will afford. In this connection I would say that I would have the financial condition of our patients such that they would not have to think of supporting themselves for several months, and feel able to live with comfortable surroundings. Although we often see the most excellent results under the most unfavorable surroundings, it is the exception and not the rule. Overcrowding in ill ventilated houses should be avoided. The room should be light, airy, and thoroughly ventilated. We are glad to note that there is less overcrowding now than prevailed a few years ago. In this connection it would be well to say a word concerning tent life and open air sleeping. There are tents and tents. One improperly ventilated may contain almost as much impure air as an imperfectly ventilated room. The circular tent, ventilated at top and bottom, as advocated by Dr. Gardiner, of this city, is a most excellent one. We find sleeping on open porches most advantageous to our patients. Judgment has to be used in knowing when to remain indoors during the winter season. Low temperature need not necessarily drive the patient in, but a blizzard should. To be properly housed and well fed are two of the greatest factors in the treatment of our patients.

The exercise of the new arrival should be strictly under the control of the physician. If the pulse rate is over ninety per minute, or increases rapidly upon exercise, the movements should be very limited for a time. Or if the patient is irritable, nervous, and has a daily rise of temperature, he should be kept quiet in the open air during the day, the weather permitting, until these symptoms abate. To govern his exercise is the most important factor in the treatment of the newly arrived patient. It is a great mistake to allow our patients to remain indoors when

the weather will permit them to be out. And it is another mistake to allow them out of doors in active exercise before they are acclimated. Have them sit out protected from the winds, well wrapped against the cold if it is in the winter season. It has been demonstrated in the Eastern sanitariums of this country, as well as in those abroad, that being out of doors is the essential factor in the treatment of pulmonary tuberculosis. If such flattering results can be obtained in an unfavorable climate, we ought to get much better results in our favorable climate. We believe the experience of all physicians in this section of the country justifies them in urging their patients to an out-door life, under proper restrictions.

Medicines.—Medical measures are of a secondary importance in the treatment of pulmonary cases. The specific remedy for the cure of tuberculosis has not as yet been discovered. Many remedies have been heralded as the discovered cure for the disease. The profession has tried them thoroughly and has found them failures as a cure; many of them are excellent reconstructives, and are prescribed for those properties. Many complications of the disease must be met by therapeutical agents. Excessive temperature should be treated by quiet, hydrotherapy, and properly selected antifebrile remedies. Nights sweats may demand attention. Excessive cough, disturbing sleep and thereby exhausting the patient, must be allayed. Diarrhoeas have to be checked. Laryngeal complications demand local applications. Digestion may be enfeebled and need stimulating. Many other complications may arise demanding medicinal measures. We do not want to be understood as not recommending any medicines in tuberculous subjects, but we do want to protest against the abuse of giving remedies continuously to patients with the idea of curing them, when it is not going to do it. If we look to the digestion and assimilation of our patients, and endeavor to keep up their nutrition, we shall be doing the greatest good in their behalf. The disease is one of disintegration, and we should watch closely that anabolism is greater than catabolism in our subjects. It may be necessary at times to force-feed for a while, or it may be necessary to aid digestion by suitable remedies. The treatment, necessarily, is more or less symptomatic; hence we should see our patients frequently during the active period of the disease.

In conclusion, I will say that if I have in the foregoing paper presented the subject of Colorado and her guests to you in such a way that you will take more interest in studying your climate, and its effect on the animal structure, and the interests and welfare of those who come to us to regain their health, my object has been fulfilled.

Original Communications.

THE REPAIR OF LACERATIONS OF THE PELVIC FLOOR.*

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Barely twenty years have elapsed since preconceived ideas regarding the function of the so-called perinæum or perineal body began to undergo radical change. Previous to the publication in this country of the classic paper by Emmet, and of that in Germany by Schatz, it was generally conceded that

against the bladder the uterus, all of which depend in great degree for support on the perineal body." This perineal body was defined then, as it is to-day, as "a triangular wedge composed of muscles, fascia, and areolar tissue which fills the space intervening between the backward curve of the rectum and the forward curve of the vagina." It is now accepted as a fact that this perineal body does not enter into the formation of the muscular floor of the pelvis, but lies wholly beneath it; that its function is solely to give needed support to the curve of the rectum during the expression of intraabdominal force, especially in defecation. From the position of the perineal body between the vaginal and rectal orifices it is not difficult to discover the source of error as to

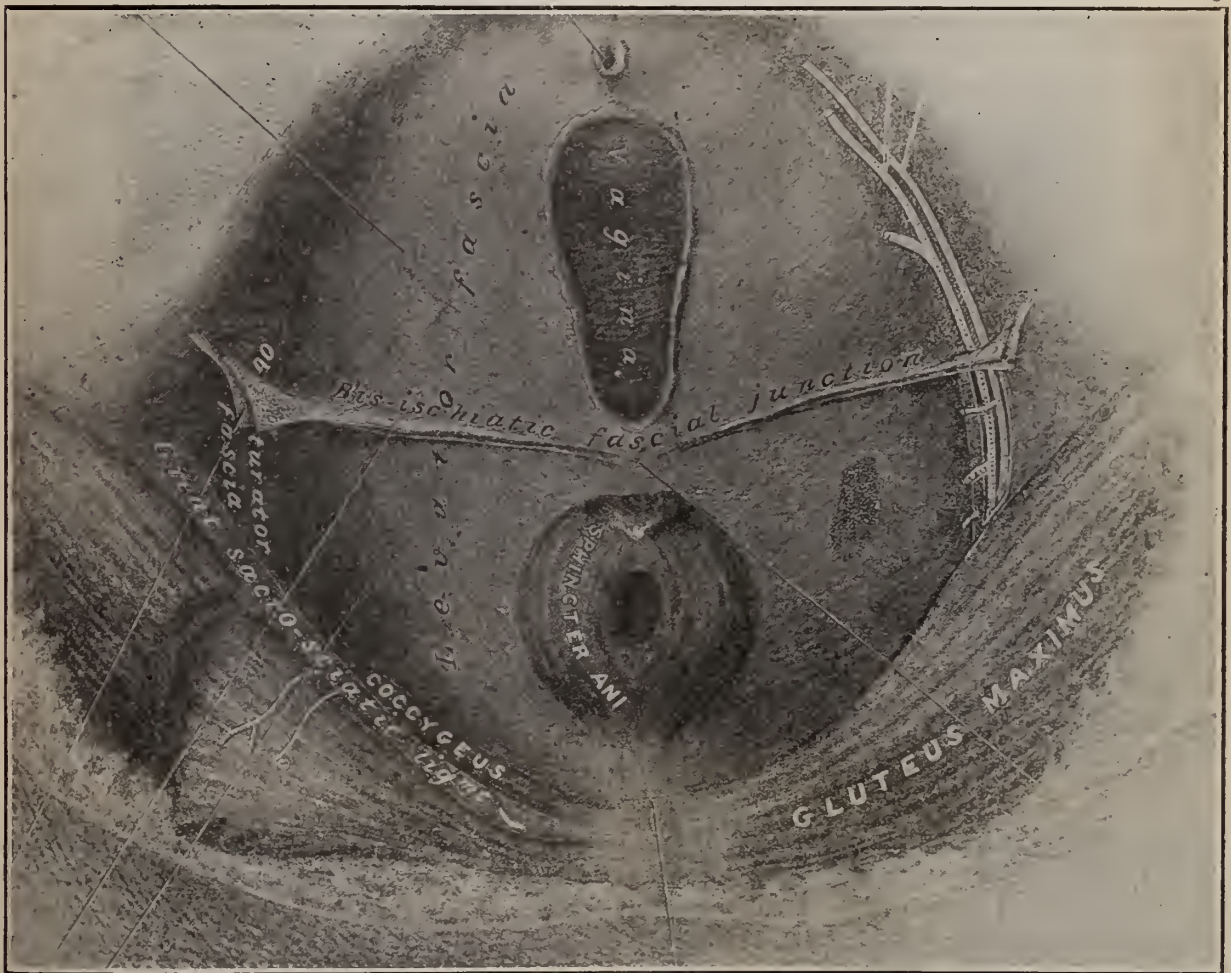


FIG. 1.—The levator ani muscle, covered by its fascia, as seen from below (Weisse).

on the integrity of the perinæum depended the maintenance of the normal positions of the organs of the pelvis. Even in 1890, Goodell taught that "the sustaining power of the vaginal column depends on the integrity of its perineal abutment," and Thomas and Mundé, in 1891, that "upon the posterior vaginal wall rests the anterior, upon this the bladder, and

its physiological function, but the deductions of the older anatomists, in some respects, closely approached the truth, and if one will substitute the term "pelvic floor" for "perinæum," certain of their arguments, in the light of present-day knowledge, will be found to be unassailable. But, in view of the fact that to "laceration of the perinæum" is attributed such a train of pathological symptoms, and because of the entirely erroneous conception of the

* Read before the New York State Medical Association at its Nineteenth Annual Meeting, held in New York, October 20, 21, 22, 1902.

physiology of this structure, it would seem to me better had the terms "perinæum" and "perineal body" never been invented.

The various structures entering into the composition of the pelvic floor are still a subject of dispute. This paper has to do only with the admittedly most important muscles of the floor and their aponeuroses, namely, the pubococcygeus and the puborectalis, which unite to form the levator ani. It is extremely difficult to obtain even a moderately correct notion of the attachments of this muscle, except by a careful dissection. Drawings and printed descriptions, even when of the best, are apt to be confusing. I shall not weary you with unnecessary anatomical details, but a brief *résumé* of the origin and insertions of the levator ani is necessary in order to appreciate its important function. Remove the skin,

while the fibres attached to the pubic bone extend along the vagina, with which they are united by strong connective tissue, but do not terminate within its walls. The belly of the muscle sweeps backward, almost horizontally, surrounding the rectum" (Piersol). In Fig. 2 these points of attachment are particularly well shown. It would seem that this dissection should convince those who are averse to attributing sustaining function to the pelvic floor that every anatomical detail of the parts tends to uphold the theory.

Of very great importance is the fascia which covers the several portions of the levator and enters largely into the structure of the pelvic floor. Without entering into details, it may be said that the posterior or outer aspect of the muscle is covered, from the rami of the pubes to the ischia and coccyx, by a



FIG. 2.—The attachments of the levator ani muscle to the pelvis, showing the rôle of this muscle in supporting the pelvic viscera (Dickinson).

fascia, and certain muscular structures over the area bounded by the pubes, the ischial rami, and the coccyx, and a portion of the levator ani will be exposed to view, a more or less apronlike muscle when seen from this position which encircles the urethral, vaginal, and rectal orifices. This is shown in Fig. 1, the superficial layer of the triangular ligament (see Fig. 3) having been removed.

The levator ani on each side is attached to the horizontal ramus of the os pubis, to the inner side of the spine of the ischium, and to the fascia extending between these points (Fig. 2). The insertions of the muscle are many. "Stretching down and back, the fibres divide into unequal portions, of which one passes to the anterior aspect of the rectum, another to its posterior and lateral surfaces,

dense fascia, the levator, which, a short distance above the external anal sphincter, unites with the deep layer of the triangular ligament (Figs. 1 and 3). The rectovesical fascia (Fig. 3) I consider the most important fascia of the pelvis, as it undoubtedly is the prime factor in enabling the pelvic floor to withstand intraabdominal pressure at the pelvic outlet. It has its origin from the parietal or main layer of the pelvic fascia along the so-called "white line," which extends from the lower part of the posterior surface of the symphysis to the spine of the ischium, and covers the inner or upper surface of the levator ani as far as the rectum, where it divides into four layers—the vesical, the vesicovaginal, the rectovaginal, and the rectal. Of these, the rectovaginal covers the fibres of the levator which pass

between the vagina and lower part of the rectum, while the rectal layer extends behind the rectum and is attached to its walls.

I do not propose to enter into the subject of the dynamics of the pelvis. There can be no doubt that the function of the pelvic floor as a whole is to support the superimposed viscera, which is accomplished mainly by the inherent strength of the fascia and connective tissue. The principal function of the levator ani muscle is to support and hold in position the rectum, vagina, and urethra. As Kelly says¹, "It is apparent that the vaginal outlet has no direct means of closure such as would be afforded

in efficient repair; and with this object in view I draw attention once more to the position of the levator ani muscle and its superior and inferior layers of fascia as they surround the vaginal canal (Figs. 3 and 1). It is to be remembered that the direction of the normal vaginal canal, for a distance of from one half to three quarters of an inch within the line of the hymen, is upward and backward, and from this point, the so-called perineal angle, almost directly backward (Fig. 3). It is at this perineal angle that the levator and its layers of fascia lift the canal forward or upward, and it is at this point also that separation of the muscle and of the fascia usual-



FIG. 3.—Mesial section showing the levator and muscle and its enveloping fascia (Dickinson).

by a powerful sphincter muscle, but depends for its support upon the indirect action of the levator muscle. For by the contraction of this muscle the lower end of the rectum is tightly lifted up under the pubic arch and the vagina flattened out and held up between the two."

Emmet, in 1883, in support of his argument against the undue importance attributed to the perineal body, drew attention to the fact that laceration through the sphincter ani might occur without subsequent descent of the pelvic organs, provided there was no accompanying laceration of the pelvic floor. It is not my intention to detail the injuries that may occur to this floor, or the symptoms arising therefrom, but rather to discuss the principles involved

ly occurs.

The train of symptoms following this accident I need not refer to here. The diagnosis is easily made. If a normal rectovaginal septum is examined by means of one finger in the vagina and another in the rectum, the edges of the levator ani may be felt through the lateral walls of the vagina; if separation of the muscle has occurred, the anus is not directly forward, the vaginal outlet is relaxed, and, in a majority of cases, digital examination readily detects the lesion.

Long before the days when the practice of gynecology was set apart as a specialty by itself, the morbid effects of these lesions on the health of women were recognized, and more or less well directed efforts were made by surgeons toward effect-

¹ *Operative Gynecology.*

ing a cure. Portions of the vaginal floor were denuded, the areas of denudation being of various shapes and sizes, and the edges of the wound were approximated by sutures introduced in various ways, but not until Emmet so clearly demonstrated the function of the pelvic floor and its pathology did surgeons appreciate the principles underlying operation.

And now this question intrudes itself: Do a majority of the modern operations of perinæorrhaphy and colpoperinæorrhaphy actually restore the pelvic floor to its normal condition? To this question I think there is but one answer—No. In but one or two of the many textbooks on gynecology now in general use are these operations on the posterior



FIG. 4.—Hegar's operation of colpoperinæorrhaphy, the type of operation usually performed for prolapse of the vaginal wall and relaxed outlet (Pozzi).

wall described in sufficient practical detail, nor are the generality of operators at clinics more precise in their technics. Especially is this true with regard to the denudation of the tissues. The would-be operator or the student is directed to outline the area to be denuded, and then simply to *denude* it, taking care to remove all scar tissue, if such is present. Except in connection with the latter, no direction is given about the amount of tissue that should be removed; in other words, whether the denudation should extend through the mucous membrane only, or into or through the vaginal wall. As a matter of fact, until very recently, most operators

have endeavored to save as much tissue as possible, and the flaps or strips removed have consisted of but little more than the mucous layer.

It stands to reason that here, as elsewhere in the body, in order to close a muscular rent, the edges of the muscle or muscles must of necessity be raw, and must be closely approximated and so held until union has ensued. By far the greater part of posterior wall plastic surgery does not expose the levator ani muscle and its enveloping fascia at all; the muscular wall is partially denuded, and, by the help of sutures, is backed up against itself, in which position the surfaces unite. Such an operation is that known by the name of Hegar, pictured in Fig. 4. I willingly grant that, in a majority of instances, such an operation fulfils all necessary indications, as far as reducing the lumen of the canal and partially closing the outlet is concerned, but I do not admit that it repairs the laceration of the pelvic floor. The edges of the separated muscle and its fascia undoubtedly are brought closer together by the approximation of the immediately overlying tissue, but the rent remains. Many operators have appreciated this defect, and have evolved special methods for the suturing of these superficially denuded areas, the professed object of the sutures being to draw the separated muscles and fascia together, but I fail absolutely to discover how this closure can be made permanent unless muscular and fascial edges themselves have been freshened, or, perhaps, the suture has been of non-absorbable material and buried.

It would appear, in this connection, to be rank heresy to question the teaching of such an eminent authority as Thomas Addis Emmet, but I confess that during an active experience covering nearly ten years in the teaching of operative gynecology the conviction has grown upon me that the operation devised by him for the cure of relaxation of the pelvic floor does not accomplish what he alleges for it. By means of a gutter-shaped, triangular denudation on each side of the vaginal canal, which denudation extends only through the mucous membrane, and by the introduction of three separate sets of sutures, "the slack of the retracted fascia is taken up throughout the pelvis, the posterior vaginal wall is lifted upward and forward in contact with the vesicovaginal septum, the everted tissues at the vaginal outlet are rolled in, and the separated levator ani muscles are brought together so that the woman becomes apparently perfectly normal." I grant that all this *may* be perfectly true, and that all that is claimed for the operation may be accomplished—*just so long as the tightly drawn sutures remain in place*; but neither the levator itself nor its fascial coverings have been freshened and directly united, and being held in their normal positions only by the sutures, is it not reasonable to suppose that they will

retract to a certain extent as soon as the sutures are removed? This being granted, I cannot see that anything more is accomplished by this operation than by those of Hegar, Martin, Bischoff, Freund, Dudley, Edebohls, and a score of others. If the denudation in the Emmet operation were to extend through the thickness of the vaginal wall, as in Kelly's method, it seems to me that the permanent results might be more in accordance with his claims.

I do not for a moment deny that a woman suffering from pelvic floor laceration will be immensely benefited by the performance of one of these plastic operations; I simply fail to convince myself that the parts can be restored to their *normal* condition, the condition in which they were previous to the injury, unless the ruptured muscles and fascia underlying the floor of the vagina are individually freshened and individually sutured.

It would appear that, so long as good results are obtained from these operations, it is unnecessary to strive for a higher degree of excellence in technique; that more elaborate and time-consuming procedures are uncalled for. This may well be; but advanced surgeons doing scientific work will ever endeavor to base that work on sound anatomical and physiological principles, and will not rest satisfied until that end has been attained. It is for this reason that new operations and modifications of old ones are constantly being brought forward.

In carrying these principles into effect it is neces-



FIG. 5.—First step in suturing of the separated levator ani muscles (Reed).



FIG. 6.—Second step in suturing of the separated levator ani muscles and vaginal incision (Reed).

sary to bear in mind certain additional facts in connection with the physiology of the pelvic floor. The first and most important of these is that the strength or sustaining power of the floor does not lie in the levator muscle itself, but in the fascia which envelops it. The conditions here are analogous to those which obtain in connection with the muscles and fascia of the anterior abdominal wall. Every operator is fully alive to the necessity of carefully approximating the edges of the rectus fascia if he would prevent the subsequent occurrence of ventral hernia. The stitching together alone of the muscle edges will not prevent hernia through the abdominal wall, nor will a like operation on the levator restore the lacerated pelvic floor. In every case the fascia itself must be united.

During the past year or two the technics of pelvic-floor repair has been greatly improved by a number of operators, notably by Harris, Reed, Noble, and Stone. Two of the steps in Reed's operation² are shown in Figs. 5 and 6. Briefly, this operation is as follows: After dissecting up a flap of the vaginal wall, the levator ani on each side is hooked forward. If the fascia underlying the muscle (the levator) has been ruptured, its edges are freshened and united by interrupted catgut sutures. The redundancy of the vaginal wall is then excised, and the separated levators, the rectovesical fascia, and the edges of the vaginal wound are brought together by deep sutures of silkworm gut, introduced in a man-

² *Journal of the American Medical Association*, August 30, 1902.

ner original with the author of the method (Fig. 6). Modified in some minor details, this operation impresses me as being an ideal one for the purpose for which it was designed—to restore the pelvic floor.

It is true that in many cases in which the lesion is of long standing, especially if the woman is poorly nourished, the rectovaginal septum near the outlet will be so thin that a search for the separated levator edges cannot be carried out without danger of injury to the bowel. It is in this class of cases, also, that it frequently is impossible to recognize and isolate the levator, to say nothing of its fascia, and the operation that will give satisfactory results under these circumstances will be of the Hegar type, mentioned above.

Conclusions. These may be summarized briefly, as follows:

1. The rôle of the pelvic floor in sustaining the pelvic viscera being acknowledged, a laceration of the muscles and fascia composing the most important section of the floor should be repaired in order to restore the natural equilibrium of the pelvis.

2. While a majority of the plastic operations on the vaginal wall restore the natural curves of the vagina and rectum and reduce the size of the vaginal outlet, in order to restore the pelvic floor to a normal condition, approximation and suturing of the edges of the levator ani muscle and its fascia are imperative.

381 WEST END AVENUE.

THE ORIGIN OF CHORIOEPITHELIOMA OF THE UTERUS.

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There have been observed and reported over one hundred and fifty cases of uterine growth of exceedingly malignant character, occurring after abortion and labor, or even after tubal abortion. The clinical symptoms are: (1) Pronounced uterine hæmorrhage, recurring even after repeated curetting; (2) very early metastases, especially in the lungs and vagina; and (3) early death through hæmorrhage, cachexia, or septic infection.

Macroscopically, these tumors are more or less localized, ulcerating, degenerating, hæmorrhagic growths, frequently passing deeply into the uterine wall, or through it with involvement of the peritonæum.

Microscopically, these tumors are characterized by hæmorrhagic areas, areas of degeneration, the presence of fibrin, and the involvement and invasion of capillaries and large vessels. They are especially

characterized by the presence of (1) pale round and polygonal cells with pale protoplasm and pale nucleus, and (2) large round and spindle shaped cells with large dark nuclei, and also (3) large, irregular branches composed of multinuclear protoplasmic masses.

These atypical growths have been variously described as sarcoma, carcinoma, carcinoma after abortion and labor, and as sarcoma and carcinoma causing abortion.

Sänger, in reviewing these cases, found a decided resemblance in their characteristic elements, and came to the conclusion that the decidua cells were the cause of the growth, giving it then the name deciduosarcoma or deciduoma malignum.

As a result of the investigations of Fränkel, and later of Marchand, attention was called to the fact that those cells which so closely resembled decidua cells *were really of fetal origin*, and were, in fact, the cells of Langhans, while the spindle-shaped and grouped masses of multinuclear protoplasm were of syncytial origin.

From all sides, especially in England and Germany, this view was attacked. It was pointed out how baseless was the statement that foetal cells could produce a growth of this malignant character, differing from carcinoma only in the fact that metastases resulted through the blood channels instead of through the lymph paths.

This controversy is to-day by no means settled, many holding the view that these tumors are sarcomatous and originate from the decidua cells. The giant cells and the protoplasmic masses are referred, likewise, to changes in the decidua. Others hold that these growths result from the epithelial covering of the villi. That these cells, if they are of foetal origin, should be mistaken for decidua cells, is a natural error, for we know that even in the normal processes a positive distinction is often very difficult. It is to be noted that many investigators have called the typical trophoblast cells in tubal placentation, too, decidua cells. Still others lean to the view that the stroma of the villi plays a part.

On the other hand, among those who hold that these growths originate from the chorionic covering a division of sentiment exists; for those who consider the syncytium and cells of Langhans to be of uterine origin class these growths as carcinoma and sarcoma of a somewhat atypical character. Those who believe, as we have shown¹, that the epithelial covering of the villi is of foetal ectodermal origin, and who also class these tumors under the category of carcinoma, are introducing into pathology a new element.

A factor which has served to clear our views on these various disputed points is the knowledge that

¹ *American Journal of Obstetrics and Gynecology*, 1902.

fifty per cent. of these malignant uterine growths, commonly known as deciduoma, follow the presence of hydatid mole.

In hydatid mole we find the same elements as in normal placentation, only that these elements are excessive in number and size. Hydatid mole represents a hypertrophic growth of the chorionic covering, accompanied by dropsical swelling of the chorionic stroma. As is well known, the covering of the villi consists of two layers—an outer, syncytium, and an inner, the cell layer of Langhans. The growth concerns both the syncytium and the cell layer of Langhans. The abnormal element is the occurrence of very large cells with immense nuclei in large number, and a decided growth of the syncytium, accompanied by the formation in the latter of large vacuoles.

Leaving out of consideration those cases malignant because of the diffuse and deep infiltration of the uterine wall by the cystic villi, by no means are all hydatid moles of a malignant character. A method of distinguishing between the benign and malignant cases was proposed by Neumann. He observed, in three cases subsequently resulting in the so-called deciduoma, large cell elements in the stroma of numerous villi, which he considered to be infiltrating elements of the syncytium. He observed, further, an abnormal infiltration of cell groups through such syncytial elements. But investigation of subsequent cases shows that malignant forms are not always preceded by such changes in the hydatid mole, while others have found these changes and yet no malignant growth has occurred.

Even the occurrence of metastasis is no proof of malignancy, for Pick reported a case with a metastasis of villi in the vagina and yet the patient recovered. We know that *fœtal cells are given off at all stages from the normal placenta into the maternal circulation*. Even the normal placenta, as Pick believes, may give metastases of villi, and these may (1) degenerate, or (2) grow slightly, or (3) produce the same syncytial growth as is observed in benign hydatid mole; and (4) primary malignant growths may originate, and have originated, from such metastases.

Malignancy, in the case of hydatid mole, is not, then, to be judged alone by the occurrence of metastases. Those cases which subsequently develop into the so-called deciduoma evidence their malignant character by the ability of their cells to grow in an unlimited manner, aided by the character of the tissue which permits or also aids this growth. Various theories have been propounded in explanation of this phenomenon: (1) Through the syncytium there is a constant exchange of products, and after hydatid mole or on the occurrence of abortion or labor or any process causing the removal or death of the

fœtus, this exchange ceases. The fœtal cells then, if in a favorable surrounding, are supposed to use this nutrition for themselves and to increase until an unlimited growth results (theory of Marchand). (2) Ribbert considers the unlimited ability of certain malignant tissues to grow, to be due to the separation of their mother cells from their normal connections. (3) As is well known, Cohnheim considered displaced embryonal cells to be the future source of many benign and malignant tumors.

An interesting power or potential retained by displaced cells is that of differentiation. We know that displaced cells, cells removed from their normal relations, are able after an interval of many years to grow and produce structures of varying form. This is best exemplified in the case of dermoid cysts, for their character distinguishes them from all other tumors. *The later in the stage of embryonal development these cells are displaced, the more simple is the structure of the resulting dermoid; the earlier in the period of embryonal development their displacement occurs, the more differentiated are these cells, and the more simple is the dermoid.* For that reason, embryonal cells displaced in the early weeks produce tumors of complicated character, for their potential as regards differentiation is great. Cells displaced at a later period possess a lesser potential as regards differentiation, while those epithelial and connective tissue cells displaced very late, as at points where the skin only remains to be united and at the branchial clefts, produce only the simplest form of dermoid growth. They produce only cells of the same character and structure as the parent cell if the stage of complete differentiation has been already reached. If the displacement occurs before this period, in the subsequent growth *such elements are found as the parent cells would have produced had they remained in their normal situation*. Such early cells, however, reproduce far greater growths and far more extensive tissues than would have resulted had they not been displaced. This is evidenced by the fact that no loss of any normal tissue or structure results. In dermoid cysts of the ovary, for instance, very large and complicated tumors are found, resulting from the displacement of ectodermal and mesodermal cells by the Wolffian body, and yet the maternal body is otherwise normally developed.

In the genital tract, especially, we find numerous evidences of another cell potential, that is, the ability to display first accelerated growth after a lapse of many years. We find in the uterine wall, under the peritonæum, in the broad ligament, and in the ovary, generally after puberty, epithelial and glandular growths, sometimes of considerable size, resulting from the displacements of cells of the Wolffian body. In the fœtus and in the newly-born, hun-

dreds of uteri and appendages have been examined, and yet relatively few such displacements of Wolffian-body cells can be found. This means that the displacement concerns simply embryonal cells of this organ, which, even at a much later period, possess the power to develop the same structures as the parent organ. This growth takes place, as a rule, at and after puberty and the same is more true in the case of dermoid cysts.

We find, then, that the general stimulation of tissue and cell growth occurring after puberty may influence such embryonally-displaced cells in the same manner.

We find, on close investigation, that almost all ovarian and parovarian cysts result from the continued growth of structures which, in the embryo, were functioning organs, but which in the fœtus and in the adult are supposed to undergo regressive changes, namely, the epoophoron and the paroophoron, constituting the two divisions of the Wolffian body. Papillomata of the ovary, in all probability, also develop from cells of these supposedly regressive structures. Ovarian cysts also frequently show papillomatous changes. These are, strictly speaking, only huge increases of the characteristics of the primary embryonal organ.

Not infrequently these papillomatous growths are macroscopically of a malignant character, in that they break through the covering of the cyst or through the ovary, grow without restriction, invade the peritonæum, infiltrate the surrounding organs, and produce cachexia.

Such changes may also display the microscopical characteristics which we attribute to carcinoma—that is, a continued growth of the epithelium, a breaking through of the membrana propria, and an infiltration, microscopically, of the tissue surrounding the epithelial cells. In other words, we find a continued unlimited growth of cells reproducing, even though in a changed relation, the character of the mother cell.

These smaller and large reproductions of the Wolffian body, these cystic growths originating from the Wolffian-body cells, these papillary and malignant growths originating from the same source, as well as dermoid cysts, furnish us with evidence of the ability of regressive cells and organs and cells removed from their normal relations to undergo a more or less unlimited growth; even after lying dormant for many years. These cells, naturally, are cells of the patient and are open to the same influences as normally situated cells.

In the case of chorioepithelioma, however, we find fœtal cells, often only a few weeks old, possessing naturally no great potential as regards differentiation, but an exceedingly high potential as regards their ability to grow. The energy and potential of

these cells may be appreciated from the fact that the earliest case occurred three weeks, the latest nearly four years, after hydatid mole.

The most prominent point of a ripening Graafian follicle is poor in blood supply and is called the stigma folliculi. It is here that the opening takes place which furnishes an outlet for the ovum. This opening is probably the result of the reaction or chemical effect produced by the ripe ovum, for in the newly-born and in children follicles of the same size and even larger ones exist without bursting—the so-called atresic follicles.

After ovulation the ovum is thrown out into the abdominal cavity, and then, influenced by the wave movement of the ciliated epithelium of the tube, the fimbriæ of the ampulla, and the fimbriæ ovaricæ, finds its way into the uterus. The wave movement of the ciliated epithelium causes a current in the peritoneal plasma which directs the ovum into one or other of the tubes.

A fecundated ovum embeds itself in the lining of the uterus through centrifugal descent. The ovum then causes a reaction in the surrounding tissue and a dilatation of the surrounding lymph spaces, so that a resulting localized œdema takes place. In addition, a dilatation of the capillaries is produced.

The outer layer of the ovum develops into what is known as the trophoblast, which is a product of the ectoderm, and from it develop the cells of Langhans and the syncytium.

Shortly after the ovum is embedded in the mucosa a connection between the trophoblast and the maternal blood takes place through a rupture of the capillaries. The maternal blood then bathes the ectodermal trophoblast. This opening of the maternal vessels occurs, however, before the formation of villi; *and the cells of the trophoblast may therefore enter the maternal veins at the very earliest period.*

The compact layer of the decidua is the zone which envelops the ovum. The trophoblast at points may extend far into the compacta, for the cells have a decided power of wandering. The trophoblast, therefore, invades the maternal tissues even at the earliest period.

A gradual transition of trophoblast cells into syncytial cells and a gradual change of trophoblast nuclei to syncytial nuclei take place through the corrosive action of the maternal blood, and elements of maternal blood aid in forming the syncytial protoplasm. The syncytium does not originate from the maternal endothelium, or from the uterine epithelium, or from the decidua cells.

Just as, in the early stages, the trophoblast invades the decidua, so after the formation of villi is the future course of the ectodermal trophoblast and of the syncytial cells of a destructive character, so

far as the decidua is concerned. The trophoblast and syncytium invade the maternal tissue and mingle with it. They infiltrate the decidua and bring it to destruction. The trophoblast and syncytial cells erode the capillaries and blood vessels, the blood in turn changing foetal cells to syncytium.

The invading trophoblast and syncytial cells have at all times a great power of wandering. They enter between bundles of muscular and connective tissue, into the lymph spaces and into the blood vessels. At full term the uterine wall is infiltrated with foetal cells of a syncytial character.

From the very earliest moment, foetal cells are continually entering the blood of the mother, not only in the primary intervillous space, but in the fully formed intervillous space, as well as through the vessels of the uterine decidua and wall.

Chorioepithelioma.

Under chorioepithelioma we distinguish two forms, the typical and atypical. In the typical form we find large, round, polyhedral cells with strikingly large, very irregular, lobulated nuclei, which stain very deeply and often degenerate, forming vacuoles. The protoplasm is relatively scanty. These cells are capable of great wandering and are found more or less isolated between the muscle and the connective tissue bundles, in the lymph spaces and in the vessels. They form the advance guard in the way of infiltration. There are, further, irregular bridges of protoplasm containing scattered or grouped nuclei of various sizes.

Many of these groups of nuclei are the same large, irregular, lobulated nuclei as were observed in the form just mentioned. In addition are found irregular masses of protoplasm containing many small nuclei. The character of the latter is identical with normal syncytium.

The irregular groups of protoplasm containing grouped nuclei of various sizes are undoubtedly of syncytial character, for they result through the blood surrounding and infiltrating the cell of Langhans, and it is very evident that these cells form the aforementioned grape-like nuclei. The isolated large cells are likewise of syncytial character. They have generally been mistaken for decidua cells. They may be distinguished from the cells of Langhans, for the latter are pale, polyhedral groups of distinctly epithelial character. They are rich in glycogen and therefore often contain vacuoles. The nuclei are large but pale.

The cells of Langhans are better illustrated in the atypical form where the syncytial elements are relatively in the background. In fact, no more and no different syncytial cells are present here than in normal gestation. The trophoblast cells lie closely grouped and surrounded by syncytial elements in

quite the same manner as in normal gestation, or especially in tubal gestation. They are polygonal cells, concerning which different views have been held. They have been called decidua cells. No vessels of their own, however, are present in these epithelium-like groups, and their character, their structure, and their arrangement so closely resemble the trophoblast cells observed in normal gestation that any other view is not to be considered. These epithelium-like cells and the syncytial masses of various forms all originate from the trophoblast cells.

In these growths newly formed villi have not yet been found—a proof of the limited power of differentiation possessed by the trophoblast cells alone when acting apart from a living ovum and without the presence of mesoderm. It may be said, therefore, that two forms of this tumor exist, the first typical, the second atypical. The former cases are so characteristic that they cannot be mistaken. The latter have been so frequently called carcinoma by eminent authorities that our belief that many of these are overlooked and incorrectly diagnosed is certainly true.

A study of the histology of so-called deciduomata, and a comparison of their structure with the structure of normal placental elements, prove these tumors to be *foetal in origin*. The cells from which they develop are the cells which cover the chorionic villi. Since these are epithelial in character, these tumors, belonging as they do to the most malignant forms, should be called chorioepithelioma.

We have, then, in the chorioepitheliomata a reproduction of the same constituent elements as are found in normal placentation and are observed in benign and malignant cases of hydatid mole. These cells exert the same influence and effect on the maternal tissues as do the foetal cells in a normal uninterrupted pregnancy.

They invade, as do the normal trophoblast cells, the maternal decidua and destroy it. They infiltrate and erode the walls of the vessels. They invade and infiltrate deeply, too, the uterine wall. They advance, either as distinct Langhans or trophoblast cells, or as syncytial cells, or else they undergo in their advance a change from the former to the latter, especially when in contact with maternal blood, as in the case of placentation either uterine or tubal. Their invasion of the maternal vessels and capillaries gives them, from their earliest existence as malignant cells, the opportunity of invading the maternal circulation with a *resulting early formation of metastases*. Their ability to erode the vessels causes *profuse and constant bleeding*. Their ability to destroy the maternal tissue as they advance, produces larger and smaller areas of *degeneration and necrosis*, accompanied by the presence of much fibrin. These cells preserve their

ability to grow when they reach their new locations, with the result that they produce in the various organs, but most frequently in the vagina, *malignant nodules* of the same character as the parent growth. In fact, these secondary nodules have in some cases been observed before the character of the uterine symptoms has called attention to the presence of malignant conditions in the uterus.

The foetal cells producing a chorioma are situated in the most favorable surrounding. They have been performing practically malignant functions in that they have destroyed, even during normal placentation, maternal tissues, have invaded maternal vessels, and have been carried off into the maternal circulation. When connected as part and parcel of an ovum, when feeding and nourishing the foetus with the products of the maternal blood which have passed through them, they are, so to speak, under control of the parent organism of the ovum; yet, when released from this connection they continue an independent growth of their own. It is quite probable that in hydatid mole the oedematous swelling of the chorionic stroma is due to interference with the proper exchange between the foetus and the mother, due to a more or less increased and independent growth on the part of those cells whose function it is, normally, to aid and permit of this exchange. It is likewise probable that the growth of the chorionic cells in chorioepithelioma takes place during the pregnancy and *is rather the cause than the result of abortion*.

We have observed in the development and change of trophoblast cells to syncytium that the closely grouped cells, when vascularized, change to plasmoidal or syncytial cells. That the blood of the mother furnishes the greater portion of the protoplasm of these syncytial cells has been clearly shown. Therefore, their production and growth, even in normal conditions, depends upon their taking up directly from the mother elements essential for the formation of protoplasm, while the trophoblast cells themselves furnish the nuclei. Therefore, the growth of so pathological a tumor as a chorioepithelioma is not absolutely a reproduction of foetal cells but *is in a more or less direct manner a direct maternal production also*.

The invasion and destruction of maternal tissues in normal gestation occurs within certain fixed limits, and the foetal cells entering the maternal circulation undergo no future growth. What preserves this balance? What limits and controls the potential of the parasitic foetal cells? In hydatid mole, and especially in chorioepithelioma, the foetal cells are no longer held in check, and they possess the power of unlimited growth. What has upset the normal balance?

When the fecundated ovum enters the uterus, it

destroys the surface epithelium under it and descends actively into the decidua. It produces a decided reaction in its immediate circumference, so that even in its earliest stages it evidences a biochemical power. When the maternal blood makes its exit from the capillaries it ought to coagulate, but does not. It circulates against the foetal cells which have the power to prevent coagulation. The trophoblast and syncytial cells are bathed by maternal blood and enter the circulation; therefore the ovum has a certain enzyme action and *the foetal cells may be said to furnish or represent a placental secretion*.

On the other hand, the blood contains elements which exert a corrosive action on the trophoblast cells, changing them to syncytium. The resulting syncytial cells then cover the villi; they play the part of endothelium (which they then greatly resemble), and protect the cells of Langhans and the stroma from a further corrosive influence by the blood. That the individual cells in chorioepithelioma have the power to grow without limit, and that the cells entering the circulation have the energy to produce malignant metastases, shows that the decidua and the blood no longer have the power to limit and control their growth.

In reviewing the anatomical and physiological characteristics of the female sex before and during pregnancy (such as the cessation of menstruation, the act of labor, etc.), but especially the pathological states occurring almost entirely or exclusively in connection with pregnancy (such as osteomalacia, eclampsia, and chorioepithelioma), we are forced to a conclusion which, while partly theoretical, is nevertheless logical.

Ovarian secretion has a great trophic influence upon the uterus. It stimulates the growth of the round cells of the stroma into decidua cells. The lining of the uterus is truly a lymphoid tissue, and it is the great development of the decidua and its secretion which prevent the involvement and macroscopical perforation of the uterine wall by the placental villi. Although it may be said that ovarian secretion stimulates the growth of the foetal cells, and that certain elements in the blood hold their growth in check, it is probably the ovarian secretion in the maternal blood which aids the decidua in holding the placental development within normal limits, and which renders the trophoblast cells and the syncytial cells entering the circulation innocuous in the way of further growth.

In normal placentation the human organism furnishes us with a process parallel to that occurring in certain bacterial infections, that is, the production of two opposing toxins or ferments: (1) a blood element, probably the ovarian secretion; and (2) the placental secretion.

In the normal woman the ovary is responsible for the changes in the endometrium which lead to the periodical loss of blood known as menstruation if a fecundated ovum is not present in uterus or tube. This process is due to a secretion furnished by the ovaries, for on their removal this process ceases and the reduction of oxygen exchange amounts to twenty per cent. This secretion stimulates various functions of the body, and at regular periods an outlet for this secretion occurs if no pregnancy is in process. Every menstruation represents, then, the birth of a non-fecundated ovum, that is, a labor *en miniature*.

When, however, fecundation and development of the ovum take place, the ovum and its enzymes nullify the menstrual stimulation of the ovarian secretion. The trophoblast cells invade the maternal decidua, which is now constantly stimulated by the ovarian secretion, and likewise enter the blood of the mother. A normal gestation is thus accompanied by the stimulating effects of the retained ovarian secretion, and these two enzymes are then opposed in their action. No menstruation occurs, for the placental secretion has nullified the action of the usual forces.

At the end of nine months, when the ovarian secretion is sufficient in amount or character to overcome the neutralizing action of the enzymes of the ovum, labor occurs, that is, the same process as is observed in a minuter degree in menstruation; for menstruation, as said before, is a labor *en miniature*.

Remembering the constitutional action of ovarian secretion, it may be said that if shortly before, during, or after labor, there is an overwhelming superiority of the ovarian secretion over the placental or an opposite mal-relation between ovarian and placental secretion, the constitutional involvement known as eclampsia results.

Chorioepithelioma, occurring generally after abortion or hydatid mole, is certainly the cause, rather than the result, of the abortion. Chorioepithelioma represents a more advanced stage than that of hydatid mole, but both of these conditions, in a basic way, follow the normal processes in their course and growth. The only difference is the *power of unlimited growth* possessed by the chorionic cells in these pathological conditions. The difference in the resistance offered by the patient points to a *constitutional element, the lack of some normal secretion*, as an important factor in the ætiology of chorioepithelioma.

Following the analogy further, it may be said that chorioepithelioma is due to the fact that the resistance to the foetal enzymes and foetal cells offered by the blood, and a secretion, probably the ovarian secretion, is insufficient to hold the growth of the foetal cells in check.

127 EAST SIXTY-FIRST STREET.

SOME TONSIL AFFECTIONS.*

By RICHARD B. FAULKNER, M. D.

PITTSBURGH, PA.

The term tonsil is now applied to various collections of lymphoid glands situated at the oropharyngeal orifice, the anal orifice, and at points throughout the alimentary tract. The tonsils include the extensive chain of lymphoid structure which encircles the oral, nasopharyngeal, Eustachian, and laryngeal cavities; extending across the base of the tongue, up the lateral walls of the fauces to the soft palate, thence to the vault of the nasopharynx, to the mouths of the Eustachian tubes, and to the ventricle of the larynx. The nomenclature adopted by specialists designates the different aggregations as the faucial, lingual, palatal, pharyngeal, tubal, laryngeal, duodenal, and anal tonsils. Similar histological structures are found in the stomach and also include the solitary and agminate masses in the small intestine, vermiform appendix, and the solitary glands of the colon.

Lymphoid tissue consists of lymph pulp and lymph nodules, the pulp constituting the greater part, and the nodules a relatively small portion. In the faucial tonsil, the nodules are seen as ten or twelve round or oval masses, regularly grouped in the pulp immediately below the walls of the lacunæ. They consist of an extremely delicate reticulum, probably continuous with the perivascular sheath of the small arteries, as in the spleen, which is obscured by closely packed lymphocytes, the activity of the lymphocytes becoming markedly increased in acute inflammatory changes.

The lymph pulp also consists of a delicate reticulum enclosing lymphocytes; but the reticulum is much coarser than that of the nodules. The reticulum is formed of elongated cells arranged around the ground substance, forming lymph spaces, through whose walls lymph and migrating cells may readily pass.

The lymph nodules surround a varying number of deep, pouchlike pockets, called lacunæ, these pockets being formed by invagination of the mucous membrane, the development commencing in foetal life. The lacunæ are lined by reflected mucous membrane. The lacunæ of largest size are filled more or less with fat molecules, loosened epithelium, lymph corpuscles, small molecular granules, and cholesterol crystals (D. Bryson Delavan).

Authorities now agree that the tonsils are absorbent glands, of lymphoid structure, their chief function being the generation of lymph cells or leucocytes, and that leucocytes so formed escape through the surface epithelium of the tonsil into

* Read before Section in Ophthalmology, etc., of the Allegheny County Medical Society, December 3, 1902.

the free cavity of the pharynx, where they destroy microorganisms and other deleterious agents.

Swain suggests that if the chief function of the pharyngeal tonsil is to destroy pathogenic germs inhaled in respiration, the faucial tonsil performs a similar office in protecting against organisms entering the mouth with ingesta (F. H. Bosworth).

More than one hundred varieties of microorganisms, pathogenic and non-pathogenic, inhabit the mouth and nasal vestibule of perfectly healthy people. That these bacteria do not always cause pathological conditions is, no doubt, materially due to phagocytosis. Macintyre has proved the mouth to be the gathering place and incubator of many varieties of bacteria, and that many diseases, if traced to their source, will be found to originate in the mouth, for example, dental caries, pneumonia, diphtheria, and almost every form of pharyngeal, nasopharyngeal, and laryngeal catarrh. Lennox Browne supports strongly the evidence of Macintyre that so called catarrhal conditions of the mouth and throat are intimately associated with the invasion of these parts by microorganisms.

Kanthack has cited a case of acute amygdalitis in which the streptococcus was present; another case has been reported of tonsillar inflammation of plastic character in which the Fränkel-Talamon organism was present, and similar cases have been reported by Jaccoud, Gobbi, Rendu, and others. Evidence demonstrates the existence of a purely pneumococcal amygdalitis. Sokolowski describes the lacunæ in acute inflammation as filled with fibrin, lymph cells, diplococci, streptococci, and bacilli. Bulloche states that when staphylococci predominate the disease is more localized and of a milder character; while, in the case of streptococci predominating, it has a tendency to spread and to become more systemic in effects. Lennox Browne suggests that weakening in the defensive process of phagocytosis is the cause of middle ear affection.

Sir Andrew Clark has remarked that if one will think merely of the rapidity with which the tonsil manufactures and discharges lymph cells, it will not be difficult to see how a sudden suppression of the process, the accumulation of effete matters in the crypts, and the filling up of the lymph spaces with the products of bacterial life, and with matters undergoing evolution, may contaminate the blood, and originate the troubles considered as rheumatic. Contamination of the system in such manner is acknowledged by Buschke, who recognizes the tonsils as the entrance door for purulent microorganisms, and Kraske, who alludes to acute osteomyelitis as being due to organisms which find their entrance to the system through the tonsils. The researches of Roos, Balck, Stabell, and Seifert tend to prove that after infection by the tonsils the microorganisms

may migrate to the joints, synovial cavities, and endocardium. Many cases of so called articular rheumatism are quite as often due to pyæmic metastasis as to the rheumatic dyscrasia. Authorities concede that diphtheria, scarlet fever, and other diseases find entrance to the system, through absorption by the tonsils of the *materies morbi*. Turnbull (*Medical Record*, August 9, 1890) reports a case of amygdalitis followed by rigor, phlebitis, pneumonia, and death. So long as the nasal channels are free and the secretions of the nares, pharynx, and buccal cavity normal, so long will the person be exempt from ordinary throat disease. The secretions of the mouth and pharynx are contaminated by inhalation of germs and seriously influenced by nasal stenosis, whether due to hypertrophy of the turbinated bodies or to destruction and atrophy of the Schneiderian membrane, with final distortion and contraction of the nares, due to their removal. Lermoyez states that nasal mucus, in three hours, at 38° C., destroys almost all varieties of microbes. Thomson and Hewlett have shown that in 84 per cent. of cultures made from the mucous lining of the nares, behind the vestibule, there was absolutely no bacterial growth whatever. Nasal stenosis leads to mouth breathing, and deprives the buccal and pharyngeal secretions of the benefits of filtration and of the moisture and warmth of the nares. Mouth breathing leads to anæmia, and whether leucocytes from the pharyngeal tonsil invade the nares, or whether the nares produce leucocytes, is now a matter of little consequence. Phagocytic action is diminished in proportion to diminution in the number of healthy leucocytes, and it is probable that quality as well as quantity constitutes an important factor in the defensive process.

In every form of acute and chronic amygdalitis, the ever present, baneful influence of pathogenic microorganisms must be taken into consideration.

With our present knowledge of the anatomy of the tonsils, of their absorptive power, and of their important phagocytic function, wisdom seems to demand, in every case of tonsillar affection:

1. Thorough antiseptics;
2. Greater care in the preservation of lymphoid structure;
3. More conservative surgical, and decidedly more comprehensive and detailed medical, treatment of the nares.

A Paper on Hookworm Disease.—On Saturday evening, January 17th, at 8:30 p. m., at the Medical Library Building, 1313 Bedford avenue, Brooklyn, Dr. Charles Wardell Stiles, of the Marine-Hospital Service will deliver an illustrated address under the auspices of the Medical Club of Brooklyn, on Hookworm Disease (*Uncinariasis*)—A Newly Recognized Factor in American Anæmias.

REPORT OF A CASE OF TETANUS FOLLOWING VACCINATION.

By WILLIS S. COOKE, M. D.,
NEW YORK.

Various statistics give an average of about 22 per cent. of all cases of tetanus as occurring in childhood, not including tetanus neonatorum. It is said to be very rare under the age of five years, except in the cases of umbilical infection mentioned above. Males are most often affected, but not so noticeably in children. Laurie, in Glasgow, reported one case in a child aged five years and a quarter, one case at six and a half years, two cases at seven years, four cases at eight years, and so on up to fourteen years, where occurred eight cases, and at fifteen years there were ten cases. Gower states that the second decade is the time when tetanus occurs most often in childhood.

Regarding prognosis, Keating says: "The death rate is very high—so much that it is never practically possible to give a favorable prognosis." Of all the cases reported by Laurie, not one patient under fifteen years of age recovered, and only about 14½ per cent. of patients over that age. Packard, of the Pennsylvania Hospital, reported one recovery out of nine cases. Yandel says that the mortality is greatest among children, and Connor places the death rate, in all cases, at about 80 per cent.

These figures are more applicable, of course, to the time previous to the extensive use of an antitoxine. A note in a prominent medical journal has just come to my notice which states that the death rate in tetanus is reduced by its use from 90 per cent. to 40 per cent.

This brief collection of statistics, which excludes cases following gunshot wounds in time of war and all cases of tetanus puerperalis, tends to show that tetanus in children under five years of age, except in the new-born, is rather rare, especially in girls, and that it is extremely fatal in all classes of cases.

As to the treatment. Probably every drug known to be, or suspected of being, a motor nerve depressant has been used, besides many whose physiological action shows no valid reason for their use. Briefly mentioned, with reference to nothing but name, the following may be given as a partial list: Amyl nitrite, arsenic, apomorphine, the bromides, belladonna, barium chloride, chloral, calabar bean, chloroform, conium, curare, calomel, carbolic acid, corrosive sublimate (subcutaneously), lobelia, methylal, nitroglycerin, serpentaria, trional and about all of the coal tar series, urethane, veratrum viride, gelsemium, and finally, the serum treatment. At one time the correct thing was calomel to salivation and opium.

The medication most in use at present, probably,

is one of the bromides and chloral in conjunction with tetanus antitoxine, which has not given extraordinary results as compared with the serum treatment in other infectious diseases. The submeningeal injection has not proved very satisfactory, I believe. Ordinary subcutaneous injection would seem to satisfy the indication well enough with less danger to the patient.

The following case seems worth recording because it is somewhat different from many of the cases published:

CASE.—Della B., aged four years, well nourished and normally healthy, was vaccinated, together with an older sister, in my office on March 28, 1901. The usual precautions as to cleanliness were carefully observed. The vaccine was of the glycerinated variety on an ivory or celluloid point, encased in paraffin. Scarification was done at a point on the right leg about three inches below the knee, over the outer head of the solæus. A protective shield was placed over the abrasion and the father was directed to report with the child at the end of a week, or at ten days at the most. He did so, but did not bring the child, she having in the mean time been sent to the home of a friend in the country. Both cases were running a typical course up to that time, according to his report. They remained five days, and on their return both sores were discharging freely, so the mother stated. She thought that there was an odor to the one in question.

On Friday, April 26th, I saw both children. The older one was well and made no complaint, but the younger one seemed to be somewhat indisposed. Both sores were typical vaccine pustules and still discharging. No odor was noticeable from either. On the 27th there was some stiffness of the facial muscles and she complained that her face was hurting her. Bowels moved normally and urine voided as usual.

On the 30th there was increasing stiffness of the facial muscles with more complaint about the pain, also a peculiar pinched expression of the countenance, especially around the mouth and eyes. The child was usually active and had a good appetite. There was no rise of temperature and the tongue was easily protruded for inspection. Later in the day some stiffness of the leg muscles became apparent and locomotion seemed to be slightly difficult. The patellar reflex was very much exaggerated and the masseters were stiff enough to cause considerable pain when the jaws were forced apart.

A nurse was placed in charge and that evening the first recognized convulsion occurred. The nurse stated that the child was very restless during the night, and sleep was disturbed about every ten minutes by slight spasms of the abdominal muscles. At midnight a marked spasm of muscles of the entire body occurred, the jaws and neck being rigid and the abdominal muscles very tense. The convulsion lasted about one minute, but there was no opisthotonos.

May 1st. There were slight spasms at intervals during the day, and at 12.15 a. m. there was a mild general convulsion with considerable complaint of pain in the face and neck muscles. There was a

good deal of restlessness during the remainder of the night, with repeated spasms of the abdomen and forcible expulsion of gas. At 7 a. m. on the morning of May 2d there was another general spasm. Nourishment and medicine were swallowed easily. At 7.30 there was another severe general convulsion, lasting over a minute. There were only two slight spasms during that day and the child was very quiet. At 9 p. m. I injected 800 units of antitoxine, and at 11.50 p. m. the most severe spasm of any occurred, lasting nearly two minutes and causing some cyanosis.

May 3d. At 1 a. m. a general convulsion, lasting about a half minute. At 2.30 one lasting a little longer, and at 4.30 a. m. another lasting again about a half minute. At 5 a. m. there occurred the first and last difficulty in swallowing, followed by a severe spasm and some opisthotonos. Calomel in tenth of a grain doses was given to move the bowels. The constipation seemed to me to be partly due, at least, to spasm of the sphincter, and the generally tense condition of the abdominal muscles, but I hesitated to order an enema, fearing to increase the convulsions in number. There was one general spasm during the day, and at 8 p. m. 800 units more of antitoxine were injected. At 8.30 another general convulsion occurred and again at 11 p. m., both lasting about thirty seconds. She was restless until 2 a. m., at which time she slept an hour, and after that there was a slight spasm of less than half a minute's duration. At 7 a. m. there was profuse perspiration, and the day passed very quietly with only one convulsion at 11.45 which lasted nearly a minute.

May 5th. There was one slight spasm at 3.15 a. m. No more occurred during the day and there were intervals of normal sleep, in which the mouth dropped open and the knees were flexed in a natural manner.

May 6th. There was one small spasm during the day, with normal sleep and taking of nourishment.

May 7th. There was one very slight spasm at 4.15 a. m., but none at all during the remainder of the day. Cascara sagrada was given to move the bowels. The kidneys acted well all the time, there being never any albumin in the urine.

May 8th. Sleep was quiet all night until 4.15 a. m., when there was a slight spasm. An interval of thirty-three hours passed without further convulsions. On the 9th, during my visit, there occurred what I supposed to be a slight spasm, mainly of the abdominal muscles, causing a desire to go to stool. It lasted scarcely any time at all and would have escaped notice had not the child cried out. There were never any further convulsions, so far as I know, at least none were ever noted with careful watching. Stiffness of the face and leg muscles persisted for a long time, those of locomotion seeming to be the last to become normal.

The treatment consisted of potassium bromide and chloral, two grains and a half of each to the drachm of mixture, every two hours, and later every hour; the antitoxine, as stated, and whiskey, in two drachm doses, every two hours. Laxatives were used only twice, and the nourishment was entirely liquid, mainly milk.

The highest temperature recorded was on the

night of May 4th, when it reached 101° F. It seemed to have a more or less regular rise and fall, being highest at about midnight and lowest near the middle of the day. The highest pulse was 140, at 1 a. m. on May 5th. It ran usually from 104 to 128, keeping in pretty close relation to the temperature changes. Locally the sore was cleansed with hydrogen peroxide every three hours, and was kept under a wet dressing of bichloride, 1 to 1,000, between times. Later, this was reduced, owing to the local irritation caused by so strong a solution.

I noticed, while watching this case, that both trismus and opisthotonos did occur, still there was never any sardonic grin. On the contrary, the orbicular muscles of the lips and eyes seemed always to be contracted. Moderate handling did not seem to excite the spasms particularly, and while there were strong objections to the taking of the temperature by the rectum, still it did not bring on a convulsion at any time, so the nurse said. The same was true of the hypodermic injections. There was only one transient involvement of the throat muscles. The period of recovery was sharply defined from the condition of progressive severity in all the symptoms, the convulsions increasing in frequency and becoming harder, and the prognosis seeming to be very doubtful. I cannot account for the radical change in all this on any other supposition than the specific action of the antitoxine.

A word as to the probable source of the infection. The vaccine was, without doubt, above suspicion, and I do not think my method of application was at fault, because I have always felt that surgical cleanliness was as essential in this as in any other operation, and have acted accordingly. As stated in the beginning, the child was sent into the country shortly after the wound was made, and, the weather being warm, was allowed to play out of doors. Dust and dirt carrying the germs settled on the legs and perspiration washed it into the sore. By close and careful questioning this is the conclusion at which I arrived, and there seems to be nothing very unreasonable or far fetched about it. I could never find that the sore or shield covering had been tampered with in any way.

121 WEST ONE HUNDRED AND TWENTY-NINTH STREET.

Nugæ Medicæ Veterum.—In our issue for November 29th, p. 943, we gave one version of one of the metrical trifles which abound in relation to the medical profession, the occasional reproduction of which may be of some interest to some of us. Here is another version of the verse there given:

A single doctor, like a sculler, plies;
His patient lingers and by inches dies;
But two physicians, like a pair of oars,
With swiftmess waft him to the Stygian shores.

THOUGHTS ON FÆTAL INTRACRANIAL HÆMORRHAGE.

By DOUGLAS H. STEWART, M. D.,
NEW YORK.

To clear the air, let us admit that the term "hæmorrhage" should be "extravasation," inasmuch as the former term presupposes an external appearance of blood. In the words of a German friend, "I have studied the English language for years and know all the bad what is in it." Intracranial hæmorrhage is an obstetrical misnomer, embracing "cerebral apoplexy" and "meningeal extravasation" in the new-born child, and is usually dismissed from further thought with the comment, "caused by pressure." The question at once arises What sort of pressure? Is it internal or external or forceps or long labor or upon the head or on the body and when, where, and under what circumstances? May not lack of pressure be an ætiological factor? Are not deaths imputed to respiratory failure due, sometimes, to meningeal hæmorrhage and interference with the respiratory centres? The literature aids us surprisingly little and one must depend largely on the *ars empirica*. A clot is found in 33 1-3 per cent. of all cases in which death occurs soon after birth, and some authors leave the impression, not only of a larger proportion, but also that many small extravasations either cause neuroses in later life or are absorbed unrecognized.

My own idea is that this accident arises from unequal squeezing. That is, a lack of counter-compression on the vertex simultaneously with heavy urging pains acting on the body. This causes increased tension in the intracranial vessels and happens under certain conditions and at a definite stage of labor, the forceps in the majority of cases being applied too late or not at all.

Let us dismiss the caput succedaneum after saying that it is caused, not by direct, but by uterine driving pressure and pelvic crush, the infiltration appearing on the part where pressure and resistance are wanting. Possibly every caput would be accompanied by internal bleeding were not the cranial bones forced to overlap, to diminish the brain cavity and to give protection from violence without and from vascular pressure within. Many physicians can quote cases of prolonged labor (three days or more), a midwife whipping up the uterus with ergot, and at last a child born with a head jammed into something scarcely human; but it does live, even if it has a lop-sided skull for all time. On the other hand, I found a clot in a case with six or eight labor pains and no appreciable caput. Surely, compression is heavy in breech presentations. The uterus grasps the head with no buffer to mitigate its bruising grip. Meconium and urine spurt

out, the after-coming head requires much manipulation, and yet, in my experience, extravasations come with the simplest vertex.

In "tetanus infantum" a clot was found in nineteen out of twenty autopsies (Finckel). This gives us some light. To favor meningeal hæmorrhage there must be obstruction to the flow of blood through the body, and to its exit from the brain; at the same time its entrance to the cranial cavity must be facilitated. Admitting these conditions, consider the child's head in a normal labor. The advance of the vertex is resisted, and should uterine pain be very heavy the bag of waters will cause the head to recede from the examiner's finger. The sutures are wide open and the hydrodynamics may be appreciated by watching the marginal dilatation of the cervix. When the first stage is completed and the waters have run away, the head enters the pelvis, the bones overlap, the actual amount of blood in the brain is lessened, because the cubic space in the skull cavity is decreased. Venous contents are expressed, and arterial contents limited in flow. This regulation would begin in the meninges, which are prone to capillary rupture and exudation. After delivery the sutures again open, but at that time the force exerted on the body is the mild expulsion of the vaginal muscles and not the violent driving embrace of the maternal uterus. So long as the varied efforts of labor are fairly synchronous on head and body, the length of each stage makes little difference to the child. To my mind the period of danger is the interval between rupture of the membranes and complete pelvic engagement. A heavy pressure on the body, in a dry labor, before overlapping, especially if there is constriction of the veins of the neck by an encircling cord, is a fairly certain cause of cerebral engorgement.

All treatments have failed, but theoretically I should advise the Kemp irrigator and the normal salt solution at 115° F. Derivatives are called for and this method works well in older children.

Prophylaxis may do something for us. In dry labor, dilate the os promptly and furnish pressure against the vertex with your rubber dilator. As soon as possible apply forceps and bring the head down so low that the bones along the sutures will lap and keep their places. Lateral pressure is desirable. Unbalanced and intracranial pressures are the dangerous ones. Dr. Brodhead, in his thoughtful article on Dry Labor, says the presenting part in its descent blocks up the point of exit of fluid, and, most favorably for the child (in fortunate cases), further escape is thus prevented. I have not quoted literally. The writing must be read for its own value, but an absolute quotation would open new matter. The point I am making is this—any fluid in the uterus protects the child's body and the ab-

sence of pad resistance over the vertex is not so accentuated. Midwives, in their reckless abuse of ergot and indifference to the interests of the mother, rupture perinæums, lacerate cervices, and deliver sugar-loaf heads—yet I must confess that intracranial hæmorrhages are not at all common. If ergot is given with incomplete dilatation, in dry labor, it will force the head into the pelvis, even though it tears the cervix to pieces to accomplish it, provided the womb is not burst during the process.

When the child is born, feel the fontanelles with the palmar surface of the finger, never with the point; and have the contact as extensive as possible—pulsations are made out quite clearly in this manner. Lay the palmar surface of the little finger along the arched top of the tongue. If there is either tremor or rigidity the clot is at the base. Here there is usually no attempt at sucking. There may or may not be in vertex cases, although sucking well on the second or third day is no disproof. Rigidity of the jaw is rare. A peculiar convergent strabismus (clonic) is common. It gives good ground for a fatal prognosis if it lasts more than a few minutes. It is also found after burns in the newborn, and if it begins, it usually continues till coma and death take place.

121 WEST EIGHTY-EIGHTH STREET.

NOTE ON THE SALT STARVATION PRINCIPLE IN EPILEPSY TREATMENT BY BROMIDES.

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I should like again to urge the importance of the hypochlorization diet treatment in conjunction with the bromides and organic bromine salts. Most epileptics are very fond of table salt as well as other ingredients of high seasoning. Many of them eat as much as three or four hundred grains of salt per day; consequently the body tissues are highly saturated with the chlorides. By undersalting or withdrawing salt from the epileptic diet, we reduce the sum total of chlorides in the body. It has been found by experimenting on animals and man that bromine can replace chlorine in the body tissues; therefore by sodium chloride starvation and the continual administration of the bromides, we get an organic bromide compound acceptably fulfilling the physiological rôle of chlorine and at the same time acting as a therapeutic agent of sedation in epilepsy.

This principle is not new; indeed, the idea was first brought forward by Hughlings Jackson in 1868, under the name of "substitution nutrition," but it was first actually applied to the treatment of epilepsy by Toulous and Richet three years ago, and has since been used successfully abroad and in this country to some extent. I have used the plan in a modified form very extensively for the past three years, both at the Craig Colony and in private practice.

Ordinarily we know the dosage of bromide sufficient to control epileptic seizures is from 60 to 160 grains, but under the salt starvation method 20 to 60 grains is just as efficacious. The lowering of the dosage means a lowering of the possible toxicity from the drug, with its well known attendant evils upon mind and body. Then, too, the economic feature of the plan is obvious, as bromide sedation in epilepsy as well as in other neuroses must often be continued for several years.

It is especially to be recommended in those acute idiopathic cases which require such large doses of bromides given in the ordinary manner that fatal intoxication is imminent; in those in which even unusually high dosage of bromide is of little value; in those totally intractable to the bromide salt; and, finally, in all chronic cases where a long continued sedation is necessary to hold in partial check the severity and frequency of epileptic attacks. The dietary should be especially arranged for palatableness, and consist of cereals, milk, and vegetables. The bromide of sodium should be given in the patient's food in place of table salt, as it is nearest like it in point of taste.

Quite recently I have employed organic bromine in emulsion; especially in epileptics of poor physique this preparation more or less entirely replaces the bromide salts in the hypochlorization diet treatment.

These new principles, however, do not obviate the necessity of constant use of hydropathy, massage, and general hygienic treatment.

In general, I may say that the results I have obtained from hypochlorization diet and the bromide treatment of epilepsy are the absence of "bromism," gastric irritation, constipation, and the mental hebetude common in the older forms of bromide sedation.

I certainly believe that the hypochlorization adjuvant principle is the greatest therapeutic advance since the discovery of the bromides.

Oysters and Typhoid Fever.—The recent outbreaks of typhoid fever are apparently traceable to the ingestion of infected oysters has led to the announcement that the local government board in England has decided to hold an inquiry into the conditions under which oysters are planted at Emsworth.

Therapeutical Notes.

For Diarrhœa in Puerperal Infection.—*Rivista medica* for October gives the following:

- ℞ Calcium sulphate.....2 grammes (30 grains);
Laudanum.....20 drops;
Syrup of morphine.....20 grammes (5 drachms);
Lettuce water.....250 grammes (8 ounces).

M. To be taken in tablespoonful doses.

For Constipation in Neurasthenics.—*Rivista medica* for October gives the following:

- ℞ Powdered senna leaves.. } ...of each 15 grammes
Licorice..... } (225 grains);
Cream of tartar... }
Sublimated sulphur } of each 10 grammes (150 grains).
Calcined magnesia. }

M. A tablespoonful at bedtime.

Gelatin in the Treatment of Melæna Neonatorum.—Fuhrmann (*Münchener medicinische Wochenschrift*, No. 36, 1902; *Arte medica*, October 19th) has used injections of gelatin in three cases of infants suffering from melæna. In two cases prompt recovery ensued, but in the third, which was not submitted to the treatment till very late in the disease, death occurred. In one of the cases in which recovery took place the prompt response to the remedy was a revelation. Here is Fuhrmann's formula:

- ℞ White gelatin.....1 gramme (15 grains);
Sodium chloride, chemically pure.....0.30 gramme (4½ grains);
Distilled water.....50 grammes (12½ drachms).

M.

Such quantities may be injected as can be fully absorbed, and they satisfy the indications of replacing the loss of blood and cleansing the organism. There should be injected at one time at least from forty to fifty cubic centimetres (from ten to thirteen drachms), and the injection should be repeated whenever the return of the condition demands it. The injections should be given as soon as possible.

The Treatment of Seborrhœa.—Dr. J. V. Shoemaker (*Medical Bulletin*, November) points out the two degrees of seborrhœa, seborrhœa oleosa, and seborrhœa sicca; the first being characterized by a greasy and shiny aspect of the face, the second by a drying of the increased and disordered sebaceous secretion, forming crusts, and giving rise to dandruff in the scalp. Anæmia, sexual derangements, digestive disorders, etc., are likely to be present. In cases with scanty and irregular menstruation the following has been found useful:

- ℞ Potassium permanganate.....⅓ grain;
Iron lactate 1 grain;
Extract of nux vomica.....1/10 grain;
Aloin 1/10 grain;
Extract of belladonna.....1/10 grain.

M. ft. pil. i. Four such pills to be taken daily, or three if the bowels are too much affected. The dose of potassium permanganate to be gradually increased to ¼ and then to ½ a grain.

Locally, galvanism is recommended, and the face

may be bathed every night in water as hot as can be borne; also the following ointment may be used:

- ℞ Salicylic acid.....20 grains;
Eucalyptus oil.....5 minims;
Chloral hydrate.....10 grains;
Zinc ointment..... }
Ointment of roses..... } of each ½ an ounce.

M. ft. ungt.

In this formula the quantity of salicylic acid should be gradually increased from 20 grains to one drachm, and that of the oil of eucalyptus from 5 minims to 10 or 15 minims.

In Pericarditis.—The *Rivista Critica di clinica medica* for November 8th recommends local applications of methyl salicylate as useful against the cardiac erethism and pain:

- ℞ Lanolin.....30 grammes (1 ounce);
Petrolatum.....20 grammes (¾ ounce);
Methyl salicylate.....10 grammes (150 grains);
Menthol.....5 grammes (75 grains);
Essence of lavender.....1 gramme (15 drops).

M.

Hypodermoclysis as a Means of Reinforcing the Effects of Calmative Remedies in Mental Diseases.—Dr. Gaspero (*Therapie der Gegenwart*, September) states that the calmative action of certain remedies (duboisine, hyoscine, bromides, etc.) is augmented when these drugs are administered hypodermically, dissolved in 400 c.c. of physiological salt solution, for this kind of internal lavement seems to disembarass the organism of the intoxication. By this method one obtains the same effects with only 4 decimilligrammes of duboisine sulphate and 3 decimilligrammes of hyoscine hydrate as are obtainable with twice that dose of the drugs given without the serum. A gramme of sodium bromide introduced in this way will suffice to induce a sensible and lasting sedative effect.

For the Early Stage of Bronchitis.—The *Philadelphia Medical Journal* for December 13th recommends the following:

- ℞ Extract of belladonna.....1/12 grain
Extract of nux vomica.....1/10 grain
Camphor monobromide 1 grain

For one capsule. One to be taken every two hours.

For Asthma.—According to the *Philadelphia Medical Journal* for December 13, 1902, the late Dr. William Pepper found the following prescription of use during the attack:

- ℞ Ammonium bromide 2 drachms
Ammonium chloride 1½ drachm
Tincture of lobelia.....3 drachms
Compound spirit of ether.....1 ounce
Syrup of acacia to 4 ounces

M. A tablespoonful in water, repeated every hour or two after the attack.

The following is also quoted from Allchin's *Manual of Medicine*:

- ℞ Extract of stramonium.....2 grains
Extract of licorice.....8 grains
Potassium iodide 24 grains
Spirit of chloroform 40 minims
Peppermint water to 8 ounces

Ft. mist. An eighth part to be taken three times a day.

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THE PLAGUE SITUATION.

Recently there appeared in the public press, almost contemporaneously with the announcement of the presence of bubonic plague in Mexico, a statement that the surgeon general of the Public Health and Marine Hospital Service had recently returned from a visit to San Francisco, and that his investigations there had convinced him that it was extremely doubtful if there had been plague in that city. This announcement gave the impression, at the time that the greatest care and supervision seemed to be demanded, that the executive officer whose duty it was to have charge of such supervision did not regard the situation as one of importance. We are very glad to be able to contradict this statement authoritatively, as has been done by the surgeon general in a letter that he sent to the *Washington Post*, the day after its ill advised announcement was published. But, as is so frequently the case, the surgeon general's denial was not given the same publicity that was afforded the untrue article.

In the *Public Health Report* for December 12, 1902, there is an abstract of the surgeon general's annual report, in which he says: "Bubonic plague, the existence of which in San Francisco was first reported March 8, 1900, and confirmed by a commission appointed by the department, consisting of three bacteriologists of the highest reputation, continues to be reported despite the amount of work which was done last year for the purpose of its eradication from Chinatown in that city, and which work covered, as stated in last year's report, the disinfection of over 14,000 rooms under the

supervision of an officer of this service. There have been reported up to August 31, 1902, seventy cases as occurring since March 8, 1900, and during the months of July and August of the present year fourteen cases were reported. Nine cases were reported in September and seven in October. In continuance of the plan adopted last year, the service has maintained its organization at San Francisco, which has continued its work of assisting the local board of the city by examination of the sick and dead in the infected locality, reporting all suspicious cases that have occurred. Cases confirmed by bacteriological examination have been published regularly in the public health reports of the service."

An experienced surgeon of the Public Health and Marine Hospital Service is now in San Francisco in charge of the work in connection with the plague situation, which has been continued in a skeleton form since the appearance of the disease. The city board of health has been and is doing good work in careful and repeated inspection of the affected district and in the enforcement of all protective measures.

Another surgeon of the service is at Ensanada, Mexico, to investigate the plague situation there, and officers are likely to be sent to Mazatlan and other points in Mexico, as may be necessary. There is, therefore, every reason to believe that the situation is receiving that careful attention that it deserves, and that the impression that has been created in the profession by the untrue report that the surgeon general had disagreed with the findings of the former commission sent to San Francisco to investigate the plague, is entirely unwarranted.

THE ELIMINATIVE TREATMENT OF TYPHOID FEVER.

The notion that hyperpyrexia is the cause rather than merely an index of the severity of typhoid fever in any given case, if not virtually abandoned at the present time, is certainly less prevalent than it was a few years ago. This does not indicate any disposition to forego the advantages in the way of increased comfort to the patient that undoubtedly are to be secured from the free use of such antipyretic measures as cold immersion baths and other refrigerant forms of bathing, but it does go hand in hand with a decided abatement of the disposition

to resort to the coal tar antipyretics, in the administration of which there is always more or less danger of adding to the toxic effects of the specific organism those of a drug.

In lieu of the antipyretic treatment that was but lately in such vogue, there seems to be a tendency to attach more importance to eliminants, and in particular to diuretics. A notable contribution to the argument in favor of abundant drinks for the purpose of producing diuresis is furnished by Liégeois in the *Journal des praticiens* for December 13th. He refers with pardonable satisfaction to his own pioneer work as an opponent of antipyretics, some of it done so far back as in 1877, in his *Thèse de Nancy*, in which he maintained that what dominated the symptomatology of the disease was paresis of all the organic functions, and that the excessive febrile temperature was in no wise the cause of the other symptoms, but, like them, was a result of the paralyzing action of the infected blood upon the nervous system.

A quart of some watery drink, says Liégeois, should be given in the course of every twenty-four hours. Milk, which, besides being nutritive, acts as a diuretic, should be given, raw or boiled and cooled, to the amount of five pints a day. If these copious draughts are repugnant to the patient, he says, four enemata of cold water, boiled water, milk and water, or a decoction of chamomile may be given in the course of a day. But, far from there being any repugnance to copious drinks, it is notorious that feverish patients crave them as a rule, and the deprivation of water in the old days when calomel was looked upon as one of the "sheet anchors" in the treatment of almost every acute disease must have been a sore trial to many a sick person, especially when bloodletting and other depletives had been resorted to.

THE HEALTH DEPARTMENT STATISTICS OF NEW YORK FOR THE YEAR 1902.

On December 31st Commissioner Lederle communicated to the mayor a summary of the returns of births, marriages, and deaths in the city of New York during the year 1902. It seems that 4,907 more births were reported than during the preceding year. The commissioner does not interpret this fact as showing that there was really a gain of

so many births, but as signifying that physicians and midwives were more mindful of the duty of reporting, in consequence of "the news having gone abroad that the department intended taking steps for the prosecution of physicians and midwives who failed to report births." The increase in the number of marriages reported, amounting to 2,753, is not imputed in the letter to any heightened attention to duty on the part of the clergymen, but to "the general prosperous condition of the country in general and this city in particular." It may be that this general and particular prosperity induced young people to marry in more than the usual number of instances, but we cannot be sure that they got rid of their notorious improvidence, since as a rule salaries have not been raised and almost all the expenses of living have been increased.

The death rate for the year was only 18.74 to a thousand of the population, which is said to be the lowest ever reported, both for the city at large and for each of the five boroughs. This decrease of the death rate took place in spite of a severe epidemic of measles during the first four months of the year, resulting in an increase of 1,260 deaths from acute bronchitis and bronchopneumonia, and in spite also of a moderate increase in the number of deaths from typhoid fever in the boroughs of Manhattan and Brooklyn. Some importance is attributed to the fact that the annual visitation of influenza was of a mild type and of short duration, so that nearly 700 fewer deaths were attributed to that disease than during the preceding year. There were also 582 fewer deaths from consumption and 100 fewer from smallpox. There was a decrease of thirty-five per cent. in the deaths reported from malarial fevers. For the first time in at least twelve years, says the commissioner, there was a slight decrease in the death rate from cancer. As compared with the preceding year, there were 1,244 fewer deaths from sunstroke, 913 fewer from diarrhoeal diseases in children under two years of age, and 918 fewer from lobar pneumonia and chronic bronchitis. On the other hand, there was an increase of 300 deaths from whooping cough and measles.

The commissioner's letter gives no general figures as to the deaths from violence, but it gives the fatalities of four notable disasters, namely, eighteen from the railway collision in the Fourth Avenue tunnel, five from the subway explosion in Fourth Avenue,

twenty-one from the Park Avenue Hotel fire, and thirteen from the explosion of fireworks in Madison Avenue. These accidents occurred respectively on January 8th, January 27th, February 22d, and November 4th. The loss of life from these disasters, great as it was, would not in any year cause an appreciable increase of the general death rate.

As has already been mentioned, the death rate for the year 1902 was 18.74 per mille. In 1901 it was 20.02, in 1900 20.57, in 1899 19.47, and in 1898 20.26. Those are the years that have elapsed since the addition of the territory comprised in the boroughs of Brooklyn, Queens, and Richmond—enough time to show the influence, if there was to be any, of the consolidation on the mortality of the enlarged city. The rate is much lower than that of the area of the five boroughs for any one of a long series of years prior to ten years ago. It must, we think, be called a good showing for a municipality in which fewer deaths are believed to go unrecorded than in any other of the large cities of the world.

LEMON JUICE AND THE GERM OF TYPHOID FEVER.

Prudent as we believe it to be to resist the merely plausible—or at least not to yield ourselves captives to it without some show of resistance—we deem it equally the part of wisdom not to deny the truth of a statement or a theory simply because it has not been proved, even if probability seems to be against it. Hence we are at present neither prepared to join in the Chicago Health Department's enthusiasm over the supposed power of lemon juice to prevent typhoid fever nor ready to pooh-pooh it. Newspaper statements concerning the department's views of the matter reached us before we had received the department's *Bulletin* for December 27th, in which the official presentment is made, and we supposed that, as is so commonly the case, they had overdrawn the commissioner's views; but that does not seem to have been true.

It appears that on Christmas morning there was published in Chicago a cable dispatch from London announcing that Dr. Asa Ferguson had discovered that lemon juice had the power of destroying the germ of typhoid fever. Thereupon the commissioner immediately caused an investigation to be

made by his laboratory workers, and in a little more than forty-eight hours they were able to state that lemon juice, in the proportion of about a teaspoonful to four ounces of water infected with the typhoid bacillus, was efficient in destroying the vitality of the germs contained in the water. The following is from the report of Dr. Jaques, the director of the laboratory: "One hundred and twenty c. c. of bouillon was inoculated with the *Bacillus typhosus*. The flask was placed in the incubator at 90 degrees for twelve hours. At the end of this period 4 c. c. of lemon juice was added. At the end of four hours plates were inoculated from this flask. The plates at the end of twenty-four hours showed no growth. Control plates showed abundant growth."

Assuming that this experiment was begun at 9 a. m. on December 25th—and, since it was prompted by a dispatch given in that morning's newspapers, it is not likely to have been begun much earlier—it could not have been concluded before 1 a. m. of Saturday, the 27th, the date of the *Bulletin*. It is stated to have been finished "at the close of office hours on Saturday." Therefore the *Bulletin*, if it was really printed on the day of its date, must have gone to press within a few hours of the termination of the experiment, when enthusiasm was still hot in the department and its flame fanned by the reflection that so long ago as in 1874 the assistant commissioner, in a report to the surgeon general of the Marine Hospital Service, had laid stress upon "the acid prophylaxis of cholera to the exclusion of all others," and it is expressly stated that "it was probably the recollection of this report that led to the friendly consideration by the department of Dr. Ferguson's claim in the face of general skepticism."

"Friendly consideration" strikes us as a curious spirit in which to approach the testing of a scientific question, but it is certainly not discreditable or particularly calculated to vitiate the conclusion drawn from the process. Nevertheless, while, as we stated at the outset, we are not yet ready either to agree to the department's estimate of the value of lemon juice as a preventive of typhoid fever or to wholly dissent from it, we must confess to some skepticism as to the prophylactic efficiency of deluging the outside of a raw oyster with lemon juice, which procedure the commissioner considers as an indication of "sound hygienic wisdom as well as good dietetic taste."

THE REVIVAL OF THE *INDEX MEDICUS*.

We are glad to know that the publication of the *Index Medicus* is to be revived by the bounty of the Carnegie Institution, beginning with a number for the current month. Dr. Robert Fletcher, who was associated with Dr. John S. Billings in the original series, is to be the editor in chief of the new issue. It is to be hoped that some way will be found to cover the literature of the period that has elapsed since the suspension of the *Index*, in 1899.

INTEMPERATE TEMPERANCE LEGISLATION.

Word comes from London of a new licensing act which contains the most drastic legislation in regard to alcoholism of anything that has ever been dreamed of in England. Hitherto, a person in a state of intoxication could not in England be legally interfered with unless his actions were of such a character as to make him liable to the charge of disorderly conduct. A man, for instance, who being in liquor, behaved himself quietly and created no disturbance, was not subject to police interference. Under the present law, the simple fact of being intoxicated is of itself an offense punishable with imprisonment, and three such convictions within twelve months render a man an "habitual drunkard," whose portrait is to be circulated among all licensed retailers of liquor in the neighborhood, so that any one serving him with drink shall incur a heavy fine. It needs no great acumen to see that such a law, like the stringent "blue laws" of the old-time puritans, will work its own destruction. After the first zeal has worn off, it will inevitably become a dead letter. "The old way was better." To make the mere fact of intoxication a criminal offense in a large community, is of that kind of legislation that is radically absurd, because it will never be properly enforced. To make more stringent the punishment for any injury or annoyance to others, or disturbance of the public peace committed by an intoxicated person, would have been more effectual, because it could have been strictly and impartially enforced. In our opinion the real friends of temperance and sobriety have no ground for satisfaction with this or any similar legislation; a sound and moderate law, based upon the protection of others against the offender, and not upon the idea of making the offender himself "good by act of parliament," and that law impartially and rigorously administered, would have stood a much better chance of effective enforcement. When the law for placing under restraint habitual drunkards was under consideration in England, it was rendered nugatory in effect by a provision requiring the consent of the subject, the

practical reason for this modification being that, as the bill stood, it was too great an infringement of individual liberty. The present law constitutes quite as great an infringement of that liberty, and by the substitution of a punitive, in place of a reformatory measure, has no reasonable prospect of success. It is absurd, ridiculous, and foredoomed to ultimate failure, complete and ignominious.

THE DANGERS OF GAS.

Besides the dangers of leakage from the mains, to which attention was drawn in a paper read by Dr. James C. Bayles, before the Medical Society of the County of New York, and published in our issue for August 23, 1902, as well as those due to explosion or asphyxiation caused by carelessness on the part of the consumer, attention has been recently directed to a very real, and at the same time unsuspected, danger, that may fall, through no fault of their own, on the many people who leave one or more gas jets burning the whole night through. We have previously heard of individual instances in which a gas jet that has been left burning all night has gone out, and an escape of gas jeopardizing life, or even proving fatal, has occurred. Various explanations of this phenomenon, according to the circumstances in the individual case, have been given, such as the overturning of the stopcock, the effect of wind, etc. A short time ago, a correspondent in one of the daily papers gave another explanation in a case which had come under his own observation, *viz.*, that at some period in the course of the night the pressure from the mains had failed, so that the gas had gone out while the stopcock was left on, and that naturally when the gas again began to flow, great peril of asphyxia had ensued. According to reports in the daily press, a whole district in Williamsburg was affected on January 3d by the gas going out at 3:30 a. m., and a great loss of life was probably only prevented by the hotel proprietors, who of course had some one on night duty, calling the attention of the company by telephone to the fact of the failure of the flow, and by the prompt and praiseworthy action thereupon of the police of Bedford Avenue station, who caused the occupants of every house in the district to be aroused. As it was, very many were found to be overcome with gas. The moral would seem to be that, apart from its unwholesome effect upon the atmosphere, it is a very dangerous thing to leave gas alight in a house when every one is asleep. It is better, more wholesome, and far safer, to have all lights out on going to bed, and to keep a candle and matches within reach of the bed so as to obviate the need of getting up to obtain a light. In cases of

sickness, an old-fashioned nightlight is in all respects better than the leaving of the gas alight.

A NEW WAY OF TREATING POST PARTUM HÆMORRHAGE.

At the meeting of the Fourth International Gynecological Congress, in Rome, according to a report of the proceedings published in the *Centralblatt für Gynäkologie* for December 13th, Laserstein, of Berlin, proposed a novel method of treating post partum hæmorrhage. He would twist the uterus and then hold it compressed against the pubic arch. We admit the great advantage that he attributed to the procedure, namely, that of the avoidance of infection by reason of its being wholly external, but we should like to have some light on the question of how the lax and slippery uterus can be twisted through the abdominal wall without such infolding of the wall itself as would be intolerable. Having given a half turn, say, to the organ, how could one relax his grip on the abdominal wall without at the same time allowing the uterus to untwist itself?

TRAINED ANÆSTHETISTS FOR THE CITY HOSPITALS.

Illustrations are multiplying of the advantages in the conduct of the municipal hospitals of New York that are to be credited to the régime brought about by the efforts of Dr. Brannan. The most recent of them that has come to our knowledge is the appointment of expert anæsthetists for Bellevue and the Harlem hospitals, with the probable sequence of like action with regard to the Gouverneur and Fordham. These anæsthetists will not only relieve the operating surgeons of much unnecessary concern, but will instruct the new members of the house staff of each hospital in the administration of anæsthetics by recent methods.

Obituary.

RICHARD VON KRAFFT-EBING.

The death of Professor Richard von Krafft-Ebing took place on December 22, 1902, at Gratz. As a psychiatrist his name was one of world-wide renown, and his teaching has exercised a widespread influence, especially in regard to the classification of insanity. The relations of degeneration to mental diseases received much attention and elucidation at his hands. He was an extensive writer, and besides frequent and voluminous contributions to the scientific journals, his three textbooks on psychiatry, criminal psychology, and forensic psychopathology have had a wide circulation. His work on sexual psychopathy has been the subject of much covert

jibing and no little overt criticism, but it was painstaking, earnest, and scientific, and the scientific results accomplished by his efforts will be put to practical use in the future when many who have thought fit to condemn his researches shall be forgotten. If he seemed to force into undue prominence a particular, and that an unsavory, field of psychological investigation, it was only the natural result of the widespread ignorance on the subject which the traditions of the past have inculcated as desirable. A pioneer in any field naturally devotes a greater proportion of energy and attention to his particular path than would appear to be in due proportion in the case of a traveler along well beaten tracks. Von Krafft-Ebing was born at Mannheim, in 1840, studied at Heidelberg and Zurich, and after serving an apprenticeship in alienism at the asylum of Illenau, became professor of psychiatry, first at Gratz, then at Strassburg, and subsequently at Vienna. He was an Austrian baron and a knight of the order of Franz Josef.

News Items.

Society Meetings for the Coming Week:

MONDAY, January 12th.—New York Academy of Medicine (Section in General Surgery); Medical Association of the Greater City of New York; New York Academy of Sciences (Section in Chemistry and Technology); New York Medico-historical Society (private); New York Ophthalmological Society (private); Society of Medical Jurisprudence; Gynecological Society of Boston; Burlington, Vt., Medical and Surgical Club; Norwalk, Conn., Medical Society (private).

TUESDAY, January 13.—New York Academy of Medicine (Section in Genitourinary Surgery); New York Medical Union (private); New York Obstetrical Society (private); Buffalo Academy of Medicine (Section in Medicine); Kings County, N. Y., Medical Association; Rome, N. Y., Medical Society; Medical Society of the County of Rensselaer, N. Y.; Newark, N. J., Medical Association (private, election); Trenton, N. J., Medical Association; Clinical Society of the Elizabeth, N. J., General Hospital and Dispensary; Northwestern Medical Society of Philadelphia; Practitioner's Club, Richmond, Ky.; Richmond, Va., Academy of Medicine and Surgery.

WEDNESDAY, January 14.—New York Pathological Society (annual); New York Surgical Society; American Microscopical Society of the City of New York; Society of the Alumni of the City (Charity) Hospital; Society for Medical Progress, New York; Lenox Medical and Surgical Society (private); Pittsfield, Mass., Medical Association (private); Philadelphia County Medical Society.

THURSDAY, January 15.—New York Academy of Medicine; Brooklyn Surgical Society; New Bedford, Mass., Society for Medical Improvement (private); Medical Society of City Hospital Alumni, St. Louis; Atlanta Society of Medicine.

FRIDAY, January 16.—New York Academy of Medicine (Section in Orthopædic Surgery); Clinical Society of the New York Post-graduate Medical School and Hospital; Manhattan Medical and Surgical Society (private); Baltimore Clinical Society; Chicago Gynecological Society.

The Pavilions for Consumptives in Philadelphia.—The material for building the new pavilions for consumptives on the grounds of Blockley in Philadelphia, is now on the grounds, and the erection of the structures will be begun at once.

A Pasteur Institute in Bulawayo.—Dr. A. Loir, a nephew of Pasteur, has recently gone to Rhodesia to establish a branch of the Pasteur Institute at Bulawayo for the treatment of rabies.

The Philadelphia Hospital.—At the recent annual meeting of the Philadelphia Board of Charities the present staff of the Philadelphia Hospital was re-elected, and Dr. Randolph C. Rosenberger was added to the staff as an additional bacteriologist, and Dr. Henry A. Newbold as an additional registrar.

The Ottawa Isolation Hospital.—Dr. G. A. Charlton, of Montreal, has been appointed resident physician of the Ottawa Isolation Hospital. Dr. Charlton is a graduate of McGill University, and has held the Rockefeller fellowship in pathology. His recent publications on the use of antistreptococcal serum in scarlet fever have attracted widespread attention.

Fighting Malaria in the Campagna.—A corps of thirty physicians and thirty assistants under Professor Paolo Postempski have just completed a five months' campaign in the Roman Campagna on behalf of the Red Cross Society. The total number of malaria cases treated was 3,065. All the inhabitants who were treated with prophylactic injections of quinine escaped attack.

Woman Surgeon to do Ambulance Duty.—On New Year's morning Miss Emily Dunning began a two-years' term as interne and ambulance surgeon at Gouverneur Hospital. Miss Dunning is the first woman ambulance surgeon on record. She will not be sent out on the ambulance, it is said, until after six months' work in the hospital. Miss Dunning graduated last June from the Cornell Medical College in this city, and stood second in her class.

Brooklyn Doctors Robbed.—A number of physicians have been robbed in Brooklyn recently by a man about thirty-three years of age, slender of build, with a small dark moustache, and dark eyes. He ordinarily calls when the doctor is out, and volunteers to wait until he returns. Being left alone in the waiting room he seizes a favorable opportunity and decamps with all the portable articles within reach. Dr. John A. Cochran, of 79 St. Marks avenue, was recently robbed in this manner by him.

Physician Appointed Supervisor.—Dr. Walter Lindsay, of Huntington, L. I., who has been appointed Supervisor of that town, to fill the unexpired term of Henry S. Brush, is one of the best known practising physicians on Long Island. He is the dean of the medical profession in Huntington, having been constantly at his work in the town for many years. Probably few other physicians on the Island have served so long in any one locality. He is an active member in good standing in various medical societies.

The Sleeping Sickness.—A recent issue of the *British Medical Journal* contains a note on the sleeping sickness in Uganda, reference to which has already been made in these columns. Dr. Low, the

head of the Royal Society's commission sent out by the English government to investigate the epidemic is of the opinion that the disease is of very serious importance to the protectorate of Uganda, and to the adjacent portions of British East Africa. Dr. Castellane, a member of the commission, has isolated a streptococcus, which seems to be the specific cause of the disease. The full report of the commission has not yet been published.

Hospital Buildings and Endowments.—A new extension is planned for the Harlem Hospital, New York, the three-story house at 521 to 527 East One Hundred and Twentieth street having been leased by the hospital authorities. The much needed new dispensary will be supplied and besides there will be a ward for children with 30 beds in it, and a maternity ward with 20 beds. Dr. William B. Graves, of East Orange, has presented a well equipped bacteriological and pathological laboratory to the Orange (N. J.) Memorial Hospital. It will be known as the Graves Laboratory.

The Editorship of the Practitioner.—Mr. Malcolm Morris, F. R. C. S., who has so ably edited the *Practitioner* for the past eight years, retires with the December issue for 1902. In his valedictory he says: "The *Practitioner* came into my hands with a good name made by its former editors; and now, in my turn, I pass on the lamp to a younger and swifter runner, to whom I wish a long and brilliant course. Nothing remains for me but to make my final bow, and say with the Roman actors, 'Plaudite!'"

To which we answer, "Euge!"

The Use of Antidiphtheritic Antitoxine in Brooklyn.—Dr. Joseph H. Raymond, Health Officer of the Borough of Brooklyn, recently made a statement to the effect that Brooklyn physicians were not using antitoxine to any great extent in the treatment of diphtheria, at least he was so quoted in the daily papers. This statement has evoked a number of replies from various practitioners in Brooklyn, who assert that it is erroneous, and the suggestion is made that Dr. Raymond's impression was probably drawn from the fact that a comparatively small quantity of the antitoxine furnished by the city authorities is called for by the physicians of Brooklyn. It is true that not a great deal of the city antitoxine is used, but the physicians of the city use considerable quantities of antitoxine made by private manufacturers.

Foreign Physicians in Peru.—Consul Charles V. Herdliska, of Callao, in reply to an inquiry regarding the chances of success for an American physician in Lima, writes as follows to the State Department: "Before a physician can enter upon the practice of his profession in Peru, he must pass a State examination upon medicine, conducted in the Spanish language. Upon being found qualified, a certificate is issued which entitles him to practice his profession in any part of the Republic. The opportunities for American physicians would seem to be good. Both Lima and Callao contain quite a large American and English colony, and the Peruvians themselves appear to have great faith in the

American, English, German, and French physicians and surgeons on account of the advanced state of medical science in those countries."

The American Congress on Tuberculosis is the name under which an association of physicians has filed a petition in the Superior Court at Atlanta, Ga., for incorporation. Among the incorporators are Dr. George Brown, of Atlanta; Dr. Henry D. Holton, of Vermont; Dr. Daniel Lewis, of New York; Dr. J. A. Eagan, of Illinois; Dr. Frank Paschal, of Texas; Dr. Irving A. Watson, of New Hampshire; Dr. E. J. Barrack, of Canada, and Dr. P. H. Bryce, of Canada. The purpose of the corporation, according to the petition, is not pecuniary gain for the stockholders, but is educational, charitable and scientific, its object being to promote discussion and devise means of bettering the condition of persons suffering with consumption or other tubercular complaints. Another object is to assist in the organization of the World's Congress on Tuberculosis. Although there is to be no capital stock the corporation is to have the right to sue and be sued in the courts, to borrow money and purchase property and have other rights and privileges of incorporated bodies.

A Journal Devoted to Medical History and Bibliography.—A new medical journal with the title the *Medical Library and Historical Journal*, devoted to the interests of medical libraries, bibliography, history and biography, will appear about January 15th. It is designed to fill a place occupied by no other journal, and will be the only magazine published in the English language devoted to the subject of medical history. Its original articles will embrace the subjects of medical history and biography, practical medical library administration and economy, medical bibliography, the care of books, the history, construction and use of medical libraries, etc. A bibliographical feature will be the publication of a complete index medicus of every current medical book, both English and foreign. The contributors to the first number include Dr. Lewis S. Pilcher, editor of the *Annals of Surgery*; Dr. Eugene F. Cordell, of Baltimore; Dr. Frederick P. Henry, of Philadelphia; Dr. James M. Winfield, of Brooklyn, and others. The journal is to be published quarterly, and is to be edited by Dr. John S. Browne, and Dr. Albert T. Huntington.

The Plague at Mazatlan.—Numerous well-developed cases of bubonic plague have developed at Mazatlan, Mexico, and the Mexican Government has issued rigorous instructions that every possible precaution must be taken in hopes of preventing the spread of the disease. According to the newspaper reports receiving stations are now accepting all persons suspected of having the disease. This, it is believed, will make the work of the physicians more effective. Barracks have been erected on Belvedere Island, and many people who have been exposed to the disease have been sent there. On one corner of the island those afflicted are quartered. Notice has been posted in the offices of the Pacific Mail Steamship Company that vessels of that line

will not call here until the disease is stamped out. The Secretary of the Interior has sent notices to the Governors of all States bordering on Sinaloa pointing out the necessity of precautionary measures. This has thoroughly alarmed the interior towns, and in some places a panic has followed. Armed cordons have been placed about the villages to prevent the entrance of refugees from the infected city.

Deaths in the Profession Abroad.—Dr. L. Landois, professor of physiology at the University of Greifswald, died recently, aged sixty-five. He had been associated with this university throughout his entire professional life, having graduated from this institution. His *Lehrbuch der Physiologie* which appeared in 1880 was translated into almost every European language and had a marked influence upon the later literature of this subject. Landois's most important contributions to medical literature have reference to the vascular system.—Dr. John Lowe, M. R. C. S., L. S. A., F. L. S., physician-extraordinary to the King, died at his residence at Weybridge on December 12th, at the age of sixty-eight. As a surgeon he was careful, painstaking and thorough, and was one of the first advocates of gastrostomy. Besides his work in medicine he was a naturalist and contributed many articles on botany, zoology, ornithology, entomology and kindred subjects to the periodical press.—Dr. Samuel Fenwick, consulting physician to the London Hospital, died on December 11th, at the age of eighty-one. He has lived in London where he practised as a consultant since 1862. He has been connected with the London hospital since 1865, in which year he published a book on *Morbid States of the Stomach and Duodenum*. In 1869 he published *The Students' Guide to Medical Diagnosis*, and in 1879, *The Outlines of Medical Treatment*. During the last four years of his life he was engaged on a series of monographs on diseases of the stomach, only two of which have been completed. His work as a teacher was most successful and he was also a frequent contributor to current medical literature.

The Lowest Death Rate on Record for the city of New York is shown in the annual report of the President of the Board of Health of the city. On this point the report says:

"I am gratified to be able to report that the death rate of New York for 1902 was 18.74 per 1,000, which is considerably the lowest ever reported in this city. The total number of deaths were 68,082, as compared with 70,803, and a death rate of 20.02 per 1,000 for 1901, which is a decrease in the rate of 1.28 per 1,000 and indicates a saving of 1902 of 4,619 lives. The death rate in each of the five boroughs is also the lowest on record. The annual death rates of the city since consolidation has been as follows: 1888, 20.26; 1889, 19.47; 1900, 25.97; 1901, 20.02; 1902, 18.74.

"The report goes on to say that the rate for the old city, or rather the Boroughs of Manhattan and the Bronx, for 1902 is 19.49, the lowest ever reported for that section, the lowest previous record being in 1899, when the death rate was 19.81.

"Regarding consumption, which Dr. Lederle puts

under the head of infectious diseases, the report says that there were 582 deaths less than in the year 1901. The report declares that the decrease in the death rate from this disease is due to scientific measures, and states that 'the control of the white plague and its ultimate eradication' is being brought about.

"There was a slight increase in the deaths from typhoid fever for last year, offset by a decrease of 100 deaths from smallpox. Dr. Lederle says that more than 800,000 persons were vaccinated by the Board of Health physicians alone. In scarlet fever, there was a slight increase in the number of deaths, but in diphtheria there was a decrease of 35 per cent. The report states that "for the first time in twelve years there was a decrease in the death rate from cancer. There were 4,907 more births and 2,653 more marriages in 1902 than there were in the year previous."

Official News.

Infectious Diseases in New York:

We are indebted to the Sanitary Bureau of the Health Department for the following statement of cases and deaths reported for the two weeks ending January 3, 1903:

DISEASES.	Weekend'g Dec. 27		Week end'g Jan. 3.	
	Cases.	Deaths.	Cases.	Deaths.
Typhoid fever.....	75	18	68	17
Scarlet fever.....	135	4	159	10
Cerebro-spinal meningitis.....	0	2	3	0
Measles.....	127	10	118	8
Diphtheria and Croup.....	356	43	322	45
Small-pox.....	0	0	4	0
Tuberculosis.....	245	148	190	142

Public Health and Marine-Hospital Service:

Official List of Changes of Station and Duties of Commissioned and Non-commissioned officers of the Public Health and Marine-Hospital Service for the Seven Days ending January 1, 1903:

BAILHACHE, PRESTON H., Surgeon. Leave of absence for seven days on account of sickness, under paragraph 179 of the regulations.

MATHEWSON, H. S., Passed Assistant Surgeon. Granted leave of absence for seven days from December 2, 1902.

GRUBBS, S. B., Passed Assistant Surgeon. Detailed to represent the service at meeting of the American Public Health Association at New Orleans, La., December 8-12. To proceed to Ensanada, Cal., for special temporary duty. To proceed to Mazatlan, Mexico, for special temporary duty.

KORN, W. A., Assistant Surgeon.—Granted leave of absence for seven days from December 25, 1902, under paragraph 181 of the regulations.

SCHERESCHEWSKY, J. W., Assistant Surgeon. To proceed to Charleston, S. C., and assume temporary command of the service during the absence, on sick leave, of Acting Assistant Surgeon F. F. SAMS.

ROBERTSON, H. MCG., Assistant Surgeon.—Relieved from duty at Chicago, Ill., and directed to proceed to New York, N. Y. (Stapleton), and report to medical officer in command for duty and assignment to quarters.

Boards Convened.

Board convened to meet at Washington, D. C., December 26, 1902, for the physical examination of Chief Engineer Howison, R. C. S. Detail for the Board—Assistant Surgeon General H. D. GEDDINGS, Chairman; Assistant Surgeon B. S. WARREN, Recorder.

Board convened to meet at Washington, D. C., December 27, 1902, for the physical examination of Chief Engineer MAHER, R. C. S. Detail for the Board—Assistant Surgeon General H. D. GEDDINGS, Chairman; Assistant Surgeon B. S. WARREN, Recorder.

Promotions.

JOHN ACHENBACH to be pharmacist of the first class, Dec. 18, 1902.

E. S. MAGUIRE to be pharmacist of the first class, Dec. 18, 1902.

Army Intelligence:

Official List of Changes in the Station and Duties of Officers serving in the Medical Department of the United States Army for the week ending January 3, 1903:

BLOOMBERG, H. D., First Lieutenant and Assistant Surgeon. Relieved from further duty at Fort Bayard, New Mexico, and ordered to proceed to San Francisco, California, and report to the Commanding General, Department of California, for transportation to Manila. Upon arrival at Manila, he will report to the Commanding General, Division of the Philippines, for duty.

BROWNLEE, CHARLES Y., First Lieutenant and Assistant Surgeon, will report to the Commanding General, Department of California, for transportation to the Division of the Philippines, and upon arrival in Manila, will report to the Commanding General, Division of the Philippines, for duty.

DE SHON, GEORGE D., Major and Surgeon, U. S. Volunteers, Captain and Assistant Surgeon, U. S. Army. Relieved from further duty in the Division of the Philippines, and will proceed to San Francisco, California, and will report arrival by telegraph to the Adjutant General of the Army for further orders.

FLAGG, CHARLES E. B., Captain and Assistant Surgeon. Relieved from further duty at Fort Grant, Arizona, and ordered to report in person to the Commanding General, Department of California, for transportation to Manila. Upon arrival at Manila, Captain Flagg will report to the Commanding General, Division of the Philippines, for duty.

GARDNER, E. F., Major and Surgeon, is relieved from further duty at Fort Totters, N. Y., and will proceed to Fort D. A. Russell, Wyoming, and report to the Commanding Officer for duty.

KIRKPATRICK, THOMAS J., Captain and Assistant Surgeon. Relieved from further duty at Fort Barrancas, Florida, and ordered to proceed to San Francisco, California, and report to the Commanding General, Department of California, for transportation to the Division of the Philippines. Upon arrival, Captain Kirkpatrick will report to the Commanding General of the Division of the Philippines for duty.

LYSTER, WILLIAM J. L., First Lieutenant and Assistant Surgeon. Now at San Francisco, California, having reported his arrival from the Division of the Philippines. Ordered to proceed to Fort Wayne, Mich., and report for duty to the Commanding Officer of that post.

REYNOLDS, CHARLES R., First Lieutenant and Assistant Surgeon. After having reported his arrival at San Francisco, California, from the Division of the Philippines, he will proceed to Fort Washington, Md., for duty.

WELLS, GEORGE M., Captain and Assistant Surgeon. Relieved from further duty at Fort Wadsworth, N. Y., and ordered to proceed to Fort Bayard, N. M., and report in person to the Commanding Officer of the U. S. Army General Hospital at that place for duty.

WILCOX, CHARLES, Major and Surgeon. Now at San Francisco, California, and ordered to proceed to Fort Totten, N. Y., and report in person to the Commanding Officer of that post for duty.

Naval Intelligence:

Official List of Changes in the Medical Corps of the United States Navy for the Week ending January 3, 1903:

- ANGENY, G. L., Passed Assistant Surgeon. Detached from the *Lancaster* and ordered to the *Essex*.
- BRISTER, J. M., Assistant Surgeon. Detached from the *Frolic* and ordered to the *El Cano*.
- CRAWFORD, C. A., Passed Assistant Surgeon. Detached from recruiting duty and ordered home to wait orders.
- CURL, H. C., Passed Assistant Surgeon. Ordered to the Naval Hospital, Mare Island, California, for treatment.
- DUNN, H. A., Assistant Surgeon. Detached from the *Vicksburg* and ordered to the *Frolic*.
- FREEMAN, G. F., Assistant Surgeon. Detached from the *Essex* and ordered to duty at the Naval Hospital, Chelsea, Mass.
- PLUMMER, R. W., Assistant Surgeon. Detached from the Naval Hospital, Chelsea, Mass., and ordered to duty at Chattanooga, Tenn.
- ULSH, W. H., Assistant Surgeon. Retired from active service by reason of disabilities incurred in the line of duty, December 22, 1902.
- WEBB, U. R., Assistant Surgeon. Detached from the *Iris* and ordered to the Naval Station, Cavite, P. I.

Public Health and Marine-Hospital Service Health Reports:

The following cases of smallpox, yellow fever, cholera, and plague were reported to the surgeon-general during the week ending January 3, 1903:

Smallpox—United States.			
Location.	Dates.	Cases.	Deaths.
California—San Francisco	Dec. 14-21	7	
Colorado—Denver	Dec. 6-20	11	
Illinois—Chicago	Dec. 20-27	3	
Indiana—Evansville	Dec. 20-27	1	
Indiana—Indianapolis	Dec. 20-27	37	4
Indiana—Kokomo	Dec. 20-27	1	
Indiana—South Bend	Dec. 20-27	1	
Kentucky—Lexington	Dec. 20-27	1	
Maine—Portland	Dec. 20-27		1
Massachusetts—Boston	Dec. 20-27	13	6
Massachusetts—Somerville	Dec. 20-27	1	
Michigan—Detroit	Dec. 13-27	93	1
Michigan—Grand Rapids	Dec. 20-27	8	
Mississippi—Natchez	Dec. 23	10	
Missouri—St. Louis	Dec. 14-21	26	
Nebraska—Omaha	Dec. 20-27	9	
New Hampshire—Manchester	Dec. 20-27	7	
New Hampshire—Nashua	Dec. 20-27	8	
New Jersey—Camden	Dec. 20-27	1	
New Jersey—Jersey City	Dec. 21-28	1	
New York—Binghamton	Dec. 20-27	1	
New York—Buffalo	Dec. 13-20	2	
Ohio—Cincinnati	Dec. 19-26	15	
Ohio—Cleveland	Dec. 20-27	7	4
Ohio—Toledo	Dec. 6-27	24	2
Ohio—Warren	Dec. 6-27	5	1
Pennsylvania—Altoona	Dec. 20-27	1	
Pennsylvania—Erie	Dec. 20-27	3	
Pennsylvania—Philadelphia	Dec. 20-27	25	3
Pennsylvania—Pittsburg	Dec. 20-27	23	3
Pennsylvania—Warren, borough & county	Dec. 10-17	5	
South Carolina—Charleston	Dec. 13-27	4	
South Dakota—Sioux Falls	Dec. 20-27	1	
Tennessee—Memphis	Dec. 20-27	4	
Utah—Salt Lake City	Dec. 11-27	20	
Washington—Tacoma	Dec. 15-21		3
Wisconsin—Green Bay	Dec. 21-28	1	
Wisconsin—Milwaukee	Dec. 20-27	5	
Smallpox—Foreign.			
Austria—Prague	Nov. 29-Dec. 6	24	
Belgium—Brussels	Nov. 29-Dec. 6		1
Belgium—Ghent	Nov. 22-29		3
Canada—Winnipeg	Dec. 13-20	1	
Great Britain—Leeds	Dec. 6-13	6	1
Great Britain—Liverpool	Dec. 6-13	34	1
Great Britain—Manchester	Nov. 29-Dec. 6	3	
Great Britain—Sheffield	Nov. 29-Dec. 6	5	
India—Bombay	Nov. 25-Dec. 2		2
India—Karachi	Nov. 23-30	1	
Italy—Palermo	Nov. 29-Dec. 6	6	2
Malta	Nov. 23-30		
Mexico—City of Mexico	Dec. 7-14	2	3
Russia—Moscow	Nov. 22-29		2
Russia—Odessa	Nov. 29-Dec. 6	5	
Russia—St. Petersburg	Nov. 29-Dec. 6	13	
Straits Settlements—Singapore	Nov. 1-13		5
Yellow Fever.			
Colombia—Panama	Dec. 8-22	9	2
Ecuador—Guayaquil	Dec. 6-13		10
Mexico—Vera Cruz	Dec. 13-20	14	3

Plague

India—Bombay	Nov. 25-Dec. 2	120
India—Calcutta	Nov. 22-29	12
India—Karachi	Nov. 22-30	11
India—Madras	Nov. 22-28	1

Cholera.

India—Calcutta	Nov. 22-29	42
Japan—Osaka and Hiogo	Nov. 8-23	3
Straits Settlements—Singapore	Nov. 1-15	22

Births, Marriages, and Deaths.

Married.

BESTIANILLE—LOOMIS.—In Oil City, Pennsylvania, on Saturday, January 3rd, Dr. Raffaele Bestianille, of Rome, Italy, and Miss Lucille Loomis.

McKIM—EMERSON.—In Baltimore, on Tuesday, December 30th, Dr. Smith Hollins McKim and Miss Margaret Emerson.

MONROE—SEARLE.—In Washington, D. C., on Monday, December 29th, Dr. Walter G. Monroe and Miss Mildred J. Searle.

STAHL—WATSON.—In Washington, D. C., on Saturday, December 27th, Dr. B. Franklin Stahl, of Philadelphia, and Miss Mary Byvanck Watson.

Died.

BLACK.—In Pittsburg, Pa., on Friday, January 2nd, Dr. Charles H. Black, in the fifty-third year of his age.

CHOPPIN.—In New Orleans, on Tuesday, December 30th, Dr. Sherburne Choppin, in the fortieth year of his age.

COUCH.—In Somerville, Massachusetts, on Saturday, January 3rd, Dr. John F. Couch, in the fiftieth year of his age.

DEANE.—In Kingston, Ontario, on Wednesday, December 31st, Dr. W. J. Deane, of Buffalo, in the thirty-sixth year of his age.

EICHLER.—In New York City, on Friday, January 2nd, Dr. Carl A. Eichler, in the seventy-sixth year of his age.

FRASER.—In Sarnia, Ontario, on Thursday, January 1st, Dr. Anson S. Fraser, in the fifty-seventh year of his age.

HOPKINS.—In Montreal, Canada, on Sunday, December 28th, Dr. C. W. Hopkins.

HOWLAND.—In Denver, on Saturday, December 27th, Dr. Henry H. Howland, in the sixtieth year of his age.

JACOBSON.—In Brooklyn, N. Y., on Wednesday, December 31st, Dr. David Jacobson, in the thirty-ninth year of his age.

JANES.—In Atlanta, Georgia, on Wednesday, December 30th, Dr. John W. Janes.

KOHL.—In Belleville, Illinois, on Sunday, January 4th, Dr. Julius Kohl.

LOUGHLIN.—In Philadelphia, on Saturday, December 27th, Dr. Dennis J. Loughlin, in the fifty-fifth year of his age.

MACDONELL.—In Montreal, Canada, on Friday, January 2nd, Dr. Angus C. Macdonell, in the seventy-fourth year of his age.

RHOADES.—In Boston, Mass., on Wednesday, December 31st, Dr. George W. Rhoades, in the seventy-first year of his age.

SCHUMACHER.—In Syracuse, N. Y., on Saturday, January 3rd, Dr. Carl Schumacher, in the fifty-first year of his age.

STEVENS.—In St. Paul, Minnesota, on Monday, December 29th, Dr. J. Stevens, in the sixtieth year of his age.

STRONG.—In Auburndale, Mass., on Sunday, December 28th, Dr. Edward Strong, in the seventy-ninth year of his age.

VAN GERHART.—In San Diego, California, on Sunday, December 28th, Dr. H. Van Gerhart, of St. Louis, in the thirtieth year of his age.

WHEAT.—In Richmond, Virginia, on Monday, December 29th, Dr. Lewis Wheat, in the forty-fifth year of his age.

WILLIAMS.—In San Francisco, on Tuesday, December 30th, Dr. Robert E. Williams, in the fifty-eighth year of his age.

Pith of Current Literature.

PRACTICE OF MEDICINE.

Stercoraceous Vomiting of Hysterical Origin.

—Dr. Ferdinando Fazio (*Riforma medica*, October 29th) reports a case in which there was stercoraceous vomiting of probably hysterical origin. The patient was a woman, aged nineteen years, who ten days before admission became constipated and could not obtain a movement of her bowels. The first symptom was vomiting, which soon became fecal in character, although there was very little pain and no other signs of intestinal obstruction. The patient was able to go about her work but vomited two or three times daily, continuing with her usual meals notwithstanding these attacks of vomiting. A history of hysterolepilepsy was obtained. The abdomen was slightly distended, especially on the right side over the ascending colon, and this region was slightly painful. The patient's general condition while at the hospital continued to be good, and she vomited twice on the first day, each time with a characteristic fecal vomit. Purgatives had been of no avail and, in view of the neurotic history, the patient was simply told that her trouble would disappear after abdominal massage. On the second day this was given with complete success, the vomiting ceasing and movements of the bowels being established on the afternoon of the same day. There was no recurrence of the vomiting. The author concludes that stercoraceous vomiting may occur in hysterical subjects purely as the result of the hysteria. As antiperistalsis alone will not produce such vomiting, there must also be some obstruction in these cases. This obstruction may take the form of a spasm or a condition of paralysis in the intestines, as in plastic nervous ileus or in paralytic ileus. The spastic form may be assumed to exist in the rapid cases which are not preceded by a period of constipation, while the paralytic probably occurs in those in which there was a preceding obstinate constipation. Suggestive therapeutics should be principally relied upon for the cure of this condition.

[Is it not probable that the cure in this case was accomplished, not by mere suggestion, but by the influence of the massage upon the spasmodically contracted or paralyzed muscular fibres of the intestine? Cases of intestinal obstruction without hysteria, but due to spasm or atony, have been frequently cured by massage, which expels the accumulated gas in the bowels and relieves the intraintestinal tension.]

The Diagnosis of Cancer of the Stomach. By William Fitch Cheney, M. D. (*American Medicine*, December 27th).—To discover the presence of this disease we follow three paths of investigation: (1) The clinical history; (2) physical examination of the abdomen; and (3) examination of stomach contents after a test-meal. In the history we note: The heredity, which has a slight but undeniable influence; the age (three-fourths of all cases occur between the ages of forty and seventy years, though cancer may occur even at twenty years); sex is practically of no importance; a previous good or bad history of the digestive functions is of little moment. The history of the present disease is charac-

teristic. Usually there is an antecedent dyspepsia, but the cardinal symptoms are pain, vomiting, hæmatemesis, tumor, and loss of weight and strength. The pain is dull, aching, dragging burning, or gnawing, rarely lancinating; it is diffuse, not aggravated by eating or relieved by vomiting. The frequency of the vomiting depends on the situation of the cancer; if this is situated near the pylorus the vomiting will occur early. It is abundant in quantity, of foul odor, and usually "coffee-ground" in character. The hæmatemesis is rarely great and the blood, being partially digested before ejection, has the well known chocolate color. The tumor is at times noted by the patient. It occurs in about two-thirds of all cases. Loss of weight and strength is vital to the diagnosis. All these symptoms not usually being present other evidence is required. The tumor must be looked for and the signs of dilatation sought. Both these objects are facilitated by inflation of the stomach, a procedure contraindicated only by profuse hæmorrhage or a large tumor. The examination of the stomach contents gives valuable information. Ewald's test-meal is used. First, we look for the absence or great reduction in the HCl. It must be remembered that HCl may be entirely absent in chronic gastritis. Secondly, the absence of renin and pepsin show destruction of the gastric glands. Thirdly, the presence of lactic acid shows fermentation due to stagnation. With the microscope the so called Oppler-Boas bacillus should be sought. It is present in nearly all cases of gastric cancer in large numbers and so far has never been found present in any other disease. As a last resort and after a careful diagnosis has proved of no avail, an exploratory incision is called for. Hemmeter says "With symptoms of chronic gastritis and absence of HCl, rapidly developing emaciation and cachexia, do not delay over one month with treatment, but urge exploratory operation." What are the indications for operation? (1) When the tumor is large, operation is useless. (2) When a small pyloric tumor is found, pylorotomy is justified, though it has a mortality of 50 per cent. When no tumor is found the case is most favorable for surgery. Keen gives the following indications as sufficient for early operation: (1) Dilatation, as shown by food in the stomach in the early morning before breakfast; (2) cachexia; (3) persistent absence of HCl; (4) excess of lactic acid; (5) the Oppler-Boas bacillus present; (6) the patient past forty years of age; (7) hæmatemesis.

Influenza and the Nervous System. By Smith Ely Jelliffe, M. D. (*Philadelphia Medical Journal*, December 27th).—Even in the early epidemics of influenza—one of which occurred in Europe in 1404—it was noted that the disease had a tendency to be followed by mental trouble: hypocondriasis, melancholia, depression, and even suicide. In the last epidemic which occurred in 1889 and 1890 this same tendency was also noted, both in this country and in Europe. Gowers writes: "There is no acute malady, with the exception of diphtheria, after which disturbance of the nervous system is so frequent as after influenza, and there is no other disease that has such varied nervous sequelæ. This effect, though long known, has never been perceived so distinctly as in the severe outbreak of 1890." Berkely,

writing of the outbreak of 1891-1892 and of 1898-1899, notes that the toxins of influenza seem especially to affect the nervous system, producing particularly stupor or confusion. Dr. Jelliffe has noted in fifty cases of psychoses following influenza, mental stupor or confusion in 20 per cent. It is to be regretted that during the past epidemic more work was not done on the bacteriology of this disease, since, without a bacteriological study, a positive diagnosis is not possible. A ready means of staining and cultivation is much to be desired. Statistics go far to show that recent epidemics greatly increase the suicide rate, both in New York and in Chicago. The disease should, therefore, not be considered a matter of small moment. The slight fear the general public has of the disease makes its control difficult. Physicians should, however, do what is possible to create a more intelligent understanding, and should advise the same antiseptic and disinfecting precautions as are used in other cases of infectious and contagious diseases.

The Ætiology of Relapse in Typhoid Fever.

By H. N. Rafferty, M. D. (*Medical Record*, December 27th).—The main object of the paper is to show that, in all probability, a large percentage of relapses in typhoid fever is due to reinfection from the colonies of typhoid bacilli contained in the gall bladder and liver, which are subsequently thrown out into the duodenum. A case is given in which this seems to have occurred. Citations from the literature are given to fortify the argument; here is one from a *Johns Hopkins Hospital Report*: "High authorities consider the gall bladder as one of the surest places to obtain a pure culture of the *Bacillus typhosus*." The only plausible theory of relapse is that it is a reinfection from some bacillary nidus within the patient's body. If this is true, it is probable that the reinfection takes place in one of the following ways: (a) by the inoculation of healthy intestinal glands with sloughs thrown off from those first infected; (b) by a deposit of bacilli in the gall bladder, and later by the expulsion of this colony with bile into the duodenum; and (c) by a colonization of bacilli in the spleen. It is the second view that appeals to the author of the paper.

SURGERY AND ANATOMY.

A Case of Acute Intestinal Obstruction Caused by a Gall Stone; Necrosis of the Bowel; Operation; Death. By J. A. Scott, M. D. (*Philadelphia Medical Journal*, December 27th).—The case recorded is the concrete example in a general consideration of the subject of intestinal obstruction, with particular reference, however, to gall stones. The chief causes of intestinal obstruction are, in order of frequency: Strangulation, intussusception, twists and knots, tumors, strictures, and abnormal contents. The paper concerns itself mainly with the latter. In Osler's 44 collected cases of intestinal obstruction due to abnormal intestinal contents there were 23 due to gall stone. However, the three most common causes of obstruction from abnormal contents are: (1) Fæces, (2) gall stones, (3) enteroliths. The obstruction is most likely to occur in the colon, in the ileocæcal region, and in the small intestine, respectively. References to ten

cases of gall-stone obstruction are given, which have occurred in the past two years, the author's case making eleven. In cases of obstruction two questions arise (a) the situation of the obstruction, and (b) its nature. When the obstruction is high up vomiting comes early and is fæcal, urine is frequently suppressed, and tympanites is often absent. If the obstruction is in the neighborhood of the ileocæcal valve the coils of small intestine will stand out and form the so called ladder pattern. When the colon is obstructed meteorism is apt to be extreme and the outline of the colon can frequently be made out. It is much more difficult to make out the nature of the obstruction. A diagnosis must be made between gall stone and strangulation, intussusception, volvulus, hard fæces, and some rare conditions. One should bear in mind that in acute mechanical obstruction there is an absence of constitutional symptoms and active peristalsis; local distention, at first with paroxysmal pain without due cause, being substituted for such symptoms. In obstruction due to inflammatory processes, constitutional symptoms appear early, peristalsis is diminished, and finally absent; tympanites is general, pain is continuous and preexisting lesions can be demonstrated. In obstruction by gall stone frequent paroxysmal attacks of pain without fever become an exceedingly important diagnostic sign. In these cases operative treatment is usually indicated.

Lumbar Puncture as a Curative Agent in Meningitis, with Report of a Case. By S. Ormond Goldman, M. D. (*American Medicine*, December 27th).—The object of the paper is to call attention to the possible curative value of lumbar puncture, and not to emphasize its well known diagnostic utility. The following case is reported: An eleven months' old infant, after being in an apathetic condition for one day, began to vomit. The temperature was 102° F., and the pulse 120. The following day the vomiting was less and frequent convulsions occurred. Later, complete right-sided paralysis occurred, with left ptosis, rigidity of the neck muscles, clonic spasm of the left forearm, and dilatation of the left pupil. The child was almost comatose. On the second day the temperature was 105° F. This condition prevailed up to about the eighth day. Swelling of the fontanelle set in on the second day, increased to the fifth, and remained stationary to the eighth, when lumbar puncture was performed; fourteen cubic centimetres of fluid were withdrawn. Examination of this fluid showed no tubercle bacilli. Complete recovery took place in about two weeks. Dr. Goldman thinks that in children trauma may often be the cause of a meningitis. Withdrawal of even a small quantity of fluid, by relieving tension, may enable absorption again to take place. The operation itself he thinks is without danger.

A Case of a Cervical Rib.—A. Vasquez y Acosta (*Revista de Medicina y Cirugía de la Habana*, November 25th) reports this curious case, of which the following is the clinical *résumé*: The patient, a man aged twenty-five years, first noticed at the age of fourteen, a small tumor in the left supraclavicular region, which gradually increased in size, but caused no discomfort till nine months before he sought relief for it; at which time severe pain, lo-

cated over the tumor and radiating up to the neck, set in. This symptom was accompanied by cold sweating, weakness, and nervous excitement. Examination revealed a tumor in the left supraclavicular region, which was hard, resistant, of osseous consistence, painless upon pressure, and which could be traced back to the transverse process of the seventh cervical vertebra. Immediately in front of the tumor, the subclavian artery was felt; pressure upon it revealing a distinct thrill; and upon auscultation a bruit was heard. The diagnosis of a cervical rib was confirmed by operation, and its removal was readily accomplished; the patient recovering completely within ten days.

Methods of Anæsthesia.—Professor Witzel (*Münchener medicinische Wochenschrift*, December 2d) recommends highly the drop method of giving ether, and considers it infinitely safer than the use of chloroform, which he stigmatizes as a "cardiac poison." He urges before the administration of the anæsthetic a prophylactic disinfection of the mouth and respiratory passages by antiseptics for the mouth, nose, and pharynx, and by the inhalation of salt water vapor or turpentine for the lungs. By keeping the head low and the neck on the stretch during anæsthesia, no swallowing or inhalation of mucus can take place and secretions can easily run out of the mouth. He also advises systematic ventilation of the lungs after the conclusion of the operation and in some instances before the operation, by deep inhalations fifteen to twenty times at intervals of every half hour. Witzel adds many details of the methods in vogue in his clinic in Bonn, showing that the anæsthesias are administered in a systematic and careful manner. The after results, he says, are most satisfactory.

Surgery of the Biliary Passages. Two Cholecystectomies for Cholecystitis Calculosa.—A. Presno y Bastiony (*Revista de Medicina y Cirugía de la Habana*, November 10th) reports two cases successfully treated by extirpation of the gallbladder; and discusses the various surgical measures for the cure of vesical lithiasis, which may, in his opinion be reduced to two, namely cholecystotomy and cholecystectomy. He limits the former operation to cases in which there is infection of the biliary passages or occlusion of the choledochus; in all other cases the author prefers cholecystectomy, upon the ground that it has been amply proved that the gallbladder is not an essential organ, and that its removal is the most rational procedure, in that vesical calculi are secondary to disease of the gallbladder, and therefore its removal constitutes the most hopeful measure for a radical cure. As to the technics of the operation, Bastiony gives the preference to the lateral vertical incision as affording the best view and the greatest ease in manipulation; and finds that two silk sutures are all sufficient for ligature of the cystic duct.

Some of my Principles in Orthopædic Surgery. By Professor Adolf Lorenz (*Medical Record*, December 27th).—*First principle.* The patient's life must not be endangered by the cure, for, since deformities do not offer what we call *indicatio vitalis*, the operations themselves should not be dangerous.

Therefore bloodless operations are to be preferred to bloody ones; osteoclasis will be preferred to osteotomy, except in the case of adults and adolescents; this will hold even in case of hip deformity, provided there is the slightest mobility; in complete bony ankylosis alone should the chisel be used. In cases of knee contracture intraarticular modelling *redressement* should be used. Only in cases of complete bony ankylosis should the bloody method be resorted to. In foot deformities modelling *redressement* is always applicable and the results are favorable beyond expectation. The recent French method of wedge-shaped excision is especially to be deplored. In wry-neck, total extirpation of the sternomastoid is not to be countenanced. The congenital caput obstipum in children can be cured even without a tenotomy, simply by myorrhesis and the modelling *redressement*. The results are quite perfect. *Second principle.* The deformity must be corrected in the vertex of its angle. This is the principle of "central correction." If this is not done, instead of a correction one has a compensating deformity, and there will be, besides, a shortening of the affected limb. Therefore, in the case of the hip, pelvotrochanteric osteotomy must be employed; in the case of the knee intraarticular correction is preferable to supracondylar osteotomy. In genu valgum, however, except in the case of young children, the principle of intraarticular correction cannot be carried out on account of the danger of a loose knee, and supracondylar osteotomy is the usual method, but epiphysiolysis is better. Unfortunately this method is only available in children from five to sixteen years. *Third principle.* The bones must be absolutely saved by dividing the soft parts as much as circumstances may demand. Cuneiform osteotomies and all excisions *en bloc* are to be condemned. Simple linear osteotomies with free sacrifice of the soft parts will answer most purposes. *Fourth principle.* Mechanical supports in cases of tuberculous joints and in the treatment of deformed paralytic limbs must not be so slavishly employed as is generally the case. Mechanical treatment should not be carried on in such a way as to exclude all functional work until the whole treatment is completed. If it is, the bones will lack solidity, the muscles will waste, and the growth of the limb will be impaired. Therefore, a diseased limb is not to be excluded from a measured function longer than the severe pain renders necessary. No motion must be allowed in the diseased joint, but extension should only be used while the pain lasts. Extension is mostly of importance as it is a part of fixation. Only in the case of total paralysis is permanent mechanical support indispensable. If the surgical task has been thoroughly solved, orthopædic appliances, if necessary, may be of the simplest construction, so that special mechanical *ateliers* may be considered superfluous.

Leucocytes in Appendicitis.—Dr. Coste (*Münchener medicinische Wochenschrift*, December 9th) has examined the blood in many cases of appendicitis, and reaches the following conclusions: (1) If, in an acute appendicitis, the number of leucocytes remains normal or is only temporarily increased, the process is one limited to the appendix, or a serous transudation is present and the case is likely to run a mild course. (2) It must not be forgotten, how-

ever, that even in a case of inflammation limited to the appendix, perforation may take place and a suppurative appendicitis may follow. This condition gives no warning by a leucocytosis but the symptoms become very severe. (3) If the leucocyte count is above 22,000, a diagnosis of an abscess may be made with security. (4) In cases of purulent peritonitis, the number of leucocytes is increased only when the organism still retains sufficient resistance to the infection. A sudden diminution of a previously increased number of white cells is a bad prognostic sign.

Operation for Correction of Deformities of the Leg.—Dr. Max Reimer (*Münchener medicinische Wochenschrift*, December 9th) recommends for extreme deformities of the leg, linear osteotomy, repeated several times, as frequently, in fact, as may be necessary for the complete straightening of the bones. The principle of Lorenz, to save the skeletal parts at the sacrifice of the soft parts, is followed. The advantage of this procedure over the removal of wedge shaped pieces is that by the extension apparatus applied after the operation, and the strong plaster cast, a corrective position of the leg can be established and maintained. The plaster cast being applied on the operating-table, all the advantages of immobilization are obtained at once.

OBSTETRICS AND DISEASES OF WOMEN.

An Autopsy Four Hours Post Partum on a Subject on whom Ventral Hysteropexy had been done Four Years Previously. By Byron Robinson, M. D. (*American Medicine*, December 27th).—Examination of the disinvaginated uterus showed that a fundal space about three inches square had become extremely atrophied from the dragging of the omental band, which was fixed to the fundus. The following conclusions are drawn: (1) Death was caused by invagination of the post-partum uterus, due to a ventral hysteropexy performed four years previously. (2) The direct cause of the invagination was the atrophy of the fundus. (3) The direct cause of death was heart shock. (4) The patient experienced during gestation pain from the dragging of the peritoneal band. An increasing number of Cæsarean sections is required at parturition subsequent to the performance of ventral hysteropexy. (5) This operation should not, therefore, be performed on a reproductive person. (6) A great number of such operation are unnecessarily performed.

Tuberculosis of the Female Generative Organs.—Dr. A. Martin (*Roussky Vrach*, November 16th) calls attention to the frequency of tuberculous affections of the female generative organs. He finds that cases of tuberculosis of the ovaries, tubes, etc., are more and more frequently reported in current literature. In his operative work he has become accustomed of late to look for tuberculous lesions; and by searching for the tubercle bacillus in his laparotomies with the aid of the Ziehl-Nielsen method of staining, he has been able to establish the fact that tuberculosis of the internal genitals is much more frequent in women than has been hith-

erto supposed. The percentage of tuberculous cases in all the gynæcological material seen by the surgeon cannot be definitely stated as yet, chiefly owing to the difficulty of diagnosing such cases without operation. When the woman suffers from tuberculosis of other organs of the body, or when she shows the tuberculous look, any lesion of the internal genitals may be taken to represent a tuberculous localization, especially when the cohabitation with a tuberculous husband or relatives can be established in the history of the case. The symptoms in many of these cases begin insidiously and are for a long while obscure. There is general weakness and malaise, there are no well-marked disturbances in the menstrual function, and there may be a slight discharge without anything characteristic about it. In thirty-five such patients observed by the author within the past three years the chief symptom was sterility. Ulcers of the external genitals or of the cervix, etc., when not proved to be syphilitic or gonorrhœal in origin, are of course suspicious, and peculiar projections on the cervix should always be regarded with caution as possibly tuberculous. The enlarged lymphnodes felt in Douglas's pouch, according to Hegar are not a reliable symptom, as they may be absent in tuberculous cases. Effusion of fluid into the peritonæum should always be considered as possibly a symptom of tuberculous peritonitis and of tuberculosis of the genital organs. In two cases the ulcerated growth on the cervix looked like a cancer, and only the bacteriological examination showed it to be tuberculous in character. The tubercle bacillus was, in fact, found in all the cases reported by the author. The prognosis of such cases is always grave, but in many instances life has been prolonged for considerable periods of time. Injections of tuberculin do not always help in the diagnosis of tuberculosis of the generative organs in women. General treatment is important in all cases in which the local symptoms are not prominent. It is doubtful whether local measures, such as curetting, etc., can cure tuberculosis of the uterus; in marked cases, certainly, a radical operation must be performed, especially as the disease exists often primarily in the tubes. In tuberculous peritonitis general measures should be employed at first, as long as they seem to act favorably, but when the ascites and the adhesions give trouble, the abdomen should be opened. It must not be forgotten, however, that cases of tuberculous peritonitis that have advanced to the stage of caseation are apt to be rather injured than improved by laparotomy, and that this operation acts as a double-edged tool sometimes. Many gaps are still to be filled in our knowledge of this disease as affecting the female genitals.

Vaginal Injections in the Normal Condition.—J. M. Barreneche (*Revista Médica de Bogotá*, Year xxiii, No. 268) utters a note of warning against the indiscriminate use of vaginal injections and emphasizes the fact that the normal secretions are antiseptic in themselves, and the introduction into the vagina of a syringe point and injection of doubtful purity—as for example the "cleansing" douches used by women themselves—is to run the risk of infection, and furthermore to deprive the organ of its natural means of defense by washing away the secretions. The use of the vaginal douche is

especially deprecated in the pregnant woman, and immediately before and after parturition; not only because of danger of infection, but because at the beginning of labor, the vagina and cervix are almost as one canal, and an injection into the former may become an intrauterine injection; further, such lavage deprives the descending foetus of the natural lubricant for its passage.

Artificial Fecundation.—This operation is considered justifiable, in a certain class of cases, by A. Gomez Calvo (*Revista Médica de Bogotá*, Year xxiii, No. 268) who quotes Gaillard Thomas's indications and contraindications for it in cases of sterility. These rest chiefly upon the failure of all methods of treatment, presence of spermatozooids, absence of inflammatory condition of the uterus, annexa or peritonæum, or presence of any malformation incompatible with conception or parturition; and lastly, tuberculous or cancerous disease in husband or wife. To the latter contraindication the author adds epilepsy or tendency to insanity. Two cases of successful artificial fecundation are reported by him in which the method of Marion Sims was used. The most favorable period for the operation is believed to be the week following menstruation, or better, immediately after it.

Operations for Fibromyoma of the Uterus.—Dr. Alfred Hegar (*Münchener medizinische Wochenschrift*, November 25th) commends highly the vaginal method of operation. In suitable cases, a total extirpation may be performed, the operation may be done by an anterior or a posterior section, enucleation may be accomplished in superficial growths low in the uterus, and, finally, the submucous growths may be removed by this method. The uterus may be entirely closed or left open according as the operator wishes complete drainage or not. Hegar has removed by the vaginal route, myomata which extended above the umbilicus. In cases of great involvement of the uterus, it is better to remove the organ at the time of operation on account of its deep invasion. Another advantage of the operation is the fact that no hernia is to be feared.

Shortening of the Round Ligaments in a Knot upon the Recti Muscles for Retroversion.—M. Eugène Villard (*Lyon médical*, November 30th) recommends this procedure. He makes a curvilinear incision over the pubes exposing the inguinal rings on both sides. The scar of this incision is subsequently hidden by the pubic hair, and advantage in the author's eyes. The round ligaments are then drawn up, tied together over the recti muscles and the skin is sutured. The indications are movable retroversions with integrity of the appendages, in patients who have worn a pessary for a long time without any result, and in those who can not wear a pessary on account of pain or compression about the lower genitals. The author mentions another indication, one of sentiment, in such patients as shrink from the use of a pessary for several months. Finally, the author says, the cases of adherent retroversions with lesions of the appendages offer themselves to this method of abdominal hypertrophy when minor gynecological measures fail.

DISEASES OF CHILDREN.

Erysipelas in a Young Infant Cured with Antistreptococcus Serum.—R. G. Rijo (*Cronica Médico-Quirúrgica de la Habana*, Year xxviii, No. 20.) believes that the efficacy of antistreptococcus serum in erysipelas is demonstrated through the cure of an infant of three months, with a hypodermic injection of 20 cc. of the serum. The child was first seen by Rijo upon the twentieth day of the disease, when the affection had become generalized; having spread gradually from the feet up to the trunk despite all previous treatment. Improvement was sufficiently marked and rapid after the first injection to make a second unnecessary; and treatment was limited thereafter to applications of guaiacol liniment; a cure being effected within twelve days.

NERVOUS AND MENTAL DISEASES.

Meningitis Due to Colon Bacillus.—M. P. Nobécourt and M. Du Pasquier (*Gazette hebdomadaire de médecine et de chirurgie*, December 7th) record the case of a child of seven months of age, who entered the hospital with an acute gastrointestinal infection, a green diarrhoea, and moderate fever. Soon convulsions and contractures appeared, with marked disturbances of the respiration and circulation. A diagnosis of meningitis was made and a lumbar puncture showed an increase in the amount of cerebrospinal fluid. In a few days the symptoms became less marked and the fever diminished temporarily, its rise being accompanied by another gastrointestinal attack. Four days later, meningeal symptoms again appeared and this time, lumbar puncture confirmed the diagnosis of suppurative meningitis by the finding of the colon bacillus. Twenty days later the child recovered. The authors dwell upon the fact that the meningitides due to the colon bacillus are curable.

LARYNGOLOGY, RHINOLOGY, AND OTOTOLOGY.

Indications for the Performance of the Mastoid Operation. By William C. Braislin, M. D. (*Medical News*, December 27th).—The author divides mastoid disease into acute, subacute and chronic. The symptoms of each of these conditions are given, and the report of a case illustrating the acute and subacute varieties. The following symptoms are those of greatest significance in leading one to undertake an immediate operation. (1) Pain continuous and severe, making sleep impossible and radiating upward along the side of the head to the vertex, backward to the occiput, or more rarely forward to the frontal region; (2) the temperature, even in children, does not often keep to a high point after the first day of acute illness, but is often markedly irregular. (3) A falling of the posterior superior wall of the external auditory canal. This is caused by œdema of the periosteum and tissues over the mastoid cells, or it may be due to actual burrowing of pus. It is possible to mistake this condition for a furuncle of the canal, and *vice versa*. (4) Tenderness over the mastoid is the rule in cases calling for operation, but there are exceptions. Other severe symptoms may be present, pointing to perforation of the tegmen tympani. Some operators go to the

extreme of believing that an exploratory mastoidectomy is justified at any time. But the author believes that most of us would prefer conservatism if it were a question of our own mastoids. On the other hand, in the quiescent states of chronic mastoid suppuration, operation is always proper since, sooner or later, the disease is sure to require an operation.

GENITO-URINARY DISEASES.

Syphilis of Glass Workers.—M. Gailleton (*Lyon médical*, December 7th) says that syphilis, it has been found, has not been completely wiped out in some glass factories, and that it is absolutely essential to bring this about to avoid a spreading of the disease. Sanitary inspection should be rigorously instituted and maintained until the disease is thoroughly stamped out among the workers. The afflicted workers should not be allowed to resume work until they receive a medical certificate affirming their cure and prolonged treatment. The pecuniary damages to an employee infected in the factory should embrace not only the fact of the disease itself, but the additional fact that the victim will be unable for a long time to follow his occupation.

MATERIA MEDICA, PHARMACY, AND THERAPEUTICS.

Boric Acid and Borax as Preservatives of Meat.—Professor R. Bøhm (*Münchener medicinische Wochenschrift*, December 9th) says that there is no question that these substances are harmless to human beings, yet a prolonged use of them may bring about digestive disturbances, cutaneous eruptions, and some other symptoms, so that, while boric acid is no powerful poison, its salts must not be regarded as indifferent in their action. As these results may follow from prolonged ingestion, symptoms may arise which are misleading and which neither the patient nor the physician can assign to any cause. The mere fact that boric acid and some of its combinations exist in plants as such is no criterion as to its influence upon the human organism, since strychnine and combinations of hydrobromic acid are also found in many plants. The author condemns the use of boric acid as a preservative.

Veratrum Viride in the Treatment of Uræmia.—Dr. Alceste Oliari, of Parma (*Riforma medica*, September 25th and 26th), devotes a clinical article to the exposition of the action of veratrum viride in uræmia, and cites a number of cases in which this drug has proved of value in combating the most serious uræmic symptoms. Veratrum viride was introduced into therapeutics after the experimental studies of Soehr, Gueding, etc., had shown that it reduced the frequency of the pulse, slightly diminished the temperature and the frequency of respiration, and markedly lowered the blood pressure, when administered in therapeutic doses, either by mouth or hypodermically. The drug has been neglected of late, on account of the unpleasant effects sometimes obtained on administering it, such as nausea, vomiting, diarrhœa, collapse, etc. Paroin, in 1896, Mangiagalli, in 1900, and others have spoken of its value in eclampsia. Vasomotor phenomena are more than sufficient to

account for the symptoms of both uræmia and eclampsia, and the treatment of these conditions, according to the author, should be directed toward a restoration of the vasomotor balances. He found with the pressure measuring apparatus of Riva-Rocci that the blood pressure in uræmic attacks reached 300, while the figures for healthy adults varied from 120 to 140. The tincture of veratrum viride was therefore chosen by the author as the remedy to be given in a series of cases of uræmia, with the result of completely arresting the convulsive attacks, and diminishing the severe symptoms which usually accompany them, *e. g.*, the headache, the disturbances of vision, the tendency to sopor, etc. The remedy was given by mouth in doses of about five to ten drops of the tincture, according to the blood pressure and the pulse rate. The author, therefore, recommends veratrum viride in uræmic attacks, as a trustworthy remedy which will diminish the intensity and frequency of the convulsive seizures, and moderate all the other signs of uræmia, giving the practitioner time to apply his other measures including bleeding, hypodermoclysis, etc.

The Treatment of Nervous Affections of the Heart.—Dr. G. A. Gibson (*Edinburgh Medical Journal*, November, 1902) takes it for granted that in a considerable proportion of cases, no matter what may be the type of the affection, the practitioner is called in to minister to the patient during a paroxysm. Considerable acidity of the stomach, or moderate distention of the hollow viscera, may, by irritation, be a reflex cause of an attack of cardiac pain. When extreme, a distended condition of the stomach and intestines may be a direct mechanical source of disturbance. Interference with the blood current through the lungs is an adequate agent in certain cases, by increasing the stress on the right, just as disorder of the various excretory channels, such as the skin or the kidney or the bowel, is an efficient factor by augmenting the stress on the left side of the heart. Further, the amount of muscular exertion and fatigue and the extent of mental occupation or exhaustion must be considered and estimated. In each and all of these directions the proximate agent in the cause of the attack must, if possible, be ascertained and obviated. Antacids and carminatives for digestive troubles, remedies which will relieve bronchial affections and stimulate excretory channels—such remedies will readily occur to the skillful practitioner.

Among the remedies acting directly upon the circulation and modifying its condition, the vasodilators hold a prominent place; and, in instances attended by an increase of blood pressure they are of much importance. The nitrites of amyl and butyl may be administered by inhalation in doses of from three to five minims, and the most convenient method of exhibition is by means of glass capsules. Each of them has certain disadvantages, such as the sensation of fulness of the head, which often leaves headache and giddiness behind it. Though more frequently found to result from butyl, these sensations are sometimes even more marked in the case of amyl. A combination of ethyl iodide and chloroform in capsules, each containing five minims of the former and ten of the latter, is found by the author to be valuable. As stimulants the various forms of ethylic

alcohol are of importance. In many cases, such measures require to be superseded by the employment of anodynes, chloroform and ether taking the first place, the subcutaneous injection of morphine being occasionally demanded by the conditions present. Many paroxysms are only amenable to such measures, and there need be no reluctance in their employment, seeing that in the dosage employed, they can only act as stimulants to the circulation, as well as sedatives to the nervous system. Change of position and selection of the posture most comfortable for the patient will require attention, while abundant fresh air must be secured, if the patient has an attack in the house. The application of heat externally to the chest may often be of use.

When no one of the iodides of potassium, sodium, strontium, or calcium, can be tolerated, the author relies upon hydriodic acid, the syrup of which contains one per cent. of hydriodic acid by weight, and may be given in one drachm doses, gradually increased and well diluted. During the employment of the iodides, a mild mercurial aperient for a few days, and a saline draught every morning, are powerful aids in the treatment of the organic types of cardiac pain.

The neurasthenic and hysterical varieties of cardiac pain yield to the general management of the conditions with which they are connected.

PHYSIOLOGY AND PATHOLOGY.

On Suprarenal Glycosuria.—Dr. Stefano Barba of Palermo (*Riforma medica*, October 22d), found that injections of considerable doses of suprarenal extract did not produce in human beings with presumably healthy suprarenal capsules nor in a case of Addison's disease by glycosuria that had been observed after such injections in various animals by Blum and other investigators. The glycosuria resulting from such injections in animals reached over 9 per cent. in Herter and Richards's experiments, when the suprarenal extract was injected into the peritoneal cavity. The results obtained by the present author in human beings were entirely negative, and the case of Addison's disease was rather injured than benefited by the injections of suprarenal extract, while the two other cases (of nervous affections) in which the injections were used were improved in general condition and showed an increase in the amount of urine secreted.

A Disease of Rats Produced by an Acid-resisting Germ.—Dr. V. K. Stephanovsky, (*Roussky Vrach*, November 16th) in a preliminary communication speaks of a new disease in rats which is produced by a germ that resists the action of acids, and is, therefore, analogous to the tubercle bacillus in this respect. The disease was observed in rats of a certain species (*Mus decumanus*) and was found by the author during the recent epidemic of plague in Odessa. The disease affected between four and five per cent. of all rats of this species and showed itself in two types: (1) The purely lymphatic type; (2) the skin-muscular type, with simultaneous affection of the glands. The former is characterized by swellings in all the subcutaneous lymphatic glands, the latter by extreme emaciation and by the appearance of numerous large white patches on

the skin, which cover almost the entire body of the animal. The germ that was found to be the cause of this disease is a bacillus with slightly rounded ends, about 3 to 5 microns in length, staining only with strong dyes like Ziehl's fuchsin solution. It is very resistant to acids, and a 5 per cent. solution of sulphuric acid and 95 per cent. alcohol solution do not decolorize it after five minutes. It stains well after Gram's method, does not grow on ordinary culture media, and inoculations into animals have thus far given negative results.

Serum Agglutinines.—Dr. Karl Laudsteiner (*Münchener medicinische Wochenschrift*, November 18th) says that agglutinating substances after their absorption can be obtained from the agglutinated elements. This is of value in the analysis of such serum elements as can be combined with corpuscular tissue. The solutions obtained can be distinguished from the serum by their marked specific action. The normal serum contains a number of agglutinating substances of a non-specific nature. It is not yet decided whether, in the production of immunity in the animal body, a call is made upon previously formed agglutinines or whether new combinations are effected. It is probable, however, that the combined specific reaction is gained in part from elements in themselves non-specific in character.

Atonic Dilatation of the Œsophagus.—Dr. M. Lewinson (*Berliner klinische Wochenschrift*, November 24th) records the case of a man thirty-three years old, who suffered for two weeks from inability to swallow solid food. This was followed by vomiting and the ability to take liquid nourishment only. The examination disclosed a dilatation of the Œsophagus without stenosis of the cardia. The capacity of the dilated portion was about one quarter of a litre, and was apparently of a pear shape. There was no diverticulum. In the horizontal position, there was a cough and disturbed sleep. The author does not believe the condition to have originated in a spasmodic contraction of the cardia, these cases being prognostically graver than the one reported. The treatment must consist of appropriate feeding, with gastric lavage.

Contribution to the Theory of the Staining of Bacteria.—Dr. Nikitine, of Moscow (*Roussky Archiv Patologiyi, Klinicheskoy Meditsiny, i Bakteriologiyi*, October 31st), has studied the theories of the staining qualities of bacteria, and has tried to explain the causes of the resistance offered by certain germs to acids. The bacillus of tuberculosis in man is the popular representative of this group and for some time has been considered as the only germ that resists the action of mineral acids in the process of decolorization; but since then, this has been found to be false, and we possess now no absolute differential test which will distinguish the bacillus tuberculosis from certain other germs by staining. The material employed in Nikitine's experiments included cultures of the *Bacillus tuberculosis hominis*, and various tubercle bacilli from lower animals, the tubercle bacillus of butter, described by Korn, etc. The smears were fixed by means of heat, and treated with various reagents in the thermostat at 37° C. for different periods of time. They were then washed,

the reagents present in excess neutralized, and the smears stained in the usual manner after Ziehl-Nielsen. The reagents used for the preliminary treatment of the smears were half-decinormal solutions of acids and alkalies and various fat solvents. The first thing he noted was that acids and alkalies, if applied for a considerable length of time to the germs in question, deprived them of their resistance to acids in the subsequent staining. Bases acted more markedly in this respect than acids, other conditions being equal. He found moreover that the degree of activity which the solutions of the acids displayed toward rendering the germs non-resistant to acids in staining, was proportional to the degree of electrolytic dissociation of the given reagent. Thus, the most marked effects were obtained with HCl and HNO_3 , the bacillus of tuberculosis losing its property of resisting acids in six hours after being treated with semi-decinormal solutions of these acids. Acetic acid with a weak degree of electrolytic dissociation acts much more slowly, taking eight times twenty-four hours to accomplish. In the same way potassium hydrate was found ninety-six times more active in this respect than ammonia. The tubercle bacillus lost its resistance to acids in six hours with preliminary treatment with semidecinormal HCl, but the other germs examined lost this property in much shorter periods, averaging one hour with the same reagent. The probability that the substance which causes the resistance of these germs to acids is a fatty body, was confirmed by another series of experiments in which the various fat solvents were used to dissolve this hypothetical substance before staining. The most active of these was found to be absolute alcohol.

Other experiments showed that the action of a decolorizer during the process of staining did not depend upon the electrolytic dissociation of the decolorizer, all the acids used having approximately the same decolorizing value in this respect. He found a great contrast between the decolorizing value of acetic acid on the bacillus of tuberculosis and the same acid on other bacteria resistant to acids. Glacial acetic acid decolorized smears of tubercle bacilli in from ten to fifteen minutes, while the other germs were deprived of fuchsin in from one to three minutes. If a mixture of two parts of glacial acetic acid and one part of a 10 to 1 mixture of alcohol and acetone was used it gave still better results in differentiating the tubercle bacillus, particularly as found in excretions, urine, etc., from other acid-resisting germs. The author recommends this mixture for such differentiations.

On the Effects of Removing the Medullary Substance of the Suprarenal Capsules.—Dr. G. Vassale and Dr. A. Zanfognini (*Riforma medica*, October 31st) publish the results of their experimental work on the effects of removing the medullary portion of the adrenals, and state that when the removal of the medullary substance was performed completely, but a small portion of the cortex of the organ being left, the animals died suddenly with the symptoms observed in cases in which the adrenals had been completely removed. If some of the medullary portion remained in the body, the animals died in a few weeks, after a period of cachexia, anorexia, asthenia, subnormal temperature, and

great emaciation. This shows that the medullary portion of the adrenals must have some special function. Embryologically, the medullary portion of the adrenals is of different origin from that of the cortex of the organs in question, and in some lower animals the medullary portion is represented by entirely separate organs. The function of the suprarenal capsule is as yet a matter of considerable doubt. In regard to the function of the thymus gland, Vassale and Generali have been able to establish experimentally that it has a distinct use, and that the tetanic symptoms attributed to the removal of the thyroid are in reality due to the removal of the parathyroid gland. In the same way, what physiologists believed to be the results of the extirpation of the suprarenals were really the consequences of the removal of the medullary substance of these organs, which have an independent function of their own. The authors will publish further experiments in the same line later on.

On the Effects of Temporary Ischæmia of the Thyroid and Parathyroid Glands.—Dr. Carlo Pinto (*Riforma medica*, October 21st) tried the effects of compressing the afferent and efferent vessels of the thyroid and thymus glands upon these structures. He experimented on twenty dogs, applying the compression for from ten minutes to forty-five hours. In the animals in which the compression lasted less than ninety minutes no effects were observed. In dogs in which it lasted longer, from ninety seconds to six hours, there were slight and transient symptoms of depression and fever. If the compression was prolonged to sixteen hours there were added conjunctivitis, polyuria, tremors, and muscular twitchings. If the compression was kept up from sixteen to thirty-one hours the true tetanic phenomena which occur in excision of the thymus gland were noted. In some of these animals the tetanic state continued until the dog died, but in others there was an interval of quiescence, polyuria, and depression followed by a second attack of tetany ending in death, which took place from the second to the fifth day. If the compression was continued beyond thirty-one hours, and the circulation was then restored, the phenomena of cachexia following the extirpation of the thyroid and thymus glands were observed, ending in death from the eleventh to fifteenth day. The thymus gland, therefore, resists less vigorously to ischæmia than the thyroid. Examinations of these glands in the animals experimented on, showed that degenerative changes occurred in consequence of the ischæmia more rapidly in the thymus gland than in the thyroid.

Proteid Digestion in the Human Stomach.—Dr. Ernest Heinrich (*Münchener medizinische Wochenschrift*, December 20th) concludes from his experiments that one third of the proteids of cooked and finely chopped beef are dissolved in the adult human stomach during the first hour of digestion. The solution takes place without the liberation of any free hydrochloric acid. He finds also that the addition of amylaceous food, like rice, to the meat, favorably influences the process of proteolysis, on the average about ten per cent.

Proceedings of Societies.

AMERICAN GYNÆCOLOGICAL SOCIETY,
*Twenty-seventh Annual Meeting, held in Atlantic
City, N. J., May 27, 28 and 29, 1902.*

The President, DR. SETH C. GORDON, of Portland,
Maine, in the Chair.

(Concluded from Vol. lxxvi, page 790.)

The Ætiology, Pathology and Symptoms of Uterine Displacements.—DR. MATTHEW D. MANN, of Buffalo, from whom a paper on this subject had been expected, said that he had not prepared one. He said that, in the first place, he would rule out anterior displacements entirely, as anteversion was to him so rare and of such little pathological significance that he would not consider it a matter we had to deal with. Anteflexion hardly seemed to come under this discussion. He would confine his remarks to posterior displacements of the uterus. In the first place, as to the cause. We must admit the uterus was held in place in three different ways, by the round ligaments, by the uterosacral ligaments, and by the broad ligaments. It was also held in place by the attachments of the vagina to the pelvic floor. That the uterus floated in the abdominal cavity with the intestine had a great deal to do with it. This, however, was the least important of the three.

With that idea of the normal suspension of the uterus, we could readily see that some one of these different organs must be at fault to allow a displacement. There must be a weakening of the round ligaments, there must be a weakening of the uterosacral ligaments, and there must be a weakening of the pelvic floor, the uterus coming downward and as it came downward going backward. The round ligaments were quite important factors; they acted in a way in which Dr. Kellogg had pointed out; they were not cords holding the uterus in place like the guy ropes to a derrick, but they were muscular, and whenever a woman lifted anything their contraction tended to pull the fundus forward, so that the intraabdominal pressure would be received on the posterior wall of the uterus, forward instead of backward, and would help any displacement. If they were so stretched, the uterus fell by reason of gravity and the round ligaments could not pull it forward. This increase of muscular efforts would tend to drive the uterus downward and increase the backward displacement and, in time, cause it to be worse. The uterosacral ligaments performed an important function. If they were very much relaxed, as the result of child-bearing, then they allowed of the cervix coming downward, and the same thing occurred as in relaxation of the round ligaments. Intraabdominal pressure came on the anterior instead of posterior surface, and the uterus was crowded downward by any pressure or any effort on the part of the woman which increased the abdominal pressure. The same thing occurred when the pelvic floor was weakened. A relaxation of any of the supports of the uterus tended to downward and backward displacement. If all the ligaments were relaxed and the pelvic floor also, there would be prolapse to a greater extent. There were other elements which caused the uterus to be displaced back-

ward in which the vaginal walls came down. If they came down with cystocele or rectocele, then the vaginal walls tipped it over backward.

The circulation of the uterus being interfered with, its nutrition would be interfered with. Then there was the condition known as chronic metritis (as good a term as "chronic congestion") with thickening and enlargement of the tissues of the uterus. With the same congestion there would be endometritis—non-infectious—which produced great thickening of the lining membrane of the uterus and disturbances of menstruation. Those were, to his mind, the principal effects on the uterus from displacement and the principal pathological factor in displacement of the ovary.

Another factor was laceration of the cervix, by allowing the uterus to sink down into the pelvis and turn slightly backward, when the displacement went on from bad to worse. Increase of abdominal pressure, as in coughing, whooping cough, straining at stool, for instance, were conditions that might be considered in the ætiology.

Could there be a displacement of the uterus without any symptoms? He thought there might be. He did not believe backward displacement could be maintained for any great length of time without the woman's suffering more or less. Besides the local symptoms, there were a great many reflex symptoms, and women suffered a great deal from them without any pelvic symptoms. He had had cases sent to him from the internal medicine men for gastric trouble. They had been unable to relieve the dyspepsia; they accomplished nothing. He found bad backward displacement. That was corrected and the gastric symptoms disappeared. He had a great many patients who suffered from reflex disturbance without any pelvic symptoms. There was undoubtedly an intimate relation between the uterus and the eye. Backward displacements and eye trouble were closely associated.

The Non-operative Treatment of Uterine Displacements.—DR. FRANCIS H. DAVENPORT, of Boston, particularly referred to the history of the pessary, which dated back to before the Christian era. A few years ago they had constituted the only means of treating displacements. The consensus of opinion was that there were cases that could be treated with pessaries. In women who had borne children the uterus might be retroverted after each confinement. Convalescence would be harder until the uterus was restored to its normal position. If the support could be easily adjusted and comfortably worn, it would be a great help toward keeping up the general health. In other classes of cases an operation was clearly indicated, especially in married women who had had children and lacerations implicating the genital organs.

The Alexander Operation.—DR. CLEMENT CLEVELAND, of New York, said that ten years ago there were few adherents of the Alexander operation. To-day there were few opponents. It was useful in anteflexion, and to Edebohls belonged the credit of being the first one to perform it. The speaker was far more conservative in its application than formerly, but he believed in its efficacy in properly selected cases. The constitutional condition should have weight in the matter of the selec-

tion. In patients with a constitutional dyscrasia it was contraindicated. He did not consider that a woman was in perfect state of health who was going around with her womb in an improper position. He believed in the pessary, to be worn in the proper position for at least two months succeeding the operation. Shortening the round ligaments was physiologically and anatomically correct, and did not interfere with the pelvic organs.

Abdominal Suspension.—Dr. HUNTER ROBB, of Cleveland, in speaking of the advantages, disadvantages and results of suspension of the uterus, insisted that suspension and fixation were not interchangeable terms, the latter procedure being always undesirable.

Before we were able to speak with certainty as to the results we must have more accurate data, which could only be obtained by a more rigid classification and a subsequent analysis of sufficiently large series of (1) uncomplicated cases of malposition; (2) those cases of malposition in which other pathological conditions were present, but in which the malposition was the indication for operation; (3) those cases in which the suspension was only a supplementary operation.

Dr. Robb believed that in suspension we had a method of permanently relieving a large percentage of patients suffering from obstinate retroflexion. Difficulties in subsequent pregnancies were mainly the result of fixation operations, and not of suspension. Hernia of the abdominal wall, adhesions, and localized or general sepsis were due to faulty technique and should not occur.

Intraabdominal Shortening of the Round Ligaments.—Dr. J. RIDDLE GOFFE, of New York, said it was logical to suppose that when the uterus had got out of its normal position something was wrong with the ligaments, and if we restored the uterus to its normal position and maintained it there the ligaments afforded the proper tissue to use for such a purpose. Gynecologists seemed pretty well agreed that the ligament which served the most important function was the sling of tissue reaching from the promontory of the sacrum, known as the uterosacral ligaments, to the posterior wall of the cervix, plus the uterovesical ligaments; then the cellular tissue and ligamentous structure in the base of the broad ligament. The next most favorable tissue to use for this purpose was the round ligament; when shortened at the external abdominal ring, it was efficient in maintaining the uterus in its normal position in cases of retrodisplacement uncomplicated by inflammatory processes. In his experience, the most frequent cause of retrodisplacement of the uterus was suppurative disease in the appendages.

Shortening of the Uterosacral Ligaments.—Dr. J. WESLEY BOVÉE, of Washington, reviewed the causation of retroversion, the anatomical relationship of the parts and the fixed attachments of the uterosacral ligaments. His first operation had been by the abdominal route. He described the technique of Byford's operation; then that of his own, reporting eighty-two cases.

A Further Contribution to the Study of Lactation Atrophy.—Dr. HIRAM N. VINEBERG, of New York, read a paper in which he said that lactation

atrophy varied in different women, and could only be ascertained by bi-manual examination. In the majority of cases the cervix underwent a corresponding atrophy to that of the body of the organ. The ovaries did not assume any appreciable difference in size. Every nursing woman, whether she menstruated or not, had lactation atrophy. The atrophy was most pronounced between the fourth and fifth months of lactation, when the amount of milk was at its height. Regeneration of the menstrual function could not be looked upon as regeneration of the uterus. Involution of the puerperal uterus was a normal physiological process. Lactation atrophy was not a dangerous condition, but the period of lactation should be limited to eight or nine months. It was almost a physical impossibility to induce the majority of women to carry on the function of nursing. It became our duty to bring about by artificial means involution of the uterus. His custom was to keep the patient under observation for eight or ten weeks or until he succeeded, by pelvic massage and medicine, in reducing the size of the puerperal uterus. It was a matter of great surprise to him to find so few cases of cancer of the uterus. During his ten years' service he had examined over 15,000 different women, and the number of cases of cancer did not exceed fifteen.

Dr. LAPHORN SMITH, of Montreal, said it was a mistake to tell a woman to stop nursing at seven months; she should go on nursing for at least two years. He thought that if women would nurse the babies more they would be none the worse for it.

Dr. EGBERT H. GRANDIN, of New York, objected to the use of the term "atrophy." He said the tendency of the times seemed to be to employ other expedients, such as prepared food for the child, instead of allowing the mother to nurse.

The Relative Advantages of Complete and Partial Hysterectomy.—Dr. E. E. MONTGOMERY, of Philadelphia, referred to Baer, who, in October, 1892, had described a procedure which he had employed in 1891, that of using ligatures to the stump of the cervix, but controlling bleeding by ligating the uterine artery upon each side of the stump, thus necessarily limiting its circulation. He referred, too, to Park's, Eastman's, Polk's, and Stimson's work in the last ten years. The operative procedure has undergone many modifications, such as working down upon one side, cutting across the cervix and pulling the organ away upon the other, a plan of operation of special value when one broad ligament was occupied by a fibroid.

Of all the many procedures devised for performing panhysterectomy, that devised by Doyen himself was, to the writer, the most satisfactory. For partial hysterectomy it had been alleged that it was more quickly done, gave a better pelvic floor and a more natural vagina, and afforded less danger of sepsis. By the method just suggested the operation was, in the speaker's judgment, much more expeditiously performed.

Dr. NOBLE thought that the historical part of Dr. Montgomery's paper was interesting, but that he had failed to mention the first man who did the operation, and that was Dr. Emmet, of New York. Dr. Noble was of the opinion that amputation at the cervix was safer than taking the cervix out.

So far as the originator's own mortality was concerned, it was bad. It had been said of the ten exhibition operations he had done at various congresses, that eight patients had bled to death, the ninth had died of tetanus, and one had got well. He believed there was not much difference in the time in the two procedures, that each took at least an hour. Having seen the operation done in Europe and in this country, it had not made a good impression on him. The danger of cancer developing in the cervix was remote.

Dr. CUSHING, of Boston, contended that Dr. Emmet had not been the first man to perform the operation. The speaker had tried nearly every way, and he did not agree that it was done as quickly as by cutting across. There was ground for leaving the cervix in in young women.

Dr. A. PALMER DUDLEY, of New York, said that he was perfectly contented with what we were doing in this country as compared with the "scientific butchery" of some European operators.

The President's Address.—After thanking the members for their punctuality and for the shortness of the papers presented, he began by saying that modern gynecology was the legitimate child of obstetrics. It was customary to say of late years that gynecology had passed its usefulness and had been merged into surgery. With this we must take issue. He maintained that until obstetrics approached the ideal standard, there would be more work for the gynecologist.

Scientific gynecology had its birth in America, created by Marion Sims; nothing had endured to the present time like his surgical methods, not alone in gynecology, but in abdominal gunshot wounds and abdominal operations—he was placed among the most advanced surgeons of the day. That which Sims made possible the intelligent, patient, practical Emmet made possible to everyone. The president then referred to the history of gynecological work and the methods employed in the days before antisepsis. Gynecology, therefore, became the parent of new obstetrics. For a long time the text books of Emmet and Thomas had been standards and they would remain classics in gynecology for a long time. The president deplored the too early use of the forceps. The majority of cases, if left alone, would terminate naturally. It was the second stage of labor where harm was done; twenty-four hours was not long for a primipara to be in labor.

A normal labor should not be interfered with, and the accoucheur who did interfere should be held responsible for mother and child. The perinæum must be dilated slowly and by degrees, allowing the patient to rest, whereas if the forceps was applied, laceration was very likely to occur. Every case was a surgical one and must be treated on a surgical basis. He believed in the timely use of an anæsthetic; he used the A. C. E. mixture, given only during a pain and given cautiously. Post partum hæmorrhage was not due to the anæsthetic, but to carelessness of the attendant. The modern Cæsarean section had been so successful that the barbarous operation of craniotomy was now discarded.

Had we as gynecologists kept up with the idea? Had we kept the faith transmitted by our fathers?

Nay, more, had we improved on the methods given by the fathers? Or had we departed so far from the methods given as to merit their disapprobation? Peaslee, the greatest pathologist of his day, fifty years ago taught, and all through his life, that inflammation was a process and not a condition of a part. In the majority of women in the childbearing age, the president thought that dilatation was much more necessary than trachelorrhaphy. The sins of commission needed atonement, and the general surgeon was too prone to do a routine trachelorrhaphy if a laceration existed.

Dr. ROBERT A. MURRAY, of New York, referring to Dr. Vineberg's paper, asked if the term "atrophy" could not be changed to "involution." If it was atrophy and the tissue destroyed, we should not have pregnancy follow.

Dr. VINEBERG said that the process of involution was atrophy; it had shown a distinct atrophy of muscular tissue. He could not think of any other term that would apply more correctly.

Dr. HARRIS thought that, unless there was a disease in the cervix, it was better to leave the cervix in position—better for the integrity and normal position of the vagina to leave the cervix there.

Dr. MANN said he had seen three cases of degeneration of the cervix after supravaginal hysterectomy. If there was a real danger, it did not seem to him that the leaving of the cervix should be done. Others maintained that the taking out of the cervix added materially to the risk of the operation.

Anterior and Posterior Colporrhaphy by a New Method—Dr. ISAAC S. STONE, of Washington, read a paper on this subject. There were a number of men who were afraid, he said, of cutting into the lower abdomen for fear of cutting into the bladder. One could cut sometimes three quarters of an inch before reaching the bladder. Marion Sims removed a cystocele by clamp forceps, just as we did the scrotum in a case of hydrocele. He expected to cut the bladder, but he did not.

Dr. ANDREW F. CURRIER said that any operation on the anterior abdominal wall, of whatever nature, which left the area of least resistance in the middle line would produce the same results which were produced in the original case. The cause of these cystoceles was weakness of the vaginal tissue.

Dr. GRANDIN believed that, taking a chronic case, there was little use of talking about tissue. The symptoms due to prolapse of the uterus were dependent upon the descent of the uterus. He would like to see the word "version" dismissed from our textbooks. A woman might have a version without symptoms, unless, with that version, there existed a descent. The object of any operation, therefore, was simply to hold the uterus at a higher place in the pelvis.

Dr. EMMET said he recognized the difficulties that attended these cases, and that the best attempts were unavailing. He made a distinction between descent of the uterus and descent of the wall. He admired the operation described by Dr. Stone and believed there was a great deal in it that had not hitherto been observed.

In the operation which Dr. FORD did for relaxed perinæum, he, as a routine, made quite a high dissection, extending quite well out to the side, and

then by figure of 8 stitches elevated the posterior wall of the vagina, so that when these sutures were tied the posterior vaginal wall would lie straight up against the urethra.

Fibroid Tumors of the Ovary.—Dr. REUBEN PETERSON, of Ann Arbor, said that his first case had been that of a woman sixty-four years old with a large ovarian fibroma extending up on the left side under the rib. The tumor weighed $7\frac{1}{4}$ pounds. Microscopical examination showed it to be a fibroma. In this case a diagnosis was not made. In the second case the mass was smaller and contained a large amount of ascitic fluid. It was found to be due to ovarian fibroid.

Dr. MANN remarked that Foster, in a recent number of *American Medicine*, had presented a paper regarding a rare cause of ascites, in which he attributed ascites to fibroma of the ovary. This was very interesting. Dr. Mann had operated in six cases in which there was ascites. In the first there was ascites with fibroma of the uterus.

Dr. HOWARD had had three cases of fibroma of the ovary. In each of these cases there was a large amount of ascites. All his patients recovered.

Dr. GEORGE I. ENGELMANN, of Boston, mentioned a case which closely resembled a uterine fibrocyst.

Dr. SMITH regarded ascites always with a strong suspicion of malignancy.

The Closure of an Abdominal Incision.—In a paper on this subject, Dr. P. A. HARRIS said that when an abscess formed in the abdominal incision the skin was reopened in the line of incision to the upper and lower limits of the mural abscess. The wound was then treated as an open one, until the flow of pus became greatly reduced in quantity. All the granulations were then removed with a sharp curette until the muscle, fascia, fat, and other tissues were distinctly recognizable.

The separated edges of the deep fascia were then drawn together by a series of silkworm gut sutures, which interlocked with each other at the apposition line of the fascia. Each one of these sutures was introduced through the skin about one inch away from the incision, and each one was brought out either just above or below the point of its introduction. If the first suture both entered and emerged from the right of the median line, the next one was introduced and made to emerge at a point to the left of the incision, and was so introduced as to interlock with the first, or preceding, suture. The third suture was introduced and brought out from the same side as the first suture, and interlocked with the second one. The fourth suture was introduced from the same side as the second suture, and interlocked with the third, or preceding one. This singular suture had for its chief object the coaptation of the deep fascia, and when it was properly introduced and tied, the fat and opposing edges of the skin fell in apposition, adhered and healed without additional sutures. In most of the few cases thus treated the parts had promptly healed and generally without suppuration. A not unimportant part of the technique of the operation was the thorough and repeated washing with solution of bichloride of mercury, always followed with a normal salt solution irrigation.

The stitches are all removed on the twelfth and

fourteenth days. Fifteen photographs illustrate much of Dr. Harris's work in this relation. A not uninteresting part of the photographic illustration is the appearance of the wound after the sutures are introduced and tied, as they convert the area of the opened and large wound into an elongated mound at whose base, on either side there appears a row of knots, while at the summit of the mound of the opposing edges of skin simply lie in apposition awaiting adherence and healing.

Dr. Harris was of the opinion that the stronger solutions of carbolic acid or possibly other disinfectants might serve as good if not better purpose than the solution of bichloride of mercury, which he had employed, for this work.

Dr. CLEVELAND was in the habit of passing every other suture through all the layers and every other suture through the fascia, bringing the fascia edges close together.

Letters to the Editor.

AN APPARENT INJUSTICE TO A PHYSICIAN.

NEW YORK, December 28, 1902.

To the Editor of the NEW YORK MEDICAL JOURNAL:

Sir: Two months ago I was summoned in great haste to attend an accident in the house of Mr. M., in East Twenty-ninth Street. The messenger was a girl in the employ of Mrs. M., who carries on business as importer and dressmaker. As I understood later on Mr. and Mrs. M. are partners in this business.

The accident had happened to a servant in the employ of Mr. and Mrs. M., in falling from a step-ladder. I found a fracture of the lower end of the right radius.

Before I went home to prepare splints and bandages I had a distinct understanding that I was to be paid for my services. This understanding was distinctly had with Mr. and Mrs. M. I explained that if I took charge of the case at all I should have to see it through, because if it was out of my control some mischief might happen and I might be made responsible, and a suit for malpractice was not an uncommon affair under such circumstances.

However, I advised having the patient as soon as possible admitted to a hospital, and offered my aid in having her admitted. The night after the day—it was about midnight—I was asked to call on the patient on account of painful swelling of the arm, her place of residence being about forty-five minutes' ride away, the weather very stormy, and I suffering from influenza. I could not go, but advised calling in a doctor in the neighborhood. Next morning, before I went to the patient's house, I had another distinct understanding with Mrs. M. that I was to be paid by Mr. or Mrs. M. for my services. I changed the bandage and everything went on well, only there was no possibility of taking the patient to a hospital. Just recovered from sickness, husband out of work, three little children, oldest four years. Mother had no one to take care of the little ones.

To make things sure, I took the patient to Dr. Beck's clinic. Dr. Beck was kind enough to take

a Röntgen photograph demonstrating a T fracture of the lower end of the radius.

Mr. M. refused to pay for my services. I brought suit against him, but the judge decided for the defendant.

I learned that the judge (district court) was not obliged to give grounds for his decision except out of courtesy. Although I would not expect courtesy from a judge who had decided against me, I asked him in a letter, but received no reply.

It seems to me this case is of interest to practitioners in general. I attend a case of fracture, have an understanding all through with the parties who had summoned and requested me to attend this case, and now I have had about twenty dollars costs to pay for all the work I have done and cannot get satisfaction, even as to why this judge decides against me. Is there no way of finding out the ground of his decision?

A. R.

THE STRIPED TONGUE AND MALARIAL DISEASE.

1530 Locust Street,

PHILADELPHIA, December 29, 1902.

To the Editor of the NEW YORK MEDICAL JOURNAL:

Sir: In the number of your *Journal* issued on April 12, 1902, there appeared an article by Dr. Lucien Lofton, describing a condition of the tongue which he had found almost constantly in cases of acute malarial infection, which he described as "One or more dark lines running from the base of the organ to the apex, usually separated by a clearly defined tract of clean mucous membrane about 1-16 to 1-8 of an inch in thickness, gradually coming to a point in the middle of the tongue; in color resembling the stain of a 10 per cent. solution of potassium permanganate that has been exposed to the air for some time." The condition had first been noted in Georgia, but was also seen in Virginia. It usually persisted for two weeks, was not relieved by purgation, and occurred in nearly all acute cases.

With the intention of investigating the occurrence of the above described phenomenon in malaria, I have collected statistics of twenty-four cases from the wards of the Pennsylvania Hospital in which this condition was especially looked for. The character of tongue described by Dr. Lofton was well marked in five cases, suggestive in one case, and entirely absent in the remaining eighteen. These observations were made in acute cases, fully half of the patients had received no quinine and none of them had received more than a few doses.

Twenty-four cases are of course entirely too few upon which to make any broad assertions, but certainly it would seem that this striping of the tongue is, at least in this climate, too frequently absent to be of much diagnostic import. In making an examination of numerous typhoid fever patients at the same time I failed in every instance to find any "striped tongues" as in malaria. It may be therefore that, though the condition is not a constant one in plasmodial infection, it may yet prove to be of considerable diagnostic value when present.

GEORGE W. NORRIS, M. D.

Book Notices.

La Prostitution réglementée et les pouvoirs publics dans les principaux états des deux mondes. Par LOUIS FIAUX, Ancien membre du Conseil municipal de Paris. Paris: Félix Alcan, 1902. Pp. xlv-354. Publications du *Progrès médical*.

The discussion of the social evil is frequently combined with the exposition of a theory of the author's which he attempts to prove by his statements and statistics. The present work is an attempt to prove that regulation—condemned by the Brussels conference—is the best means of fighting the vice, and is laudatory of the efforts of Béranger to reform the methods of regulation and to purify the public morals. The author goes deep into his subject from what might be called a "clinical" view, emphasizing especially the greater venereal morbidity of clandestine prostitutes as compared with those under police observation. While we do not think he has made out a strong case, and could, we believe, easily point out its faults and weaknesses, these columns are not the ones in which to conduct a controversy of that sort. On the other hand, every contribution to this subject earnestly conceived is of value, and it is in this sense that we must consider M. Fiaux's book. To the student of political problems it will be of interest, and to the physician it should appeal as do all matters which pertain to the efforts to bring about a diminution of disease.

Materia Medica, Therapeutics, Medical Pharmacy, Prescription Writing and Medical Latin. A Manual for Students and Practitioners. By WILLIAM SCHLEIF, Ph. G., M. D., Instructor in Pharmacy in the University of Pennsylvania. Series Edited by BERN B. GALLAUDET, M. D., Demonstrator of Anatomy and Instructor in Surgery, College of Physicians and Surgeons, New York, etc. Second Edition, Revised and Enlarged. Philadelphia and New York: Lea Brothers & Company, 1902. Pp. 3 to 389. (Price, \$1.75.)

This work will be found to be a concise and thoroughly up-to-date book on the subject. The drugs are well classified, and all the newer remedies receive attention. The article on prescription writing, which has been thoroughly revised, although condensed, is extremely comprehensive. For ready reference, this book will be found to be a valuable addition to any medical library.

A Manual of Practical Medical Electricity. The Röntgen Rays and Finsen Light. By DAWSON TURNER, B. A., M. D., F. R. C. P. Ed., M. R. C. P. Lond., Lecturer on Experimental Physics, Surgeons' Hall, Edinburgh, etc. Third Edition, Revised and Enlarged. New York: William Wood & Company, 1902. Pp. xix-396. (Price, \$3.)

In spite of the introduction of much new matter, this work is still a concise presentation of the essentials of modern medical electricity in its theoretical and, more especially, in its practical aspects. Chapters have been added dealing with the Röntgen rays, x ray therapy, and the Finsen light. These chapters are ample for a volume of this size, and may be commended to those who, not requiring a

practical familiarity with the manipulation of electro-therapeutical instruments, still desire a somewhat more than academic knowledge of the subject.

A Textbook of Materia Medica, Therapeutics, and Pharmacology. By GEORGE FRANK BUTLER, Ph. G., M. D., Professor of Materia Medica and Therapeutics in the College of Physicians and Surgeons, Chicago, etc. Fourth Edition, thoroughly Revised. Philadelphia and London: W. B. Saunders & Company, 1902. Pp. 9 to 896. (Price, \$4.)

In this new edition the author has maintained the high standard of merit shown throughout all the earlier editions of his work. The work has been brought thoroughly up-to-date, and we are pleased to note that the author has not changed the plan of grouping the drugs, instead of giving them in alphabetical order, as this helps the student to associate them in his mind more intelligently.

We certainly recommend the book most highly.

The Medical News Pocket Formulary for 1902. By E. QUIN THORNTON, M. D., Demonstrator of Therapeutics, Pharmacy, and Materia Medica in the Jefferson Medical College, Philadelphia. Fourth Edition, Revised. Philadelphia and New York: Lea Brothers & Company, 1902. Pp. 3 to 287. (Price, \$1.50.)

This edition contains many new formulæ, both of recent drugs and of older ones; while to maintain its compactness less important prescriptions, present in the last edition, have been omitted. The compend covers a wide range of diseases and disorders, and submits for most of them several formulæ from which to make a selection.

The Physician's Visiting List for 1903. Philadelphia: P. Blakiston's Son & Company. (Price, \$1.)

This visiting list is so well known and has so fully established its reputation for compactness, convenience, and usefulness, being now in the fifty-second year of its publication, that it needs scarcely any introduction. It comprises a calendar, useful memoranda on incompatibility and the treatment of poisoning, metrical tables, a very exhaustive dose list, uterogestation tables, etc., a visiting list arranged for special memoranda for twenty-five patients a week, also pages for obstetrical engagements and for a cash account. It is neatly bound in leather and furnished with a pocket and pencil.

Kirkes's Handbook of Physiology. Revised by WILLIAM H. ROCKWELL, JR., and CHARLES L. DANA, A. M., M. D., Professor of Diseases of the Nervous System, Cornell University Medical College, etc. Seventeenth American Edition. With Five Hundred Illustrations, including many in Colors. New York: William Wood & Company, 1902. Pp. xi-854. (Price, \$3.)

This work will be found to be a valuable book of reference on the subject, for both student and practitioner, but we fail to find much change in this new edition. Only slight revision seems to have been made in three or four of the chapters.

Miscellany.

Medical Fees According to Scripture.—The *Medical Examiner* for October, 1902, tells of a surgeon who, some years ago, brought suit for a fee that was considered exorbitant by the patient, for operation on a strangulated hernia. In the course of the trial the attorney for the rich defendant rather sarcastically asked the surgeon if there were no limit to his charges. "None in this case," said the doctor. "On what authority, sir?" "The Bible." "Explain yourself." "'Eye for eye, tooth for tooth, yea, all that a man hath will he give for his life.'" The remark had its effect upon the jury and the doctor won his case.

The Evil Effects of Sugar in Subjects of Incipient Cataract.—Diabetic cataract is, of course, well known, but Mr. George Wherry, F. R. C. S., in a letter to the *Lancet* for October 18th points out that there is plenty of scientific evidence that cataract may be formed by sugar when taken in excess by animals and it seems quite probable that in many cases the consumption of sugar, though not injurious to the general health, may hasten the formation of cataracts. "Of course," he says, "I am supposing that it is not desirable to hasten, but rather to retard, the maturity of these cataracts, and in these remarks I am not concerned with methods, mechanical, or other, to hasten matters. Nor is it suggested that every patient should be restricted in the use of sugar but that some opinion should be formed in every case just as we examine the urine for sugar."

The author takes the case of a man, aged sixty-nine years, who can read J. 2 readily with his glasses and 6/12 easily unaided with each eye and has in each eye equally marked evidences of lens opacity. He read without glasses until the age of fifty-five years (low myopia). He has ailments of a gouty or rheumatic character with no sugar in the urine. It would be his practice to restrict such a patient in the use of sugar and sometimes he finds that sugar has been taken in excess (sweets and chocolate). Saxin or saccharin makes a fair substitute for sugar and there can be little doubt that some of his aforesaid ailments were made worse by the careless use of sugar and thus the patient gains benefit by abstinence. Experiments on trout were made many years ago proving that cataracts in these fish were caused by sugaring the water in which they lived. Experiments more lately both in fishes and frogs have given the same results. Cataracts have been induced in rabbits by the subconjunctival injection of sugar. Weir Mitchell caused cataract in frogs by the subcutaneous injection of sugar. These, with the experiments with naphthalin by Bouchard, are most interesting in connection with diabetic cataracts.

There is thus much evidence that excess of sugar in the system will bring about cataracts and it seems probable that excess of sugar may occur without any evidence of ill health or glycosuria. In many patients with incipient cataract the use of sugar should be restricted, as it is impossible to feel sure that the sugar is harmless. In suitable cases it will be found that the general health is improved by abstinence from sugar, and among the author's notes of several thousand cases of disorder of the eye he finds sufficient evidence to encourage him in the belief that the progress of cataract has been retarded by his advice.

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Lectures and Addresses.

AN ADDRESS ON CHEMICAL PATHOLOGY; THE FIELD OF GREATEST PROMISE IN PATHOLOGICAL RESEARCH.*

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MEDICINE.

It is nearly half a century since the publication of his cellular pathology by Virchow, easily the brightest star in a remarkable constellation of intellectual splendors. Two centuries of histological research, beginning with the crude pioneer work of Malpighi and Leeuwenhoek had gradually paved the way for Virchow, and had, indeed, made his remarkable achievements a possibility. It was only a single generation before Virchow that Bichat had gathered together the isolated observations of his predecessors, much as Kepler had in astronomy the facts accumulated by Tycho de Brahe and others, and had welded them into the first systematic treatise upon histology. Between Bichat and Virchow came Schwann, with his wonderful demonstration of the primary unity of the cellular beginnings of all forms of animal life. But, in morbid histology, the soil was almost virgin; a science of pathology could scarcely be said to exist. Virchow created it.

The principal facts concerning the structure and function of the cellular unit had been formulated in such a way as to require only slight subsequent modifications. Animal life, however complex it might become, was already pretty fully recognized to be but the summation of the multitudinous lives of its individual cells. Each cell had impressed upon it, by some mysterious law of hereditary succession, the specific character of its own activities—in short, what we call its function. It might separate from the blood the constituents of bile, of pepsin, or of urea; or it might initiate a nervous impulse or respond to the stimulation of a ray of light or a wave of sound; but whatever it did, this was its normal action—the manifestation of *health*.

But the cell had other characteristics of a more

palpably physical character. It had for each tissue a certain average construction, shape, size, and consistence. All these attributes might vary considerably, but if the variations exceeded certain fairly well defined limits it constituted disease, and the systematic study of these variations in different morbid states was the method, and, when considered in relation to the then existing state of knowledge, may justly be characterized as the matchless achievement of Virchow.

His conclusions did not all stand, as, for instance, that the leucocytes of inflammation were produced by the segmentation of connective tissue cells, a conception which was definitely overthrown by Cohnheim; but his great generalization, that all cells arise from preexisting cells, is unassailable. It stands to-day, and will stand for all time, as one of the foundation facts upon which the vast structure of biological science rests, and I need scarcely remind you that the laws and facts of pathology are not fundamentally different from those of normal physiology. The cancer cell and structure, for instance, has no possible antecedent in every human organism, and its fatal evolution is but a tremendous exaggeration of normal variations. This is entirely apart from any question concerning the possibly bacterial, blastomycetic, or other ultimate causes of cancer.

But cellular pathology, to the vast development of which in the last half of the nineteenth century I can only allude, was only a partial pathology. Basal as was its importance it failed to approach even closely to the solution of the final problems of disease. It was little more than a systematic study of the minute anatomy and physiology of disease. These were but the phenomena of disease, the classification and study of which were of the first importance, and indeed necessary to further advances in the knowledge of disease. But the investigations along this line had their obvious limits. The real pathology of tuberculosis, for instance, must have forever eluded scientific research confined to the phenomena of morbid cell life. The essential fact in all pathology, namely, *ætiology*, must have forever remained a speculative field in which the individual observer would continue to interpret the phenomena by a logical process that necessarily rested upon too slight a foundation of fact. The conflict regarding the nature of tubercle well illustrates this; and

* Delivered before the Allen County Medical Society, Fort Wayne, Indiana, at its annual meeting, December 23, 1902.

whether tubercle was a neoplasm, as maintained by Rokitansky, Virchow, and others, or an inflammatory process or a simple exudation, as held by still others, would be a matter of controversy to-day had not other principles or discoveries come to our relief.

But already a cloud, no bigger than a man's hand, had arisen above the horizon, and was pregnant with undreamed-of promise. It was destined to overspread the sky of the scientific world, and abundantly to fertilize and replenish the soil in the field of pathological research. It was destined to usher in the second great era in the evolution of the science of pathology, and to prove in its full fruition a measureless benefaction to the human race. It was to broaden the foundations of rational therapeutics, and to make possible, for the first time in the history of the world, intelligent prophylaxis and effective sanitation. Thus may justly be characterized the beginnings of the era of bacteriology.

Already Ehrenberg had seen and described vibrations, and Dujardin and Robin had respectively classified them as infusoria and algæ, their vegetable character being finally established by Davaine in almost the same year that Virchow published his cellular pathology—a most interesting juxtaposition. The theory of spontaneous generation which, together with its theological aspects, was curiously interwoven with the controversy, had been assailed, but not destroyed. The gradual improvement in the construction and technique of the microscope had paved the way. Then, in the fulness of time came Pasteur, just as Savonarola, Lincoln, Luther, and other great figures in history appeared as the exponents and products of their age and environment.

Out of it all came the science of bacteriology and the germ theory of disease. They stand to-day as a great monument to the persevering scientific and humanitarian zeal of a generation. There is no fact better established in all the realms of science than the causal relationship of certain microorganisms to definite diseases. We know, for instance, that tuberculosis cannot exist without Koch's bacillus, cholera without the comma bacillus, or diphtheria without the Klebs-Loeffler bacillus. Future investigations may possibly show that in some instances more than one morbid process is included under a common name, the clinical differences scarcely exceeding the ordinary variations in the types of disease. This would seem quite possible, for instance, in regard to typhoid fever and scarlatina, and has already been shown to be true with reference to dysentery. But these are simply errors of observation and imperfections of existing knowledge. They in no way impair the validity of the theory as a working formula, but simply point

to the necessity of continuous investigation in spite of the incalculable volume of work that has been done.

This is also illustrated and emphasized by the fact that the pathogenic organisms of many diseases, in which we are perfectly certain, on grounds of analogy that are considered conclusive in any science, that such an organism exists, has never been identified. It would be entirely aside from my purpose to enter into any extended discussion of the germ theory of disease. There are probably very few members of the medical profession who are mentally capable of following a sequence of facts to its logical conclusion, who do not accept the theory that microorganisms of some sort produce the so-called infectious diseases, and that the latter cannot exist without them.

Just how these organisms produce the infectious diseases which are dependent upon them as ætiological factors, is quite another question, and one of the greatest interest. The fact is that the germ theory of disease, which was one of the battle grounds of science a quarter of a century ago, needs a comprehensive restatement. The smoke of the real battle has long ago cleared away, although every now and then some Rip Van Winkle who is just in hailing distance of the tail end of the procession, if he has not lost sight of it altogether, mistakes himself for an actual combatant, and feebly attempts to galvanize the corpse of a dead issue. The issue no longer is as to the competency of pathogenic organisms to produce definite diseases, but, among other things, how do they do it? Why are they not always effective? Why and how does immunity occur? And what are the defenses of the organism against these insidious foes?

The germ theory of disease, as originally conceived, was, in a certain sense, only a half truth. Not so, however, the facts upon which it was based. Again it was a question of interpretation—a synthesis of new and startling facts. In the presence of such revelations into the hitherto secrets of disease, the human mind, with characteristic impetuosity, leaped to the conclusion that here lay the finality of the whole problem. The fact soon became apparent amidst the wilderness of experimental investigations, that something besides the corporeal substance of the germ was necessary, and that that something, even when isolated from the germ, was capable of producing the effects which had been directly attributed to the germ. Take, for instance, the process of suppuration. The dictum became current that without germs there could be no suppuration. From a practical clinical point of view this was and is substantially correct. But strictly speaking it was not true, for the suppurative process was really the result of chemical irritation, the chem-

ical compound being the biological products of the pyogenic organisms. This was readily demonstrated, Buchner asserting, and perhaps correctly, that bacteria could not even produce inflammation unless broken down, and it was furthermore shown that other chemical irritants acting similarly could produce suppuration. Out of it all stood the one significant fact that the real pyogenic factor was chemical in its nature. In short, similar observations and critical analyses along various lines led to broader generalizations, and that which I will venture to call, in this hasty review of the subject, the third great era—the chemical era—in the development of the science of pathology had been unconsciously inaugurated, and was destined to immediate and indefinite expansion.

Before proceeding briefly to outline its further evolution, it should, even though superfluous, be clearly stated that these so-called eras in pathological investigation are not referred to, as in any sense supplanting each other. They are rather the expression of the addition to our knowledge, at different periods of time, of ideas or discoveries so important as to be epoch making in character. Chemical pathology rests upon the foundations of cellular pathology and bacteriology; cell structure and function are none the less important—the pathogenic relations of certain microorganisms none the less certain—because the ultimate problems of disease have been transferred, as I believe they have, to the realm of physiological chemistry.

In the further discussion of this subject it will be necessary to travel over ground that is relatively unfamiliar to the average physician. We cannot all become either bacteriologists or chemists, and, to deal competently with these questions, a man must be somewhat of both; at least, he must, if he assumes to become an educated and progressive physician, understand the general laws and discoveries of these sciences and their practical bearing on his own work. The truth is that we have come to “the parting of the ways,” and we must either grapple with these somewhat difficult biochemical problems, or fail to comprehend the present and future trend of pathological study and investigation. Nothing can be more practical; for in the true pathology of disease lies the key to the whole fabric of clinical medicine.

We start with the fully established fact that the various morbid processes produced by pathogenic organisms are the result of chemical products formed by them in their life history. A great deal is known about their chemical bodies, although much more remains to be learned. I have already referred to the phenomena of suppuration and will mention one other illustrative fact. Van de Velde produced from the *Staphylococcus pyogenes* a proteid sub-

stance which he called leucocidin. This substance destroys leucocytes. The destructive process can be studied under the microscope and takes place in about two minutes. Now, if this solution of leucocidin is heated to 58° C. (136.4° F.), it loses its leucocidal power. This is a most important method of studying these proteids, and it can sometimes be demonstrated that two chemical bodies are held together in solution and one will be rendered inactive by a much lower temperature than the other. Again, the filtered products of staphylococcus cultures will dissolve red blood cells, and, when sterilized and injected into animals, produce changes in the kidney, heart, etc. Many other facts of this character could be cited, but time will not allow, for this is only one of many aspects of chemical pathology.

Some facts concerning that wonderfully complex chemical compound and tissue, the blood, will next engage our attention. As long ago as 1872, it had been observed that bacteria introduced into the circulation disappeared. This was, later, variously attributed by different observers to their lodgement in the capillaries, the alkalinity of the blood, the phagocytes, and the blood serum. Whatever the explanation might be, it soon became a settled conviction that in some way the blood had germicidal properties, and it was further shown that the fluid constituents of the blood, entirely freed from cellular elements, were active in this respect. The inference that destruction of bacteria was due to a chemical substance, very probably the product of secretion or disintegration of leucocytes and possibly other cells, was irresistible.

About seven years ago, one of the most important steps in the development of our subject was taken, when Pfeiffer discovered that if the comma bacillus was injected into the peritoneal cavity of guinea pigs which had been immunized against cholera the organisms disappeared. The blood serum or exudates of animals thus immunized were later found to be equally active outside the body. Still later, it was demonstrated that if animals were immunized against any pathogenic organism, the blood serum or exudates of that animal had acquired the power of destroying with great intensity the bacterium used in the immunizing process. Only one rational explanation of these phenomena could be offered. They occurred indifferently in the animal body or out of it; they were purely chemical phenomena; and they could only be produced by a separate chemical compound, created in some mysterious manner within the inscrutable laboratory of the human body, under the influence of the pathogenic organism—or more accurately speaking, its chemical products. These bodies were termed lysins, and the phenomena of bacterial destruction which they produced, bacteriolysis. A more brilliant application of Ba-

con's inductive philosophy has rarely been recorded in the history of science.

Considering the chemical facts already cited we find two distinct classes of chemical bodies—a toxic and an antitoxic group. We have found that the toxine, usually bacterial, when introduced into the circulation leads to the formation of an antitoxic body by which it is neutralized. This combination of a toxic and an antitoxic body produces an inert compound, which is not at all toxic to the animal body. The two bodies will combine just as readily in a test tube as in the animal body, and require the same proportions; and in the combination neither is destroyed. The combination is a loose one. Under certain conditions, either one of the original bodies entering such combination with each other may again become active. The toxine of venomous snakes, for instance, when mixed with just the proper amount of antitoxine, is innocuous when injected into animals. If now the mixture is heated to 68° C. the antitoxine is destroyed and the toxine becomes as virulent as ever. With diphtheria and tetanus just the reverse obtains. The evenly balanced mixture of toxine and antitoxine, when heated to a certain temperature, becomes antitoxic because the antitoxine, unlike that of snake venom, is more resistant to heat than the toxine.

These facts cannot be pursued further, as there are other aspects of this many sided question to which I feel it necessary to refer.

The next thing to which I desire to call your attention has reference to the chemical attributes of the blood serum. No distinctive difference can be determined by chemical analysis between the blood serum of one animal and that of another. But there are differences of a vital character—so vital as to involve the very integrity of the red blood corpuscles. If the serum of one animal is injected into the blood of certain other animals not too closely related, it produces destruction of the red blood cells of the host. This may be sufficient to cause hæmoglobinuria. It is produced, beyond doubt, by a series of chemical bodies which have been termed hæmolysines, and which, together with the bacteriolysines are included under the general term alexines.

But these hæmolysines, when they do not exist for the blood of a certain species, can be produced artificially by the frequently repeated injections of small quantities of the defibrinated blood of that species. For instance, the serum of a guinea pig in a test tube does not have any solvent or hæmolytic action upon the red blood cells of the rabbit, which are placed in it. If, now, the guinea pig is treated to injections of defibrinated blood obtained of the rabbit, it will presently be found that the red blood cells of the rabbit, when placed in the serum of the guinea pig, will undergo rapid solution. What has

happened to the serum of the guinea pig? A new chemical body, globulicidal for the rabbit blood, has been formed by the blood and other tissue cells of the guinea pig. The defibrinated blood of the rabbit was foreign, was *toxic* to the guinea pig, and this hæmolysine was the chemical product of the defensive mechanism, just as the bacteriolysine would be if bacterial toxins instead had been introduced.

Time will not permit further citations from the great mass of interesting facts and experimental demonstrations bearing upon the chemical processes of morbid conditions. I wish now to briefly outline one of the most startling and comprehensive generalizations of modern science. I refer to Ehrlich's so-called side chain theory of immunity. The remarkable facts which I have cited, along with many others but little less important, pointed toward the existence of laws and forces within the animal organism concerning which the scientific world knew little or nothing. These phenomena were so obviously of a chemical nature, occurring as already indicated somewhat indifferently within or without the body, that it was in the direction of chemistry that Ehrlich sought for their explanation. Our knowledge of the real chemical constitution of the proteid substances of the body was and is very imperfect. Enough was known, however, to point with practical certainty to an extreme complexity in their molecular constitution.

Certain facts well recognized in chemistry offered to Ehrlich the suggestive data for the theory which he enunciated. The composition of many organic compounds was known upon grounds considered by chemists conclusive, to be made up of a principal central group of atoms united by forces which made their separation difficult and gave to them great stability. United to these by weaker affinities were other groups of atoms which could be easily dissociated from the principal group apparently without disturbing the molecular arrangement of the latter. These loosely constructed groups of atoms were known in chemistry as side chains, and the theory of their existence rests upon the same sort of experimental proofs and logical analysis as other accepted chemical theories. The presence or absence of these sidechain groups of atoms made astonishing differences in the chemical and physical constitution of the compounds in question. The addition, for instance, of the simple group NH_2 into the benzol molecule resulted in the formation of aniline, while that of OH gave rise to phenol. The inference that the proteid molecules which make up the protoplasmic substances of the animal body are similarly constituted, and possessed similar sidechains is entirely justifiable, and rests upon the most solid analogical foundation of chemical and physiological research.

It should be remarked at this point that the side chain group of atoms in the proteid molecules of the living cell has attached to it an interest much greater than that indicated by any pathological theory. Their existence primarily is for the purpose of enabling the cell to perform its functions in the nutritional economy of the animal body. There are a great variety of these loosely combined groups of atoms and some of them have an affinity for one sort of food pabulum and others for entirely different food elements, and the nutritional elements of the blood existing in the fluid state are thus taken up into combination by these side chain groups of atoms as a step in the nutritional processes of the body. It is something of a quibbling on terms whether such a chemical process as this is a vital one or not. The chemical combination would probably take place in a test tube as well as in the fluids in which float the tissue cells; but the conditions are only perpetually produced in the presence of what are called vital phenomena, and are none the less vital because chemical. So far as we are able to fathom these intricate problems, every life phenomenon and every vital process is strictly correlated with a corresponding chemical and physical activity, and when we have reached this point we have reached the limitations of science and stand in the face of an apparently insoluble mystery. The central group of proteid molecules has a power of forming these loosely combined side chains in apparently unlimited quantities so that they have an affinity for food elements which are only available after this combination has been effected.

It was only a step, but a step which only a bold intellect could take, to carry by a process of analogy the facts of chemistry and normal physiology into the domain of morbid physiology or pathology, and to utilize them in an explanation of disease phenomena.

With this preliminary explanation the theory may be briefly outlined as follows. A toxine, when introduced into the circulation, finds among the protoplasm of tissue cells side chains between which and itself there exists a mutual affinity. The result is a chemical combination. The extent of damage to the cell and interference with its functions depends upon a variety of circumstances. The amount of toxine may be small, only a few cells may be thus involved and the economy of the animal body may not be appreciably disturbed. With an increase in the amount of toxine the number of cells involved and the severity in their injury increases; various disturbances of the functional or structural character take place up to the point where, in consequence of an injury greater than the organism can stand, somatic death ensues.

If, now, the toxine is introduced in small amounts,

it combines with the side chains of the proteid molecules and thus robs the cell of an important attribute needed in the performance of its regular function. In obedience to a well established and indeed very familiar physiological law of compensation the cell is stimulated to increased activity to supply the loss. But it does not stop with simply supplying the actual loss, but, as is seen in many other instances, produces an excess. These side chains with an affinity for the toxine, which are thus produced in excessive amounts, are detached from the proteid molecule, become a part of the circulating fluid, and constitute, in fact, the real antitoxine with the physiological and therapeutical properties of which we are now somewhat familiar, especially with its brilliant record in diphtheria.

If, instead of an isolated toxine, the intact bacterial cells are introduced into the blood, they are dissolved, and probably many complex toxic bodies are liberated, each one of which combines with different side chains, and in the manner already indicated gives rise to different antitoxines and lysines. It will be seen that the theory explains equally the production of hæmolysins. The foreign defibrinated blood, so apparently identical in composition, is so really different as to combine with certain side-chains, with results entirely comparable to those obtained upon the introduction of bacterial toxins. I have only stated, in as untechnical a manner as possible, the fundamental principles of Ehrlich's theory, and have necessarily left much untold. It explains the phenomena of infection and immunity better than any theory which has thus far been presented. That it embodies the whole truth it would be absurd to assume. It will probably receive material modifications in the future, as it has already done at the hands of the author; but it stands to-day as the best working theory of disease ever constructed. It is much to have a tangible, reasonable theory. It is too much to expect its universal acceptance, even tentatively. It is not capable of an ocular demonstration. Neither was the nebular theory of Laplace or the atomic theory of Dalton. Yet they respectively lie at the foundations of astronomy and chemistry. The fact is that if the provisional acceptance of the important working theories of science had been compelled to wait for their absolute demonstration, the world would be half a century behind its present mile stone of progress. The thoughts which have analyzed the stars, and sent messages across the ocean through the vibrant air, were not found ready made. The facts upon which they rested, and indeed all the other ascertainable facts of nature, are but the lumber out of which the human intellect builds its architectural monuments; the structure depends upon the architect—the building material is the same for all.

Ehrlich's theory of immunity is but one phase of chemical pathology. It may also be, and probably is, like cellular pathology and bacteriology, only a part of the truth. For instance, it is not every toxine that creates an antitoxine, and there are some apparent discrepancies under which may lie unknown laws. It may be that Metchnikoff's theory of phagocytosis, which he has so ably maintained in the institution made famous by Pasteur's great name, contains a part of the truth. They are not entirely antagonistic. Bacteriolysis may almost be said to be in part a chemical phagocytosis.

But be this as it may. The chemical factor in pathology has at last received due recognition, and there seems little doubt that it offers the best explanation at hand of most morbid processes.

The field for fruitful research is probably greater here than in any other department of medical science, and we may confidently look for astonishing revelations in the next decade.

Original Communications.

ANTERIOR TRANSPLANTATION OF THE ROUND LIGAMENTS FOR DISPLACEMENTS OF THE UTERUS.*

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At the annual meeting of the American Medical Association at Denver, in 1899, I presented a preliminary report of an operation entitled Anterior Transplantation of the Round Ligaments for Displacements of the Uterus (*Journal of the American Medical Association*, November 18, 1899). I performed my first operation on the 27th of April, 1896, for an antelexion that had resisted well selected non-cutting procedures by others as well as myself, including a forcible dilatation. At the meeting above referred to, I simply mentioned that I had operated in twenty-two cases and that one of the patients became pregnant and gave birth to a child at full term without any trouble.

On the 21st of August, 1897 (*Centralblatt für Chirurgie*), Dr. Carl Beck, of New York, published, his operation, Eine neue Methode der Hysteropexie, which he had then performed four times, but no data were given of his cases. It consisted in suspending

the uterus by one round ligament at the lower angle of a median abdominal incision. I mention this in order to prevent confusion of his method with that described by me and which I now elaborate.

It is now over six years since I first carried out the principle of this operation. The abdominal wall was opened in the mid line in my first few cases. I then thought it better to enter the abdomen through each rectus muscle, the skin alone being cut in the median line. After doing fifty cases in this manner, I returned to the one incision in the abdominal wall, and that at the linea alba, then bringing the round ligaments through stab wounds, one in each rectus muscle. In about one half of these cases I severed the round ligaments and brought their stumps through the recti muscles, while in the remainder the ligaments were not cut at all.

It must be admitted that with this technics there was danger of bowel or omentum, or both, slipping between the transplanted round ligaments and the bladder and producing such complications (strangulation of bowel, etc.) as have been known to occur after Kelly's suspension and other methods of hysteroplexy. In order to prevent these complications, I have employed one of two procedures to render it impossible for bowels to slip around the uterus beneath the round ligaments. (1) A continuous suture is made running along the parietal peritonæum from the puncture in it and the rectus muscle downward to the side of the bladder, and back posteriorly to the round ligament near the uterus. In this almost circular sweep of the needle and thread, the peritonæum is caught up about every third of an inch. When the suture is tied, an antero-posterior partition of folded peritonæum is thrown between the iliac and bladder regions on each side. (Fig. 1.)

(2) The round ligaments are fastened to the parietal peritonæum on each side from the internal inguinal rings to the artificial openings in the abdomen through which they are transfixed. The redundancy of the peritonæum and the loose attachment of the parietal peritonæum in these regions enable this part of the operation to be done with comparative ease, especially when the patient is in the Trendelenburg position.

The technics of the operation as I now perform it is briefly as follows:

Operation.—Place the patient in the Trendelenburg position. Make a median incision about three inches in length through the abdominal wall, the lower angle of which reaches the suprapubic fold, and dissect the fat and skin from the anterior sheath of the rectus muscle on either side of the abdominal incision, corresponding to its lower third. Pass two fingers of the left hand into the abdominal cavity on one side beneath the rectus muscle, already exposed

* Read before the Southern Surgical and Gynecological Association at its fifteenth annual meeting, held in Cincinnati, November 11, 12 and 13, 1902.

anteriorly, to locate and protect the bladder; then make a stab wound through the rectus muscle in the direction of its fibres into the abdominal cavity, between the two fingers, an inch from the median incision and an inch and a half from the pubic bone. Before withdrawing the knife, pass an artery forceps alongside of it into the peritoneal cavity, and with it seize hold of the round ligament and a portion of the broad ligament beneath it, near the uterus. Now insert the suture (Fig. 1), which is to prevent bowel from slipping between the uterus and bladder, or, for the same purpose, suture the round ligament to the

In suturing the peritonæum, care must be taken not to leave an iota of raw surface on the peritoneal aspect; this prevents the possibility of adhesions of viscera to the abdominal scar. All that one has to remember to obtain this result is to evert the cut edges of the peritonæum and sew normal peritonæum to normal peritonæum behind the raw edges. A continuous suture of catgut does this most perfectly.

Applications.

I. Displacements:

(a) Anterior.

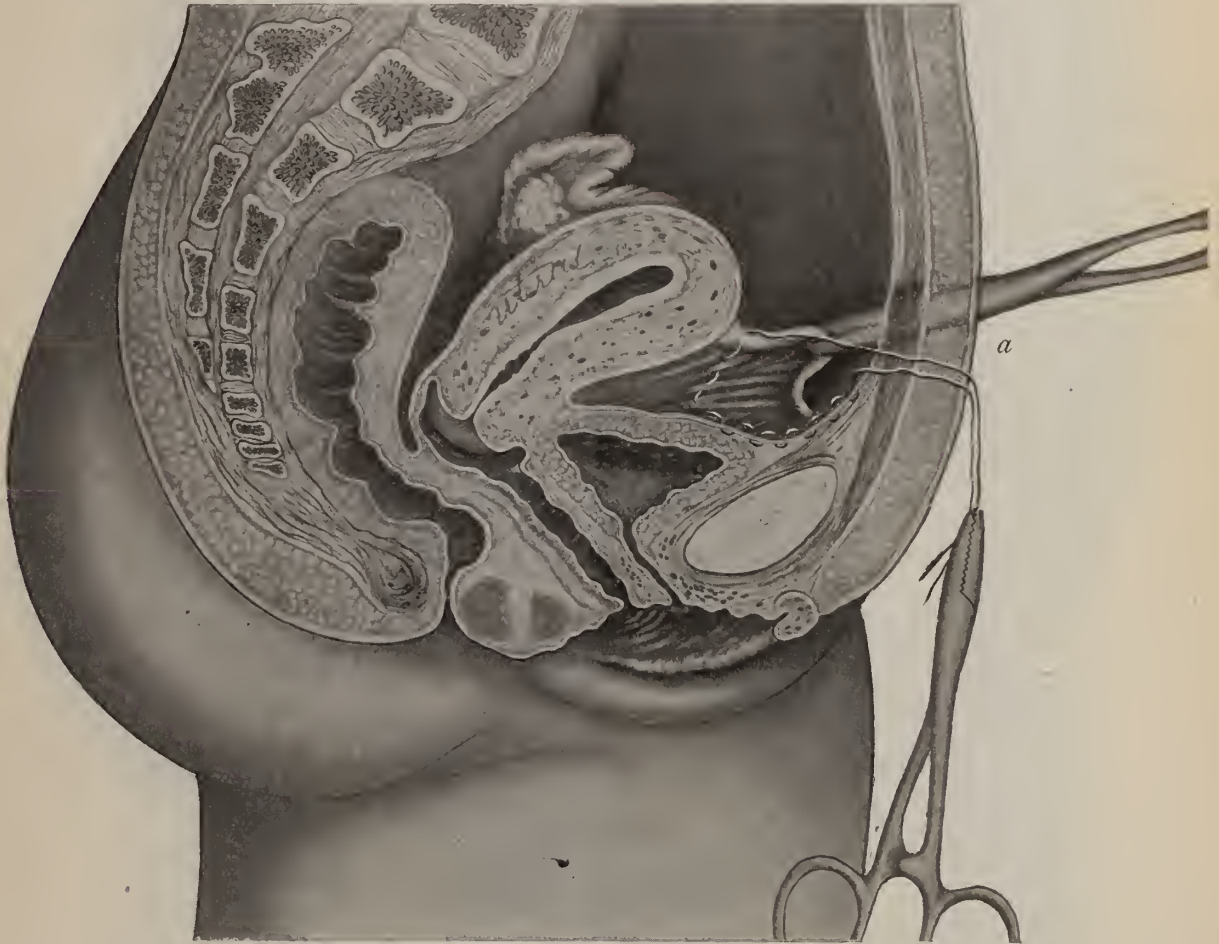


FIG. 1.—*a*, suture to prevent bowel slipping between uterus and bladder.

parietal peritonæum, as already mentioned. Then drag the proximal end of the round ligament (Fig. 1) through the rectus muscle with the forceps already-attached to it, and sew it and the subjacent portion of broad ligament to the anterior sheath of the rectus muscle, leaving a stump about half an inch long between the parietal peritonæum and uterus (Fig. 2).

It must be remembered that the round ligament is a part of the broad ligament, and in this operation it is not separated from it.

Deal with the other side in a similar manner, close the abdomen, and the operation is complete (Fig. 3).

(b) Posterior

(c) Anterolateral.

(d) Posterolateral.

(e) Prolapse.

These malpositions include, of course, flexures as well as versions affecting the patient's health and that have resisted intelligent and appropriate non-operative treatment. It is admitted that the mere detection of a displacement giving no trouble to the patient is no indication for this or any operation. The abdomen should not be opened for displacements alone, during the childbearing period, unless

it is absolutely necessary for the relief of suffering or as an aid to conception.

2. *The operation is also applicable when the abdomen is opened for other purposes and the uterus is displaced.* Should, for instance, a section be made for diseased ovaries or tubes or for myomata of the uterus, and at the same time a displacement exists, it adds but little more risk to perform an anterior

through the primary incision into the pelvis and brought the round ligaments through stab wounds in the recti muscles, making the two skin wounds just long enough to enable me to suture the round ligaments to the anterior sheaths of the muscles, without opening the abdomen in the median line at all.

The hand in the pelvis, which does its work of protection and selection by its sense of touch alone,

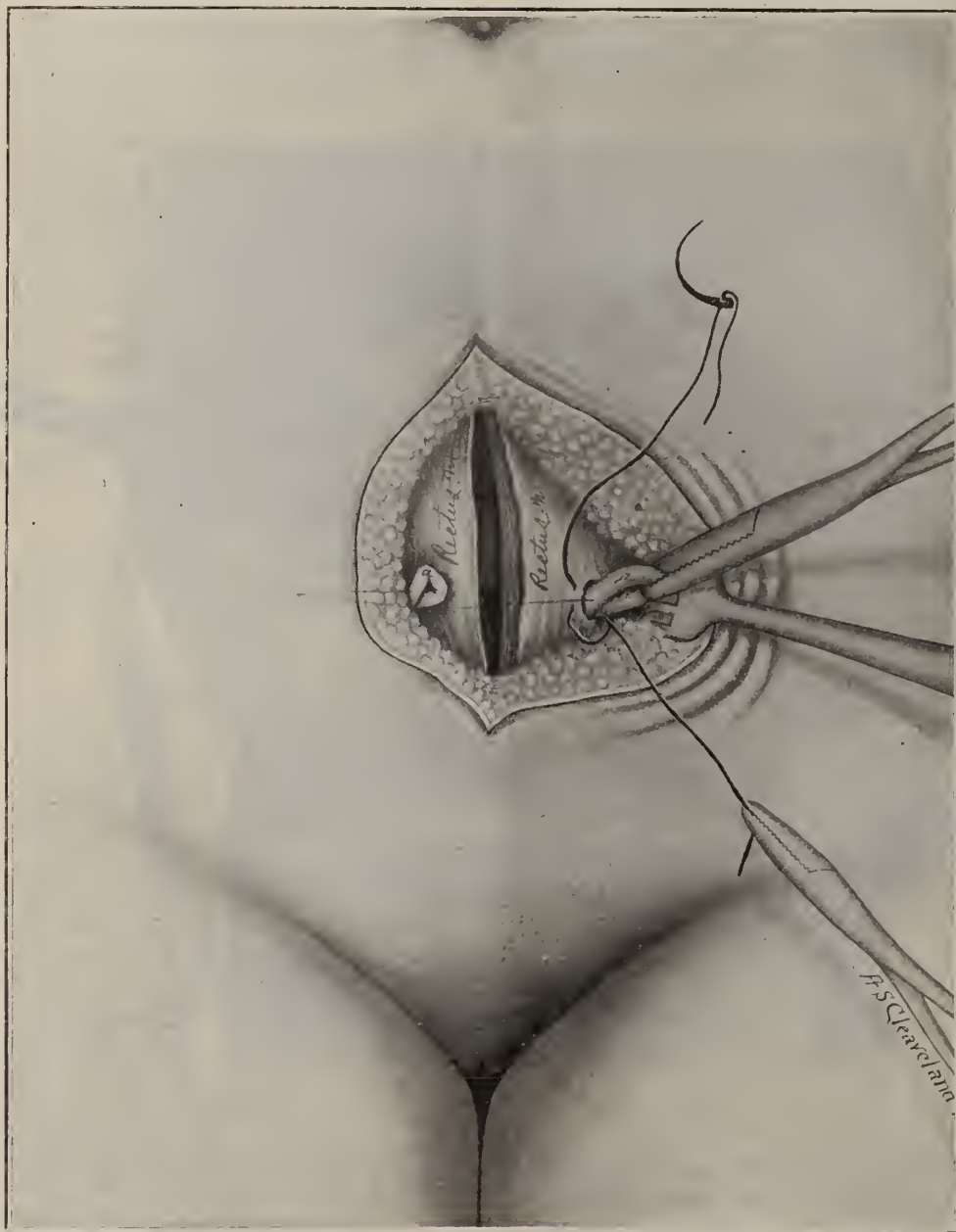


FIG 2.—a, round ligaments coming through recti muscles.

transplantation of the round ligaments for its rectification. The opportunity for doing this presents itself very frequently while one is operating on the gall bladder, on the kidneys, on the appendix between attacks of inflammation, or for hernia (inguinal, umbilical, or epigastric). I have in many instances of these conditions passed my hand

must needs have handled these structures many, many times before being commissioned to so important a trust as is involved in this operation.

Since my operation was first published, it has been accepted favorably by some of our best surgeons and gynecologists. Dr. C. A. L. Reed, in his *Text Book of Gynecology*, gives my operation prominent recog-

tion. I have performed it over two hundred times without a death or complication, except suppuration in the external wound in three cases. I have not followed all of them, but as far as I know there has been no return of the malposition of the uterus.

Advantages.—Some of the advantages alleged for it are:

1. It is easy to perform, because all the structures involved are seen as well as handled while performing it.

INTESTINAL INDIGESTION AND ITS RELATION TO ARTERIAL SCLEROSIS AND RENAL DIS- EASE.*

By LEONARD WEBER, M. D.,
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Out of a larger number of cases of chronic intestinal dyspepsia and their possible relation as an exciting feature to subsequent arterial and renal sclero-



FIG. 3.—*a*, round ligament in its new position; *b*, suture shutting iliac and bladder regions off from each other.

2. The uterus is left free in the abdominal cavity, as no stitches or bands are attached to it.

3. There is no interference with the physiological functions of the organ—menstruation, conception, parturition, labor, or involution.

4. It has a wider range of application than any operation known to me.

10 DREXEL SQUARE.

sis, I desire to place the history of three before you for subsequent argument. I knew these patients well and for many years, and they have been under my care from the beginning to the end of their final illness.

CASE I.—L. S., lawyer; father and mother were healthy people, lived to seventy or beyond and died

* Read at the stated meeting of the Section in Medicine of the New York Academy of Medicine, December 16, 1902.

of some acute illness; his sisters and brothers are still living and in health. Mentally and physically well equipped, he was successful in his profession, he loved outdoor life, was particularly fond of horseback exercise; though a spare eater, he enjoyed his meals, drank wine moderately, and smoked but little. So far as I know, he carried no larger burdens of cares and anxieties than most men of some prominence do; he was not engaged in speculation or other unusual undertakings, but a steady and regular worker almost up to the time he passed away. From the time I became acquainted with him, in 1868, and for some years before he was troubled with chronic constipation accompanied by flatulence, frequent intestinal distention, eruptions, various paræsthesias, rather frequent though never severe headache, the occasional appearance of hæmorrhoids, and so forth. Examinations made from time to time revealed nothing beyond a relaxed and somewhat dilated state of the ascending and part of the transverse colon. Dietetic measures, hydrotherapy, electricity, and massage neither cured this trouble nor brought so much relief and regularity in his daily alvine movements as a simple pill containing some aloes, jalap, and rhubarb, which answered the purpose better than any other drug or combination of drugs, and which he was in the habit of taking for thirty years. It was about 1890 that the first symptoms occurred indicating the presence of serious disease. The patient began passing more urine at night than before, the specimens showed a low specific gravity, between 1.010 and 1.012, with a loss of albumin. The radial arteries showed some rigidity; the pulse tension and the cardiac impulse showed abnormal increase, and the latter extension downward. Slowly but steadily renal arteriosclerosis advanced, accompanied by nearly all the usual and well known signs of intestinal nephritis. During the last three years of the patient's life the disease was unusually well marked in all its features, and in September, 1902, he succumbed to a severe attack of cardiac hemiplegia at the age of sixty-three.

CASE II.—S. B., merchant, no taint, but family history not particularly good as to longevity, he being the only one of a number of brothers and sisters who lived beyond sixty. He had been known to me since 1874, when the family moved here from the South; he was a short, thick-set man, unusually vigorous and energetic and successful in business, fond of good eating, using spirits very moderately, but smoking considerably. In a certain sense we might have called him a catarrhal subject, inasmuch as he had chronic nasopharyngeal catarrh and hypertrophies of the nasal mucous membrane, which were finally cured. Acute bronchial catarrhs were with him of rather frequent occurrence. Pneumonia he had twice during the last thirty years, recovering promptly each time. Dilatation of the stomach with much eructation and hyperacidity I made out first in his case in 1880. With this came not infrequent attacks of diarrhoea, readily checked by phosphate of calcium and appropriate diet, but just as readily relapsing through indiscretions in diet and occasional exposure when fishing or riding, of which he was quite fond. However, as late as 1885, when he took out additional life insurance, he

was pronounced a good risk and looked well and strong, attending regularly to business and carryings, besides, pretty large amounts of stock, the care of which never caused him any anxieties, he said to me, because he always paid in full for what he bought. Now, this man's urine was found to be normal in quality and quantity in 1885, but ceased to be so in 1888, when its specific gravity was considerably lowered and the daily amount increased. Five years thereafter his heart began to suffer; hypertrophy, later on dilatation and degeneration of its muscular fibre, with not much visible change in the peripheral arteries. About 1898 he became a confirmed invalid, but by the utmost care and nursing he managed to live on until this summer, when his heart gave out. Before and during the final disease of the heart and kidneys, the management of his chronic intestinal dyspepsia had been difficult.

CASE III.—A. N., a short, stout man of forty-eight when I became acquainted with him in 1882, very vigorous and active in business, with no particular history; had always been a free liver in so far as he used light wines and beer pretty freely and smoked about half a dozen cigars a day. When he came to me first in 1885, his complaint was of a sense of fulness and distention of the abdomen, loose bowels for a number of years, and much flatulence. Beyond dilatation of the stomach and colon not much was disclosed by examination; urine rather abundant but otherwise normal. When I said to him that wine, beer, and tobacco must be given up, if his gastrointestinal disorder was to be improved, and kidney trouble prevented, he promised to reform, but did not go much further than making promises. Two years after the symptom complex of renal sclerosis set in and ran an unusually rapid course, leading to great emaciation and death by intercurrent pneumonia at the end of three years after his first call at my office.

There would be no difficulty in describing some more cases of chronic nephritis in the ætiology of which chronic gastrointestinal dyspepsia may perhaps have played an important part, but inasmuch as most of the others I have knowledge of are not supported by a series of years of careful observation and often passed out of sight in the course of a year or two, let those related above be sufficient for argument and discussion. And, further, let this be said right here: It is a fact, I believe, known to and demonstrated by physicians who see much in the way of infantile diseases, that cholera infantum and similar acute and subacute gastrointestinal dyspepsias of children are not very infrequently complicated and even terminated by acute nephritis. If ptomaines and other toxins can do this in acute cases, why should not similar poisons chronically supplied insidiously produce renal changes of a chronic nature and more of the interstitial form of inflammation?

Dr. A. Seibert, of this city, spoke of such cases before the German Medical Society about five years ago.

Dr. A. E. Elliot, of Chicago, in a paper read at the recent meeting of the American Medical Association, declared his belief that absorption of toxic material from the intestinal tract plays the most important part in the ætiology of chronic nephritis. He points out that when the kidneys fail in their excretory functions, the liver cells degenerate because of the toxic substances which are present in the blood; that the liver then fails to metabolize substances which come to it, and adds its own quota of toxic material to the blood, thus still further irritating the kidney, and that the vicious circle thus formed continually deteriorates the general condition of the patient. There is much to be said for Dr. Elliot's contention; it was favorably received, also found a sympathetic response, in some foreign journals; and there is certainly this great thing to make one cling to the belief that the causative poison of many cases of nephritis is doubtless initiated by imperfect or perverted action of the tissue metabolism, that, if true, it throws a far more hopeful light upon the treatment of this disease, if caught at an early stage, than seems to be cast by other views as to its ætiology. No disease, not even cancer, has shown a greater increase than Bright's disease, it is believed; if our theory is correct the question of why they have increased at so rapid a rate is not difficult to answer. The manner in which the majority of the rich and well-to-do of the present day live, particularly those in cities, naturally conduces to the conditions arising from intestinal troubles.

In a paper read before the Clinical Society of the Post-graduate Medical School on April 15, 1898, and published in the October, 1898, number of the *Post-graduate*, I said in part:

"That nephritis is generally caused by infection *from without or within the body* I have no manner of doubt; when the question was raised and discussed at the last International Medical Congress, 1897, the leading men who spoke on the subject appeared to agree in that. There is scarlatina, diphtheria, typhoid, cholera, malaria, syphilis, lead poisoning, sepsis, alcoholism, etc., which we know to be important ætiological factors in the former, and gout, diabetes, prolonged exposure to cold, chronic suppuration, extensive burns, etc., in the latter direction. In fact, the number of cases of renal disease which I have not been able to trace to infectious origin in one way or another in my own casuistics are so small that, as exceptions, they only seem appropriate to prove the rule.

"How do the noxious agencies get at the kidney substance? and how is it that in most cases of chronic parenchymatous and interstitial nephritis the process is diffuse, *i. e.*, that the inflammation running along in the connective tissue is not uniformly spread, but

focal or tractlike? If there be any gentlemen present who have seen the various and interesting specimens of chronic Bright's disease, in more or less advanced stages, which I demonstrated during the last two years before my class, they will remember that most of the kidneys shown had uneven surfaces, the diseased portions being drawn in by cicatricial retraction, the less diseased or sound parts being prominent. For a reasonable answer to these questions we are indebted to Ribbert. By his investigations of the inflammatory process in the kidneys, liver, lungs and arteries which he published in various journals, and quite recently in comprehensive form in Virchow's *Archiv*, 1897, Vol. CL., Part iii, he comes to the conclusion that the noxious agents coursing with the blood current do not attack the parenchyma directly through the capillaries, but get into the lymph spaces, and, in flowing from the periphery towards the hilum of the organs develop their irritating and deleterious influence upon both parenchyma and interstitial tissue. By the peculiar tractlike way in which the lymph channels and lymph nodules are arrayed beneath the capsula propria and within the cortical substance of the kidney, the focal distribution of the inflammatory process would then be explained. It would lead too far to give more than a short résumé of Ribbert's views, but his pathological work in this direction will be found most interesting study, both theoretically and from a practical point. * * * *

"After reading Gull and Sutton on arterial sclerosis and its relation to interstitial nephritis, years ago, and studying later on the claims some French authors, particularly Germain-Sée, put forward as to the good results observed by them from the use of small doses of iodide of potassium in arterial sclerosis and chronic interstitial inflammation, generally, I began to use the drug in arterial and renal sclerosis.

"In 1883 I read a paper, entitled *Locomotor Ataxia and Syphilis* before the New York Academy of Medicine, published in the *Medical Record*, 1883, based upon the clinical study of one hundred and twenty-five cases of syphilis, most of them under my care and subsequent observation for a period of twenty years. With the introduction of that subject, the discussion was started in this country of the relationship of tabes and syphilis, but I did not more than simply mention, at the time, that in visceral syphilitic and parasymphilitic disease, nephritis seemed to occur also. I have since learned, however, that diffuse nephritis is seen pretty frequently in old cases of syphilis, that it develops mostly upon the basis of and through vascular disease, and that its course appears to be retarded by relatively small doses of the iodides given for a long period of time. From about 1880 to the present

time I have ordered small doses of iodide of potassium or sodium, *i. e.*, from 2 to 4 to 6 grains of the salt in copious draughts of water or vichy, *t. i. d.*, in conjunction with other symptomatic treatment as might be indicated, in every case of chronic interstitial nephritis, and in all such cases of chronic parenchymatous disease where I had reason to suspect that arterial disease was an important factor in their ætiology, though not underlying them as in the true interstitial forms. While I do not pretend to any originality in having thus used the iodides, or in having cured a case of chronic Bright's disease by them, I am conscious of having employed them for a definite purpose, and believe to have benefited a number of patients by their use.

"In a recent paper on the employment of the iodides in the treatment of arterial sclerosis Professor Vierordt, of Heidelberg, confesses that all doubts as to their value in this disease had been removed after a series of carefully conducted clinical observations, and from a skeptic he has turned to be a believer in their efficacy and greatly recommends them, though he has found it proper to give larger doses than the French authors do. The results he obtained with fifteen grain doses of the iodide of potassium *t. i. d.* in sclerotic disease of the coronary arteries have been particularly marked and gratifying.

"After sufficient clinical observations of the good influence of small doses of the iodides in certain forms of chronic nephritis during the last eighteen years, and the value of creosote in the medical treatment of inoperable surgical kidney in the past six years, I believe I am justified in drawing the following conclusions:

"1. The iodides given in relatively small doses, three or four times daily, and continued for many months and even years, have the power to retard, modify, and improve subacute and chronic inflammatory processes concerning the connective tissue of parenchymatous organs like the kidneys, the liver, the lungs, and particularly so the sclerotic disease of the arterial vessels.

"2. It appears that this salutary effect is brought about by direct inhibition of the proliferation of the connective tissue, as well as by subsequent induction of disintegration and fatty metamorphosis of infiltrated corpuscular elements and the removal of the same.

"3. It is reasonable to hold that the drug manifests and develops its activity through the lymph channels and spaces of the affected organs by direct action upon the irritating substances, by stimulating the vasomotor nerves and increasing the functional activity of the parts.

"4. The favorable influence of the iodides can be

clinically demonstrated, and is more decided in arterial sclerosis than in similar disease of parenchymatous organs, and will show itself frequently, whether the underlying cause is gout, alcoholism, or syphilis. In cases with a syphilitic history, however, it is well to give larger doses of the iodides for a while, *i. e.*, from ten to fifteen grains, *t. i. d.*"

It is self-evident that the administration of small doses of the iodides *t. i. d.* constitutes part of the treatment of established sclerotic disease; where the kidneys are threatened to be diseased through gastrointestinal indigestion, careful diet, intestinal antiseptics, *i. e.*, calomel in very small doses, frequent cleansing of the colon, regulation of the patient's life, etc., will be of direct benefit and of the first order in our therapeutic measures.

There are various localities in the body where the poisons arising in the course of tissue metabolism—base albumins *i. e.*,—may be evolved; many of them are undoubtedly produced within the gastrointestinal tract, but many more and probably more active ones within the tissue cells, the interstitial, the indeterminate toxins as they have been termed by recent observers. These either originate through deficient oxidation or accumulate through retention in consequence of abnormally abundant production. It is the latter which really are the originators of genuine autointoxication, and to this group belong the constitutional diseases such as gout and the uric acid diathesis, diabetes, and its acute exacerbation in diabetic coma, uræmia, eclampsia; but also the diseases caused by the anomalous functions, or loss of function, of certain organs; Basedow's disease, myxœdema, cretinism, morbus Addisonii and pancreatic diabetes.

If, for the purpose of early diagnosis of these conditions we are disappointed with the results of urinary analysis—our methods are possibly not yet fine enough—we have learned more and more in recent years to look upon the blood as being the chief carrier of these poisons, and we may hope to recognize their presence and effect by the study of the changes in the composition of the blood, better than by that of the urine. There is not any more doubt, that quite a group of blood diseases, for instance, severe anæmia from apparently unknown causes, are produced through autointoxication. We know, that in pernicious anæmia a severe catarrhal state of the gastrointestinal tract is often found; I think, however, that caution must be exercised here, in order not to mistake cause for what may sometimes be effect.

Some recent observers—von Noorden among them—have expressed a belief, that the constitutional disease chlorosis is brought about through functional inactivity of the ovaries. That the presence

of endogenous toxins may disturb the alkalescence of the blood and produce more or less acidosis, must also be admitted.

In considering the progress made during the last five years in the recognition and further development of the doctrine of "*autointoxication*," it may be truly said that much more by clinical observation and combination in thousands of cases than by chemical analysis and experiment on animals has an important place been secured for it in the system of pathogenesis. The perception of autointoxication as a basis for many internal disorders is constantly growing and extending to the various branches of pathology; there is an almost uninterrupted communication of positive clinical facts in that direction. But it is not only the poisons of decomposition and putrefaction of food stuffs in the gastrointestinal canal, but also those produced by faulty intermediate tissue metabolism—these latter quite often—which may produce acute or chronic autointoxication. True, as I have already said, the animal body is endowed with protective devices of sufficient energy to counteract or annihilate such toxins and generally succeeds in doing so as long as the particular organs for this purpose, the thyroid, liver, spleen, pancreas, suprarenals, etc., are able to bind, to change, to destroy them by the active energy of their cells. We do not yet understand the chemistry of the cells of these glands, but it is likely to be of the enzyme or ferment order.

Dr. F. Blum, I believe, was first in drawing attention to the importance of the protection of the organism against the products of intermediate tissue-metabolism by the antitoxic action of certain organs. In a paper read at the last session of the International Medical Congress, he furnished proof, at least, that the toxic products of digestion carried into the blood will be captured and rendered innocuous in the thyroid gland. That the intestinal and intermediate, interstitial toxins irritate the kidneys, must now be conceded; albuminuria, desquamation of renal epithelia, and nephritis have been noted and believed to have been brought about by the elimination of such poisons through these organs.

That gastrointestinal poisons can cause nephritis in cases of ileus and tetany is known. F. Blum has also recently observed interstitial nephritis becoming gradually diffuse in dogs after depriving them of the thyroid gland.

By the great and lasting scientific work of Horsley with reference to the thyroid gland and myxœdema and by the persistent labors of Bouchard and those who have followed him in the study of antitoxines and their significance, both from the physiological and pathological side, new ways have been opened

to a better understanding and, let us hope, better treatment of many disorders which up to very recent years were supposed to be caused in some mysterious way through functional disturbances of the nerve centres. With the little light furnished thus far by these modern researches we cannot yet go far in the prevention and treatment of the diseases mentioned, but I believe, nevertheless, that with the knowledge gained thereby I have been able to understand cause and effect much better in the perception of my cases and their management than I could have done without that knowledge. In concentrating my efforts upon what may be practically called "*ætiological therapy*" and careful general management, I have certainly prolonged the usefulness of the lives of two of them.

25 WEST FORTY-SIXTH STREET.

"THE MECHANICS OF FLATFOOT," CAUSATIVE, PREVENTIVE, CURATIVE.

By EDWARD M. THOMPSON, M. D.,
NEW YORK.

It may seem that another article upon the subject of flatfoot would be superfluous, but it is plain to the orthopædic specialist, very often indeed, that there is still a lack of understanding of the frequency as well as of the causes and treatment of this common affection by the general practitioner; in view of this fact alone the author finds sufficient excuse for adding to the already excellent literature upon this subject.

I make no claim in this paper to the intention of revolutionizing the treatment of flatfoot, nor do I expect to evolve any new theories or principles; but my aim is to call attention to many self-evident and patent facts, and to urge the use of common sense in treatment and consideration of the subject.

Primarily, flatfoot, talipes valgus, or pes planus is nothing but a mechanical condition, due, of course, to varying causes, and if considered from this standpoint it will tend toward more gratifying results in the treatment.

The *definition* of flatfoot is a condition characterized by longitudinal and lateral flattening of the arches of the foot with lateral displacement; the condition may be painful or non-painful, deforming or non-deforming, depending upon degree and causation.

The *etiology*—(a) rheumatism; (b) rhachitis; (c) paralysis; (d) general muscular weakness; (e) traumatism, direct or indirect; all of these causes being aggravated by body weight, prolonged standing or walking, and improper positions of the feet while on them. To illustrate—in people whose weight is above normal flatfoot in one degree or

another is almost the rule, especially if combined with prolonged standing, due no doubt to the fact that the plantar structures become stretched by the superincumbent weight, aggravated by excessive perspiration of the feet (which latter condition is very common in stout people, this probably causing a softening of the tissues by maceration); also to the usually taught manner of standing and walking with the feet at an angle of ninety degrees to one another. This is said to be the proper and natural method, but I am of opinion that this in itself increases the tendency to flatfeet, by throwing the centre of gravity inside the apex of the plantar arch, causing, mechanically, a valgus or abduction and eversion of the foot. This last point I believe to be new, and I have made use of it in the treatment of the condition under discussion.

My classification of the ætiology is only designed to impress upon the reader the relation of flatfoot with other conditions, as degrees and intensity of symptoms do not seem to depend upon the causes. However, we shall consider each one of the causes in this classification with a view to an understanding of its influence.

(a) In *rheumatic* or *gouty* affections of the lower extremities, flatfoot is frequently observed where there is swelling or œdema, especially of the feet and ankles. In all probability maceration of the tissues causes stretching and weakness of the structures. This variety of flatfoot is extremely painful and is characterized by sharp muscular spasm and constant pain in the feet and legs, which is more marked after resting and especially on arising in the morning.

(b) In *rickets* the flattening of the arches is due to the laxity of the ligaments and tendons (characteristic of rhachitis) and is often produced by knock-knees, which cause also a mechanical valgus. This variety of flatfoot is usually not painful.

(c) *Paralyses* cause flatfoot, when they affect the calf or anterior leg muscles, by permitting stretching of the tendons or muscles, thus depriving the arch of considerable support; this is intensified by contractions of opposing muscles to the paralyzed group. This variety is also usually non-painful.

(d) *General muscular weakness* causes a simple flatfoot by stretching of tendons or muscles and ligaments. This variety, as in the case of the two preceding ones, is usually non-painful; however the degree of deformity is the determining factor.

(e) *Traumatism* may be either *direct* or *indirect*. *Direct traumatism* applies to the causation of cases where sudden violence tears, stretches, or ruptures the plantar structures, causing a flatfoot which is exceedingly painful, *e. g.*, as in jumping or falling and striking full upon the soles of the feet with

great force. *Indirect traumatism* would include that class of cases already mentioned, which are caused by overweight, long standing, etc. This variety is usually somewhat painful but has remissions depending upon continuance of the exciting cause.

We have also varieties of flatfoot that are due to diseases or injuries of adjacent parts, such as tuberculous ankle joint disease, tumors, Pott's fracture, etc.

Most important in the study of the ætiology is the consideration of the anatomical changes which occur in the production of this condition, for no matter what the cause, the interference with the normal relations of the bones forming the tarsus is the essential feature and is the factor which produces the symptoms. We must, therefore, carefully consider these phenomena and bear in mind their mechanics, as our treatment is likely to fail should we neglect these points and endeavor through misdirected effort to accomplish something which is a mechanical impossibility as well as a painful absurdity.

I will quote from Treves's *Surgical Applied Anatomy* a description of the arches of the feet. They are "an anteroposterior and a transverse. The anteroposterior arch has its summit at the astragalus. It may be considered as composed of two piers. The hinder pier consists of the os calcis, the anterior pier of the scaphoid, cuneiform, and metatarsal bones. The astragalus forms the keystone of the arch, the head of the bone especially performing that function. The transverse arch is most marked across the cuneiform bones. It gives much elasticity to the foot and affords protection to the vessels of the sole."

The astragalus, or keystone of the arch, is the keynote of the condition; for when we have a flatfoot the astragalus is dislocated forward, downward, and inward, owing to the stretching, tearing, or rupture of the powerful inferior calcaneoscaphoid ligament, which supports the astragalus. The scaphoid, being now free, is "popped" outward by the pressure of the astragalus and superincumbent weight of the individual, the foot is abducted and everted; the middle cuneiform slips downward and the internal cuneiform slips outward, thus bringing pressure upon the plantar vessels and nerves, and giving rise to acute pain, which is transmitted to the legs and thighs, and even to the back *via* the anterior tibial, musculocutaneous, and external plantar nerves, all of which supply the mediotalar joint. It might also be well to call attention to the fact that to this deformity may frequently be traced the cause of many cedemas of the lower extremity which cannot be accounted for otherwise, and which are no doubt due to pressure brought upon the plantar vessels by

the breaking down of the arches. These œdemas almost invariably disappear with the proper correction of the deformity of the feet.

The symptoms vary in intensity from a slight pain on arising in the morning, and after long standing, to complete disability and all the phenomena of an acute inflammatory condition. The manifestations may accordingly be local or general, and the fact that they may be general should not be overlooked, for possibly therein lies the reason for many errors in diagnosis. The local symptoms are pain and deformity; the pain is not always present, but when it is, it is over the external border of the foot and instep, the sole of the foot, and in the heel; there is tenderness on pressure over the plantar surface and especially over the scaphoid. On standing or walking, there is great aggravation of these symptoms, with the additional symptoms of transmitted pains to the legs and thighs. Spasm of the muscles on passive motion is more or less marked in painful flatfoot. The deformity is constant in a greater or less degree, and prominence of the scaphoid is invariable and essential. Marked flattening of the arch, and abduction and eversion of the foot are dependent for degree upon the severity of the condition and its duration; or, possibly, it would be better to state that the severity and degree of the deformity are dependent one upon the other.

The general symptoms vary according to the degree of local manifestation and include nearly all the aches and pains that flesh is heir to; as, for example, backache, pains in hips and thighs, headaches, etc. These symptoms are caused by voluntary or involuntary attempts of the patient to relieve jarring and by walking on the heels.

The usual story of the sufferer from flatfeet is that he has gone from one physician to another and has the antirrhumatic remedies, liniments, lotions, baths, electricity, etc., all with no relief; possibly he has had rheumatism and "it has all gone excepting in the feet." He gets up in the morning and spends from five minutes to one half hour in getting used to standing on his feet. The pain is intense until he has walked around for some time, when it seems to get a little better. Toward evening he has to hurry home, get his shoes off, and place his feet on a chair to get even partial relief. He moves restlessly in bed in the endeavor to find comfort, and finally falls asleep, to awake early and renew the sufferings and history of the previous days.

Such a history is so characteristic that its recital alone should attract attention to the arches of the feet.

The treatment of flatfoot is usually satisfactory when properly and intelligently applied, with an

understanding of the mechanics. The simple application of braces, insoles, plaster of Paris, or strapping will not avail and may even do harm unless rationally applied.

Treatment is essentially mechanical, occasionally aided by surgical proceeding—surgery being directed toward a more rapid, though not more satisfactory, result. In mild cases we have a slight, maybe barely perceptible, flattening of the arch and a prominent scaphoid. In these cases we can readily overcome the deformity and relieve the pain by means of adhesive plaster straps. These straps should be about three quarters of an inch wide, and of sufficient length to reach in a spiral course to the knee.

Mechanism of reduction.—Grasp the foot firmly and extend it sharply on the tarsus (this increases the space between the internal cuneiform and the astragalus). Then forcibly invert and adduct the foot and flex it again to ninety degrees, maintaining the adducted and inverted position. This will bring the scaphoid back into place and reestablish the relations of the arch. With the foot held in this position adhesive plaster straps are applied firmly, by attaching one end over the instep and bringing the other end over the outer side of the foot, under the sole, and upon the inner side of the foot, crossing over in front of the ankle joint and up around the calf in a spiral manner to just below the knee. A second, third, and fourth strap are applied in the same manner. Short straps may be applied anteroposteriorly around the heel, crossing at the instep to hold the foot more firmly, but these are not essential. Plaster of Paris is applied in aggravated cases (in which an anæsthetic is used) in the same manner and after the same method of reduction. This dressing holds the foot in *varus*, or inversion. The adhesive plaster straps must, of course, be a temporary dressing or be renewed frequently. They are usually employed while steel insoles or braces are being made. I should like to call attention to the fact that ready made insoles are impracticable, because each case differs from every other in the character of the deformity; therefore a plaster cast should be made of each foot, and cut out to correct the deformity, and the insole must be fitted to this cast.

Insoles are used in the milder cases, and should be worn for a long time or until the arches become restored to a nearly or quite normal relation; and even then they should be worn occasionally to relieve excessive strain.

In aggravated cases we have the choice of two methods of treatment: A gradual correction (or what may be termed an "ambulatory" method) by means of properly applied braces; or a rapid correction under anæsthesia, with plaster of Paris,

which latter method, of course, requires confinement in bed for a varying length of time. I personally believe, from my own experience, that the rapid correction is the most satisfactory if it is possible to keep the patient in bed. However, I have had extremely satisfactory results in a large number of cases by applying braces, even in exceedingly painful cases.

In the application of braces we have the true scientific treatment of flatfoot, and it is an astonishing fact that, in the great variety of braces designed for this condition, there are very few which appear to be made with any understanding of their object or of the condition they are supposed to relieve. The majority of braces have a pad on the inside designed to press upon the scaphoid and force it back into place. This would undoubtedly correct the trouble, provided we used enough force and ignored the feelings of the patient: for it is very evident to one who has examined a case of flatfoot that the very slightest pressure over the scaphoid is excruciatingly painful. If we consider once more the anatomy of the parts we shall note that the displacement of the scaphoid is due to the pressure of the individual's weight upon the astragalus and internal cuneiform; and pressure upon the scaphoid is force applied on the short arm of a lever and demands an enormous amount of power to accomplish the desired result.

I will describe an ankle brace which I have used with great success, and which has afforded considerable relief almost instantly upon its application, because it is constructed with the object of throwing the centre of pressure on the foot in such a way as will permit the parts to return to their normal relations in a natural manner, *i. e.*, the reverse of the mechanism of displacement.

The ankle brace is composed of a foot piece attached to the shoe, an inner and outer upright, and a calf band. In the adjustment of the foot piece we have the secret of successful treatment. The uprights and calf band do not differ materially from those used in other ankle braces. In measuring for the brace I find the following method to be most satisfactory: An outline drawing is made from the heel to the knee, then the foot is gently but firmly brought into a corrected position in the manner described above, and held in this position while a strip of malleable metal is fitted from the external malleolus under the sole to the internal malleolus, which will give a pattern like the letter U with a short arm, the short end being on the inside. This pattern is laid on the outline drawing of the leg at the heel from the corresponding points and copied—the ankle joint of the brace comes opposite the malleoli. The uprights are measured from the malleoli to a point far enough below the knee joint to prevent

interference with flexion of the knee; at this same point the circumference of the calf is taken. This brace is to be attached to the shoe on the inside of the sole.

It will be seen that the primary effect of this brace is to hold the foot in inversion. In severe cases the action of the brace is facilitated by the application also of a well fitting insole.

The advantages claimed for this apparatus are correction of deformity, restoration of the relations of the tarsus, absence of pressure over tender parts, and almost instant relief of pain, with ability to attend to duty while treatment is being applied. I want it understood that I do not claim either priority or invention in this apparatus, but merely wish to bring to the notice of the general practitioner especially, a successful mechanical treatment based upon what I believe to be common sense principles.

With reference to the preventive treatment of flatfoot, we can many times rescue a weakened arch by directing a proper use of the feet—first, by educating our patients to use the heel and toe method of walking, with the feet parallel rather than on diverging lines, and when running or jumping, to catch the weight on the front of the foot, and not on the heels. These points, with the added one of careful attention to “running over of the heels,” will do much toward preventing this common affliction. In line with what I have already said concerning maceration of tissues in the production of flatfoot, care should be taken that rubber overshoes, patent or enamel leather shoes, or in fact any waterproof footwear, is worn as seldom as possible (and better never at all).

In summing up the points in this paper I only ask to direct the attention to a careful study of the mechanism of the production and correction of flatfoot, and should I succeed in helping by this article in the alleviation of the sufferings of the vast army of patients thus afflicted, and in whom a wrong diagnosis and treatment add to their misery, I shall feel that I have accomplished a good deal.

221 WEST FIFTY-SEVENTH STREET.

The Enno Sander Prize of the Association of Military Surgeons of the United States for 1903 will be awarded to the author of the best essay on The Differential Diagnosis of Typhoid Fever in its Earliest Stages. The board of award will consist of Dr. Austin Flint, of New York; Colonel Calvin DeWitt, of the Army, and Prof. Victor C. Vaughan, of Ann Arbor. Full information concerning the contest may be obtained from Major James Evelyn Pilcher, Carlisle, Pa., the secretary of the Association.

TOPICAL BLOODLETTING AS A DERIVATIVE AND REVULSIVE REMEDY IN CONGESTED AND INFLAMED HÆMORRHOIDAL BLOOD VESSELS AND TUMORS AND IN OTHER AFFECTIONS.

BY WILLIAM BODENHAMER, M. D., LL. D.,
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The writer, on this occasion, will in a brief introduction to this subject, first speak of the antiquated theory held and maintained by the ancients and the moderns—that the natural or spontaneous effusion of blood from any part of the body was a highly valuable therapeutical agent, in the alleviation, the prevention, and the cure of diseases. But it was more especially to the spontaneous hæmorrhoidal flux that the salutary power was attributed of curing or preventing diseases, of promoting continued good health, and of insuring long life. It was doubtless this very theory or hypothesis which subsequently led to the rise, to the introduction, and to the adoption of the great artificial system of blood abstraction by venesection for the cure of all actual diseases and as a complete substitute for the former theory. Now both of these theories or systems have been consigned to oblivion, but whether justly so is, in the opinion of the writer and many others, highly problematical; for they both contained within themselves some very important truths and precepts, and were very valuable curative measures which have not as yet been supplemented by anything superior, notwithstanding the laudable and the truly great progress of the present day in the art and the science of medicine. It would, therefore, seem evident that it was the abuse and not the judicious use of these two theories, which caused their abolition.

The writer is well aware, however, that by the introduction of these old theories he is liable to be misunderstood and to be subjected to criticism by those who reject everything antique in medicine because it is old, and adopt nothing in the same art unless it is new. Now, the writer wishes it to be distinctly understood here that he has not introduced on this occasion the theory and the practice of the ancients, and approved or rejected some of it merely because it was old; neither does he present that of the present day, and approve or reject some of it merely because it is new. For the length of the time which a theory or a practice has existed neither makes it true nor false; neither can the status of him or of them who formed it render it either good or bad. And, furthermore, there is no one more ready than the writer to acknowledge the established axiom that medicine is an experimental and a progressive art, and that

innovation is the vehicle which conveys it from one degree of excellence to another.

Now, as it relates especially to the general abstraction of blood by venesection and arteriotomy, as these operations were called, it is a well known fact that no complete substitute has yet been found which, for instance, acts so promptly and so efficiently in pleuritis, in pleuropneumonia, and in coup-de-soleil as general bloodletting.

The writer well remembers that when he began his professional career the excessive abstraction of blood was largely used for diseases in general, when every physician carried in his pocket his thumb or spring lancet, and when but few patients who had any appearance of excited action in their systems escaped without being "let blood." The doctor now, however, is seldom if ever called upon to use his lancet, except perhaps for the purpose of opening abscesses.

Leeching as a Partial Substitute for Venesection.
—The local abstraction of blood by leeching the anorectal region alone is not only valuable in the successful treatment of those two organs, but is equally efficacious in the alleviation and cure of other affections, as will be shown.

It was in consequence of the large number of veins which accompany the arteries and expand around the rectum and anus, and which so largely contribute to the formation of the portal system, that the anorectal region was long since selected as the most proper and most eligible place for leeches to produce their greatest effect in chronic or in inflammatory affections of the liver, the spleen, the colon, the rectum, and the contiguous organs. They not only diminish the general volume of the blood, but by unloading the hæmorrhoidal blood vessels operate more directly upon the affected parts; indeed, their influence upon the general circulation is far greater than is usually imagined. Attentive observation will soon convince any one that between the whole capillary system there exists a kind of specific sympathy; so that influencing their action in one part of the body frequently produces striking effects in other parts, and the more this circle of sympathies is investigated the more important it will be found in pathology and practice.

Indeed, leeching the anorectal region as a derivative or a revulsive measure in the treatment of certain diseases has been employed in almost all ages. It was at one time, many years ago, so common in Great Britain that some of the poetic wits of that period, immortalized the practice. Butler, in his celebrated satire, pleasantly alludes to this practice in one of the following lines:

"But with moon was more familiar
Than e'er was almanack well-willer;

Her secrets understood so clear,
That some believed he had been there;
Knew when she was in fittest mood
For cutting corns, or letting blood;
When for anointing scabs or itches,
Or to the bum applying leeches."

(*Hudibras*, Part ii, Canto 3).

Mr. Alexander Brome, the poetical wit and champion of the cavaliers of King Charles I, in one of his songs against the Rump Parliament, in allusion to Cromwell's hunting the members out of the house by military force, sings:

"Our Politique Doctors do us Teach,
That a Blood-sucking Red-coat's as good as a
Leech,
To Relieve the Head, if applyed to the Breech,
Which nobody can deny."

(*The Rump: Or an exact Collection of the Choicest Poems and Songs relating to the Late Times*. Vol. II, Part 2, p. 5, 16mo. London, 1662.)

Lecching in Prolapsus Hæmorrhoidis.—If internal hæmorrhoidal tumors are protruded, inflamed, and swollen, as well as the contiguous parts, the application of leeches is highly beneficial in subduing the severe inflammation and removing the engorgement and tumefaction. The leeches, however, should not be applied to the prolapsed, congested, and inflamed tumors, nor should they be placed within the area of the inflammatory surface surrounding the anal region, but on a place sufficiently distant from the diseased or affected parts, yet near enough to secure derivation. It has been the usual practice heretofore to apply the leeches directly to the tumors themselves in such cases, with the expectation of disgorging them by the local evacuation; but the effect is just the reverse, for the local irritation produced by the leech bites is of itself sufficient to attract and to augment the flow of blood and other fluids to them, thus preventing derivation. For a similar reason, in certain affections of the feet, the blood should not be abstracted from them by venesection, but from the arm, which is derivative. After carefully investigating the various places outside of the affection under consideration, to apply the leeches, the writer has come to the conclusion that the lumbar region has superior advantages, and to it the leeches should be applied in all such cases. From five to fifteen leeches may be applied, according to the condition of the patient, and repeated daily until all the inflammation is allayed, and he is relieved. Now, if such tumors are of long standing, and are regularly organized, they should, after the inflammation has been subdued, at once be removed surgically, so that

they may never again raise their diminished heads.

The writer will now conclude by saying that he sincerely regrets that the practice of leeching, which has been used in almost all ages in certain peculiar cases is now rapidly passing away without leaving us a like substitute or some such valuable, suitable and efficient a remedial measure. The practice of leeching and cupping, has for many years been very justly and properly a part of the function of the barber, and it is to be regretted that he may sooner or later entirely lose his vocation in this respect.

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New York, December 6, 1902.

Correspondence.

LETTER FROM CAIRO.

THE EGYPTIAN MEDICAL CONGRESS.

CAIRO, December 22, 1902.

The first Egyptian Medical Congress was informally opened on the evening of December 18th with a reception given to the visiting delegates and members of the congress at the Continental Hotel. The congress gives every evidence of being a great success. In the point of attendance it has exceeded all expectations. There are over six hundred members in attendance. The reception was a happy idea, because it enabled the delegates and their families to become acquainted with one another, thus making subsequent intercourse much more pleasant. The hotel was beautifully decorated in the Egyptian style. The large veranda of the hotel was converted into an annex of the hotel parlors by the liberal use of Oriental draperies. Music, dancing, and refreshments formed part of the programme.

On the morning of December 19th the congress was formally opened by his Highness the Khedive, at the Khedival Opera House. He was accompanied by all his ministers and the civil and military members of his household. The stage was occupied by the delegates, and the main floor by the members of the congress. The boxes and rest of the theatre were crowded to the doors by families of the delegates and other visitors. The *tout ensemble* presented a beautiful spectacle. The Khedive in a few brief remarks welcomed the delegates to Cairo and stated that he was in entire accord with the objects of the congress, and that he had no doubt much good would result from the bringing together of so many scientific men. He was followed by the president of the congress, S. E. Ibrahim Pacha. He stated that Egypt felt deeply flattered that Europe and America had sent representatives to their ancient country, and that it was with sincere and unanimous cordiality that they entertained the visitors. The following delegates replied, in the order named: For Germany, Dr. Nolda; Austria, Professor Nothnagel; Belgium, Dr. Eid; United States, Major Gorgas, U. S. A.; France, Professor Bouchard; Great Britain, Mr. Reginald Harrison; Hungary, Pro-

fessor Karl Hoor; Italy, Professor Maragliano; Persia, Mirza Mahamed M. Khan; Russia, Professor Pawloff; Switzerland, Professor Eternod.

The congress was at first intended to be only a meeting for Russian doctors, but it was found that to keep the congress entirely under Muscovite patronage, while at the same time enjoying Egyptian and English hospitality, would be naturally impossible. Accordingly, after certain conditions regarding the admission of some of the Egyptian government staff to the board of management and the issue of international invitations had been agreed upon, the Egyptian government gave the idea full support. The Khedive gladly offered his hospitality and patronage. The Khedival Opera House and the Kasr-el-Ainy Medical School were placed at the disposal of the congress.

Egypt is peculiarly fitted as a place to hold the congress, owing to its situation in the midst of many diseases not found in other places. This was well demonstrated by the number of medical men who were able to present clinically the disease about which they were writing. Bilharziasis is a disease scarcely known outside of Egypt. A number of men illustrated their papers by showing cases of leprosy, pellagra, and ankylostomiasis. There is also a certain amount of sentiment about Egypt as a meeting place. It was here that the smouldering flame of medicine was kept alive during the Middle Ages. Many of the principles in use to-day had their birth in this ancient country. But we need not look entirely into the past for what has been done in medicine in Egypt. We find to-day in Egypt men who stand upon the topmost rung of the ladder of fame.

There can be no doubt in the mind of any one that every effort is being made to entertain the members of the congress in a handsome manner. All the social functions have been a grand success. The arrangements, on the whole, have been admirable. When it is considered that the committee of arrangements has to struggle with many difficulties not found in other countries, an idea of the task may be gained. This is an Oriental country, and what would be simplicity itself in Europe or America becomes here an almost insurmountable obstacle. The entertainments have also been much more numerous and of much greater proportions than is usually the case at a medical congress. Much of the success of the congress is due to the indefatigable efforts of the secretary, Dr. Oronoff. He seems to be omnipresent, and is ever ready to render the delegates any assistance in his power. The committee has been successful in perfecting all the details in such a manner that

very little annoyance has been encountered. This was an especially difficult task, because the delegates are from many countries and speak many different languages.

The congress is not remarkable for the number of celebrated men that are in attendance, but there are a large number of men present who have been close students in their various specialties, thus making the average ability above that found at most medical gatherings. The best known man among the visitors is probably Dr. Nothnagel, professor of the Faculty of Medicine of Vienna. The next best known man is probably Professor Bouchard, of France. He is accompanied by nearly sixty others from France. This is the largest delegation from any one country. Germany is not officially represented. There are a number of Germans here who have been acting for their native country, but none of them has any home credentials. Italy comes after France in the point of numbers. Professor Maragliano is her most representative man. He has made a very favorable impression on the delegates and is very popular. He is always listened to with marked attention. The only official delegate from Great Britain is Mr. Reginald Harrison. He represents the Royal College of Surgeons. He has also another mission here, viz., to inspect the Cairo School of Medicine for the purpose of ascertaining the scope of the medical course, in order that whenever a graduate of the Cairo School of Medicine presents himself in England for a diploma, they may know how much value can be placed upon the instruction that has been received here. His public utterances indicate that he has found the state of medical education here very satisfactory.

The United States is represented by Major Gorgas, of the United States Army, and Assistant Surgeon Victor G. Heiser, of the Public Health and Marine Hospital Service; Dr. C. S. Campbell, of New York, represents the State of New York.

On the afternoon of December 19th the Khedive received in person the delegates who represented countries. The reception took place at the Abdine Palace and was truly Oriental in character. Each delegate was personally welcomed by his Highness, and at the same time he took occasion to thank the country for its kindness in manifesting sufficient interest to send a delegate. He had coffee served, after which the guests took their departure.

On the evening of December 19th the delegates were entertained with a fête given at the pyramids. The visitors reached the pyramids by the special street cars which had been provided them. Here an Arab open air fête was given. It con-

sisted of an exhibition of Arabian horsemanship, native dances, and the illumination of the Sphinx with various colored lights. At midnight a luncheon was given. It was a very enjoyable affair and especially so because of its novelty.

On the morning of December 20th the active and real work of the congress was begun. The sessions of the congress are held at the School of Medicine. The buildings are admirably suited to the purpose. For each section a room has been provided, fitted up with a platform for the president and vice-presidents of the section. The rooms are large, light, and airy. Abundant seating room has been provided. No detail apparently has been overlooked. Paper and pencils are found upon small tables, conveniently situated. The Students' Club has been thrown open to the visitors. Here writing materials, a buffet, etc., are provided. The various museums connected with the college are placed at the service of the members of the congress.

A curious coincidence connected with the congress is the fact that since the last delegate registered there have been no further cases of cholera in Alexandria, and only one case in Cairo. The local newspapers are deriving much amusement from the occurrence, and give as a reason for this satisfactory condition of affairs the fact that the doctors are all busy at the congress and as a result of their absence the cholera has disappeared.

The work of the congress was divided into three sections:

1.—INTERNAL PATHOLOGY.—President, S. E. Comanos Pacha, M. D.; vice-presidents, de Becker Bey, M. D., Dr. Sandwith, Dr. Torella, Dr. Valassopoulos; members, Dr. Creswell, Dr. Formario, Dr. Gotschlich, Dr. Talaat Bey Mohamed, Dr. A. Eid, Dr. Tribe; secretaries, Dr. Beddoe, Dr. Aly Bey Ibrahim, Dr. Kantsky Bey, Dr. Savignoni, Dr. Scheuber, Dr. Tonin, Dr. Trekaki, Dr. Wilson.

2.—SURGERY.—President, Dr. H. Milton; vice-president, Dr. Kastulis, Dr. Legrand, Dr. Madden, Dr. Voronoff, Dr. Wildt; members, Dr. Mohamed Bey Chonkry, Dr. Pertridis, Dr. Symmers; secretaries, Dr. Adamidi, Dr. S. Bonan, Dr. Conbath, Dr. H. H. Khayatt, Dr. Ali Labil, Dr. Fr. Milton, Dr. Rigazzi.

3.—OPHTHALMOLOGY.—President, Dr. Mohamed Elvin Bey; vice-presidents, Dr. D. J. Démétrades, Dr. Fisher, Dr. Osborne, Dr. Saad Bey Sanieh; secretaries, Dr. Mohamed Bey Chaker, Dr. Didikas, Dr. Bayomin Fathy, Dr. Fanzi, Dr. Guariño, Dr. Kahil, Dr. César Lakah.

The congress in its various sections now meets regularly from 9 a. m. to 12 m., and from 3 to 6 p. m. The hour from 12 m. to 1 p. m. was used

by the different professors of the medical school for showing cases. The first day Dr. Sandwith showed some typical cases of pellagra. On Sunday he showed a number of cases of leprosy. Dr. Loos showed some interesting cases of ankylostomiasis.

On Sunday only one session was held. The afternoon was spent at the barrage and the Khedive's private grounds. The Khedive kindly placed his private yachts at the disposal of delegates and their families, by which they were conveyed to the barrage and his private gardens. Here a luncheon was served, and after the gardens and bridge were inspected the visitors were taken back to Cairo by special trains. The trip down the Nile was much enjoyed.

On Monday evening, December 22d, an Arab fête was given by the president of the congress, Ibrahim Pacha, Madam Pacha, the secretary, Dr. Voronoff, and Madam Meison Matatia. It consisted of native chants, Arab prestidigitation, snake charming, etc. At midnight a repast was much enjoyed by all those present.

On Tuesday afternoon, December 23d, the Minister of Public Instruction invited the delegates to visit the Egyptian Museum of Antiquities. Every attention was given the visitors to make their visit interesting. The great antiquity of many of the specimens made the visit most instructive and enjoyable. After the visit to the museum was concluded a luncheon was served.

On the afternoon of December 24th the Khedive invited the delegates and their families to the Abdine Palace, where he gave them a reception. After he had welcomed each one personally, luncheon was served. This reception marked the last social function connected with the congress. The delegates are nearly all worn out from the work of the congress and the great amount of entertaining they have gone through. All have only the highest words of praise to offer for the magnificent manner in which they were entertained. Every one unites in expressing thanks for the boundless entertainment.

Therapeutical Notes.

The Treatment of Ringworm.—Surgeon-major R. E. Wrafter, Bengal Medical Service (retired) (*Indian Medical Record*, November 19th) says that in a case of suspected ringworm of the head, the affected parts should be well washed daily with soft soap and tepid water until it can be decided if the disease is really ringworm. Then all hair in the vicinity should be either clipped close to the scalp or thoroughly shaved, after which the great object is the removal of the diseased hair, which should be

carefully depilated with a pair of broad-nibbed forceps. Unless this is done very gently, the fragile hair will break and the roots remain. Subsequently, every particle of scurfiness should be washed away with carbolic soap and warm water, and the following ointment may be freely applied night and morning with excellent results:—

℞ Carbolic acid	}	Equal parts.
Citrine ointment	}	
Sulphur ointment	}	
Mix.		

It causes no pain; for children under ten years of age double the quantity of sulphur ointment. Some practitioners employ chrysophanic acid ointment (1 in 10) rubbed into the affected parts twice a day, or paint the patches with strong acetic acid about every third or fourth day, and apply diluted citrine ointment in the intervals.

In all cases the local treatment must be conjoined with constitutional remedies, since the spores of these parasitic plants find their most congenial nidus in weakly children. The child should be also taken away from its books, allowed to be much in the open air, fed well upon plain nourishing food, warmly clothed, and be strengthened by tonics, such as iron, quinine and cod-liver oil.

Drugs to be Avoided by Nursing Mothers.—

According to the *Clinical Review* for January, the following drugs are eliminated by the milk glands, and care should therefore be taken in prescribing any of them for nursing mothers: Strychnine, carbolic acid, quinine, cascara sagrada, sulphur, arsenic, iodine, opium, iron, bismuth, senna, rhubarb, jalap, zinc, mercury, potassium iodide, magnesium sulphate, castor oil, garlic, oil of turpentine, oil of copaiba, and all the volatile oils.

For Appendicular Inflammation.—According to the *Clinical Review* for January, Lauder Brunton recommends the administration of from 10 to 15 grains of sodium salicylate every two hours, and from 10 to 15 minims of tincture of belladonna, in appendicular inflammation. They may be given together or alternately but should not be mixed, because either drug must be lessened in amount or dropped altogether when its physiological effects appear.

For Earache in Children.—The *Practitioner* for December gives the following formula for bougies that may be used in the earache of children in the early stage before exudation in the tympanum has occurred:

℞ Carbolic acid.....	7 minims;
Fluid extract of opium.....	6 minims;
Cocaine	6 grains;
Atropine sulphate.....	3 grains;
Water	3 minims;
Gelatin	18 grains;
Glycerin	158 grains.

M. Divide into 47 bougies. These bougies should be kept wrapped in tinfoil, and be moistened with water before being used.

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THE LATE DR. HENRY J. BIGELOW ON
VIVISECTION.

Elsewhere in this issue, in our department of Miscellany, we publish an essay on vivisection which, the corresponding secretary of the American Antivivisection Society assures us, was written by Dr. Bigelow shortly before his death. It is said to have been published before, in whole or in part, in some book, but not in any medical journal. It is unnecessary to remind our readers that Dr. Bigelow was one of the most distinguished surgeons of his time and the author of the ingenious procedure known as litholapaxy, and it goes without saying that, resolutely as we have always opposed legislation which seemed to us to tend to the serious embarrassment of experimental inquiry by the undue restriction of vivisection, we should invariably attach great weight to all that such a man might say. Although we cannot avoid the conclusion that in some respects Dr. Bigelow underrated the value of vivisection and overrated its cruelty, we should be content, as we think the generality of experimenters also would be, with such legislation as would satisfy those of the antivivisectionists as were not blind zealots unmindful of everything but their own purposes, provided we could be reasonably sure that the administration of such enactments would be vested in men of Dr. Bigelow's breadth of view.

Dr. Bigelow's article, it appears to us, would give the non-medical reader to understand that vivisection meant the dissection of living animals—dissection in the sense in which the term is applied to study of the details of anatomy on the dead sub-

ject. Undoubtedly he did not intend to imply this, but we fear that that will be the construction put upon his words by the laity. There is a minimum—generally nothing at all—of what the public understand as dissection in the practice of vivisection as carried on by enlightened investigators; a rapidly executed incision or puncture is as a rule all that is painful to any great degree in an experiment coming under the head of vivisection, not at all more painful than the opening of an abscess, which the great majority of human beings would readily submit to without demanding the use of an anæsthetic. Moreover, we cannot admit that the lower animals are as acutely sensitive as man is.

We presume that very little serious attention will be paid to Dr. Bigelow's fanciful contention that possibly in infinite space there are beings superior to man, and that therefore man's right to inflict pain upon his inferiors for his own advantage is vitiated by the supposititious superior beings' equal right to inflict it on him. The possibility of the existence of such beings, he contends, is enough for the argument. This we absolutely dissent from. The possibility, of course, we cannot deny, but what we have to deal with is actualities, not hypothetical conditions. Not until such superior beings have actually overpowered us, or at least made us aware of their existence, shall we relinquish our right of dominion over the whole animal creation, a right sanctioned by Holy Writ and abundantly certified by immemorial experience.

Dr. Bigelow belittles the real usefulness of vivisection, and in so doing he is not alone, it must be admitted, among medical men of eminence; but it does not follow that that eminence entitles such an estimate to overwhelm the general opinion of men more immediately engaged in experimental research. Least of all is their eminence entitled to weigh against the positive experience that lately enabled Dr. Keen to save a human life by reason of the physiological knowledge that he could have derived from vivisection only. We are as firmly opposed to cruelty as we are to the unnecessary hampering of experimental inquiry, but, even if we concede that in some instances vivisection involves acute and protracted suffering, it does not follow that he who inflicts it is cruel. To the laity all painful intervention, even that which merely seems painful, appears cruel, but suffering that it is nec-

essary to inflict, whether for the good of the subject or for the general welfare of mankind, is not cruelty.

Dr. Bigelow's most important contention, as it seems to us—though one not raised by him for the first time—is that the practice of vivisection tends to blunt one's natural repugnance to the infliction of pain. This tendency ought by all means to be striven against most strenuously, for a medical man who is lacking in sympathy with brutes is almost sure to be deficient in that humane feeling which lies so near the foundation of all efficient medical treatment. However, those who are actually engaged in the practice of medicine are very rarely vivisectors, so there is little danger that the callousness that is alleged to result from vivisection will deprive the family physician of his tenderness.

THE THERAPEUTICS OF THE FUTURE.

With a view perhaps to letting the expectant treatment drop gently into oblivion, Professor Bouchard (*Presse médicale*, December 31st) says: It is not unknown for a sick man, when he gets well, to attribute his cure to the physician, but it is rare for the physician, if he is well informed, to look upon himself as the agent of cure; on the other hand, it is seldom that he has not been of service, for he has relieved suffering, he has favored the processes that naturally lead to recovery, he has warded off possible accidents, and he has sustained the patient. Spontaneous cure, he goes on to say, is the ruling tendency in acute diseases, but the same is not the case in chronic ailments; in them there may be a natural tendency toward recovery, but intervention is of service, to prevent Nature from curing the patient in the wrong way. Odd as this may seem, it is comprehensible when we remember that the writer has just before been considering the case of a fracture or dislocation.

Empiricism often finds the right path without a guide. For example, says Bouchard, in certain extremely rebellious diseases of the scalp, medicine, after having recognized the inefficiency of tonics, depuratives, and general alteratives, suspected a local cause and, seeking to remove it, applied certain adhesive unguents which, each time they were removed, brought away some hair with them; and it cured tinea before the fungus producing it had

been discovered. It was empiricism, he says, that gave us opium, which does not often cure, but almost always alleviates; moreover, it gave us many drugs that do cure, such as cinchona, mercury, iodine, arsenic, colchicum, and salicin.

Topical medication presents itself to Bouchard as likely to grow in esteem, and it has been so growing, we may remark, ever since the late Dr. Lewis A. Sayre proposed to treat tuberculous cavities of the lungs surgically. What is the use, virtually asks Bouchard, of saturating a man's system with sodium salicylate when a relatively small amount, injected into the neighborhood of a joint affected with acute rheumatism, will answer the purpose without any danger of injury to the patient? As an example, he cites the case of a man with rheumatism of the knee, with a tendency to chronicity, who had been laid up in bed for two months, during the greater part of which time both general and local treatment had been of no avail, but was on his feet within a few hours after a single injection of three grains of salicylate, and was cured on the following day.

It is puerile and perilous to seek to draw the horoscope of a century, says Bouchard, but it is easy to see that he regards topical medication as likely to be accorded greater and greater importance in the medicine of the future, and in this, it seems to us not at all improbable, he is right. Of course we do not mean topical medication in the sense of mere applications, but interstitial medication or at least deep medication in close proximity to the seat of morbid manifestation.

PARTURITION IN THE VERY YOUNG.

It is natural to suppose that childbirth is fraught with unusual peril to very young women, and we presume that the supposition is very largely entertained in the medical profession. Recorded data on the subject, however, are for the most part little more than fragmentary contributions to its casuistics. Peculiar interest, therefore, attaches to certain observations published by Palotai, of Budapest, in the *Centralblatt für Gynäkologie* for December 27th. He deals only with cases in which the mothers were not over sixteen years old, twenty-five in number. In seven of them the mother was fourteen years old, and in eighteen

she had reached the age of fifteen years. Two of the fourteen-year-old girls had never menstruated, and one of the fifteen-year-old ones was said to have been impregnated as the result of rape.

In one of the cases abortion took place in the sixth month of pregnancy; in all the others gestation pursued its course without noteworthy disturbances, though in several it was somewhat abbreviated. In seven instances the precise date of impregnation was accepted as known, and in those cases the average duration of pregnancy was 292 days, rather longer than the usual period. In only two of the mothers, each fifteen years old, were the pelvic dimensions less than normal, and in those there was only slight contraction, and it was limited to the conjugate diameter. How little influence this slight contraction had on the duration of labor is shown by the fact that in one case it was nine hours and twenty minutes, and in the other fifteen hours and nine minutes.

Leaving out of account the case of abortion, which was occasioned by unknown causes, the twenty-four other cases all terminated spontaneously, the child presenting by the vertex. The average duration of labor was ten hours and three minutes; the longest, in a girl fourteen years old, was nineteen hours and thirty-four minutes. The greatest duration of the placental stage was only nineteen minutes. The children were all born alive, and they were no smaller than the average foetus at term. The largest of them was born of a mother fourteen years old. Although in nearly a third of the cases the vulvovaginal ring was unusually narrow, in only two instances was there sufficient laceration of the perinæum or of the vaginal wall to require sutures. This goes to show, as has been observed by Staffier, in opposition to the observations of Spitta and Tanner, that youthful primiparæ are not predisposed to perineal laceration. The puerperium did not differ notably from its usual course in older women. Nothing is said of the ability of these young mothers to nurse their offspring.

AUTHORSHIP BY DICTATION.

It is indeed refreshing to read such remarks on the subject of stenography and dictation in literary work, as recently fell from the lips of Mr. Frank Munsey in an address on Journalism, delivered to

the professors and students of Yale. Mr. Munsey, who was introduced by President Hadley, is reported to have said, among other things, "The typewriter and stenographer have done more to degrade literary style than anything else. To get the best results in literature and journalism, cling to the pen and avoid the typewriter."

So far as medical articles are concerned, there is a noticeable deterioration, not only in their literary style, but even in their grammar, spelling, and punctuation. The earmark of the dictated article is visible in very many of the contributions that reach us, often from distinguished sources. A man may know his subject thoroughly; he may be able to lecture on it; to discuss it in a conversational way lucidly; yet when he begins to dictate an article, the result will have all the faults of both lecture and conversation, with the virtues of neither. The digressions, the lack of coherence, the occasional obscurity of logical sequence or grammatical accordance which even the best of us fall into when talking, are corrected in the minds of the hearers by the manner, expression, and tone of the speaker. Not so, however, when we read a stenographic report of the speaker's utterances, which can supply us with none of these modifying influences. It is one thing to dictate clearly a business letter, which consists mainly of the use of certain stereotyped formulæ, and quite another to dictate a discourse on some subject of unlimited range. To many persons, the actual writing of page upon page calls for an amount of mechanical effort that dismays them. But they could at least carefully read through the result of their dictation, pen in hand—not merely glancing through it for obvious errors of spelling and for grammatical slips, but weighing it sentence by sentence for the correction of ambiguities or the elucidation of obscurities.

The speaker or writer, be his sentences never so confused, knows what he means to say (or at least it is to be hoped and presumed that he does) and therefore he readily reads in what he has said, what he sets out to say. Not so his other readers. Unless the words used and their proper sequence and accord are apt, the latter are left in doubt as to the author's meaning. Literary style is one thing, logical consecutiveness and grammatical concord constitute another. The first, if lacking, may be supplied by a third party; but the second cannot, because, in their absence, a wrong idea or no idea at all, may be conveyed.

When we have ventilated our grievance on this point on previous occasions, in regard to medical articles, the tendency of modern journalism has been adduced and the customs of the lay press and the magazines cited against us. It is therefore, as we

have said, with great pleasure, that we find so extensive an owner of lay newspapers and magazines as Mr. Frank Munsey, deploring this very result and attributing it to these very causes.

VALE.

It is with the greatest regret that we find ourselves obliged to announce the retirement of Dr. Reed B. Granger from our staff. With a brief intermission, Dr. Granger has been the managing editor of the *New York Medical Journal* for twenty years—ever since it was changed from a monthly into a weekly publication. He has always been unfailing in his devotion to the duties of the office, and

is remembered by the greater part of his friends in the profession. The sight of it will call up in many a generous breast reminiscences of hearty interchange of sentiment. Dr. Granger is to exert his activities hereafter in the service of the great medical book publishing house of Messrs. W. B. Saunders & Co., and to have charge, we understand, of a New York office to be established by that house. We wish him the utmost success in his new undertaking.

THE INFRASPINATUS REFLEX.

Another has been added to the ever lengthening list of reflexes by Steiner (*Neurologisches Centralblatt*, 1902, No. 18; *Berliner Klinische Wochenschrift*, November 10th), who calls it the infraspinatus reflex. If one taps a certain spot over the shoulder blade, on a line bisecting the angle formed by the spine of the bone and its inner border, outward rotation of the arm occurs with simultaneous straightening of the elbow.

THE NEED OF THE STUDY OF MEDICAL HISTORY AND LITERATURE.

While, undoubtedly, the practical portion of the art of medicine is first in importance, it is gratifying to note the general revival of professional interest in the history and literature of medicine. These subjects are not altogether professional luxuries, either. According to *Janus* for December 27th, M. Deneffe, in his work on *The Speculum Uteri throughout the Ages*, (*sur le spéculum de la matrice à travers les âges*) is astonished to find the whole world crediting Récamier with the invention of the speculum, "which for two thousand years had never been unknown to science, and which is even dwelt upon in 1774, in the writings of J. L. Petit." In a discussion on Deneffe's work, at the French Society of the History of Medicine, M. Dureau said: "I recall a traction apparatus for use in dislocations, invented some few years ago by one of our most distinguished surgeons and professor in our faculty, a very ingenious piece of mechanism, which I pointed out one day to this surgeon very exactly delineated in a plate in an old English edition of Albucasis. My good friend, who had expended much time and thought in the construction of his own apparatus, was overwhelmed with astonishment." Another instance of such belated inventions is the "Trendelenburg posture," which, as was shown in an article abstracted by us from the *Gazette médicale de Paris*, was fully described and illustrated in the medical works of the middle ages.



REED B. GRANGER, M. D.

in addition he has represented the *Journal* at innumerable medical meetings held in all parts of the country, on which occasions he has invariably won the esteem and friendship of his professional brethren. It is doubtful, indeed, if there is in the United States a medical man with a greater number of personal friends among physicians than Dr. Granger has. The portrait of Dr. Granger which we herewith present is from a photograph purposely chosen as representing a period in his career in which he was most occupied with attendance on medical society meetings, and showing him as he

News Items.

Society Meetings for the Coming Week:

MONDAY, January 10th.—New York Academy of Medicine (Section in Ophthalmology); New York County Medical Association; Hartford (Conn.) Medical Society; Chicago Medical Society.

TUESDAY, January 20th.—New York Academy of Medicine (Section in General Medicine); Buffalo Academy of Medicine (Section in Pathology); Ogdensburg, N. Y., Medical Association; Syracuse, N. Y., Academy of Medicine; Medical Society of the County of Kings, N. Y. (annual); Baltimore Academy of Medicine.

WEDNESDAY, January 21st.—New York Academy of Medicine (Section in Genitourinary Diseases); New York Society of Dermatology and Genitourinary Surgery (private); Woman's Medical Association (N. Y. Academy of Medicine); Medico-Legal Society, New York; Northwestern Medical and Surgical Society of New York (private); New Jersey Academy of Medicine (Newark); Philadelphia County Medical Society.

THURSDAY, January 22nd.—New York Academy of Medicine (Section in Obstetrics and Gynecology); New York Orthopædic Society; New York Celtic Medical Society; Brooklyn Pathological Society; Brooklyn Society for Neurology; Roxbury, Mass., Society for Medical Improvement (private); Pathological Society of Philadelphia; Church Hill Medical Society of Richmond, Va.

FRIDAY, January 23rd.—New York Clinical Society (private); New York Society of German Physicians; Yorkville Medical Association, New York (private); Philadelphia Clinical Society; Philadelphia Laryngological Society.

SATURDAY, January 24th.—New York Medical and Surgical Society (private); Harvard Medical Society, New York (private).

Change of Address.—Dr. Bryan DeF. Sheedey to 10 West Forty-sixth Street, near Fifth Avenue.

Dr. Allan M. Lane Hamilton, who has been seriously ill, has returned from Europe and resumed the practice of his profession.

The New York State Medical Society will hold its annual meeting at Albany, on January 27th to 29th. The preliminary program includes titles of papers from a number of well-known practitioners.

The New York State Nurses' Association will hold its regular quarterly meeting at the Academy of Medicine, on January 20th. The principal topic for discussion will be the proposed legislation requiring the registration of nurses.

The Wisconsin Board of Health.—Dr. Cornelius A. Harper, of Madison, has been appointed to membership in the Wisconsin State Board of Health, to succeed Dr. Solon Marks, of Milwaukee, whose term expires in February.

King Edward's Sanatorium.—The three prize essays giving plans for the construction of the sanatorium for tuberculous patients to be erected by King Edward VII are printed in full in the London *Lancet* for January 3d, almost the entire issue being occupied by these essays. The first prize, five hundred pounds, was won by Dr. Arthur Latham, of London; the second, two hundred pounds, by Dr. F. J. Wethered, of London, and the third, by Dr. E. C. Morland, of Croydon.

To Study Tropical Medicine.—The trustees of the Michigan College of Medicine and Surgery have decided to establish two new professional chairs in tropical diseases, such as are encountered in the Philippines and in Cuba. Dr. Robert S. Linn and Dr. V. J. Hooper are the physicians selected for these positions. Both were surgeons in the late war with Spain, and have practical knowledge of the branches in which they will teach.

A Series of Clinical Lectures on Diseases of the Skin will be given by Dr. L. Duncan Bulkley at the New York Skin and Cancer Hospital, at Second Avenue, corner of Nineteenth Street, on Wednesday afternoons, at a quarter past four. The course will be free to members of the medical profession.

The Georgia Medical Society at its annual meeting held at Savannah on January 6th elected the following officers: President, Dr. J. G. Jarrell; vice-president, Dr. H. H. Martin; recording secretary, Dr. J. O. Cook; corresponding secretary, Dr. H. W. Hesse; treasurer, Dr. C. B. Lanneau, and librarian, Dr. J. G. Van Marter.

Expenditures for the Health Department.—In the course of an article comparing the cost of the municipal government of New York, Chicago and Philadelphia, the *Chicago Post* states that New York expended last year \$754,909 in salaries and \$233,691 in expenses for the health department, while Chicago used \$150,688 in salaries and \$75,998 in expenses. Philadelphia had for its health department \$168,842 for salaries and \$97,150 for expenses.

Dr. Hilbert B. Tingley Killed.—Dr. Hilbert B. Tingley, one of the oldest practitioners of Rockaway Beach, was killed at the Holland Station crossing of the Long Island Railroad, on January 14th. While attempting to board a westward bound train his foot slipped and he fell beneath the wheels. Dr. Tingley was president of the Rockaway Taxpayers' Association, and he took a prominent part in the recent movement for secession from Greater New York. He was thirty-seven years of age. Dr. Tingley was a graduate of the University of Baltimore.

The Kansas City (Mo.) Academy of Medicine held its tenth annual banquet at the Midland Hotel on January 8th. About seventy-five physicians were in attendance, and the following officers were formally installed: President, Dr. Charles B. Hardin; vice-president, Dr. J. Block; secretary, Dr. J. W. Sherer; censor, Dr. J. M. Frankenburger; treasurer, Dr. C. Lester Hall. Following the installation came the address of the evening by Dr. W. G. Moore, of St. Louis. His subject was: "The Nestors of Our Profession." Besides Dr. Moore, the guests included the presidents of the medical societies of Missouri, Kansas, Oklahoma and Indian Territory, all of whom had places on the toast programme at the banquet. This was in the charge of a committee, composed of Dr. Jabez N. Jackson, Dr. C. Lester Hall and Dr. J. M. Frankenburger.

The Philadelphia College of Physicians has elected the following officers for the current year: President, Dr. Horatio C. Wood; vice-president, Dr. Arthur V. Meigs; censors, Dr. Richard A. Cleeman, Dr. S. Weir Mitchell, Dr. Horace Y. Evans, and Dr. Louis Starr; secretary, Dr. Thomas R. Neilson; treasurer, Dr. Richard H. Harte; honorary librarian, Dr. Frederick P. Henry; councilors, Dr. Francis R. Packard, Dr. Charles W. Burr and Dr. J. Milton Miller.

A McKinley Memorial Hospital for New York.—The McKinley Memorial Hospital for Diseases of the Digestive Organs, of New York City, has made application to the State Board of Charities to incorporate. The hospital will be for the treatment of diseases of the digestive organs and the establishment of a laboratory for original investigation.

The directors are Dr. Mark I. Knapp, Dr. Ramon Guiteras, Dr. Reynold W. Wilcox, Dr. Edward Lauterbach, and Dr. Carl Beck, of New York City.

In Memory of Dr. John Byrne.—The following resolution was passed at the meeting of the New York Obstetrical Society, held on December 9th.

Resolved; That by the death of Dr. John Byrne, our oldest Honorary Fellow, the members of this Society have lost a beloved associate, whom we esteemed as an eminent surgeon, a wise counselor and a faithful friend.

CHARLES JEWETT, M. D.,
HENRY C. COE, M. D.
Committee.

A New Research Fellowship in Medicine has been established at Columbia University. The fellowship is to be known as the Proudfit Fellowship in honor of the late Alexander Moncrief Proudfit, of the class of '92, who left a large bequest to the university. It is established distinctly for research work, and is to be offered to graduates of the College of Physicians and Surgeons to enable them to pursue advanced study and research in internal medicine either in this country or in Europe. The fellowship is to have an annual value of \$1,200, and to be tenable for two years.

The Academy of Medicine held its annual meeting on Thursday evening, January 15th. Besides the addresses by the retiring president, Dr. Robert F. Weir, and by his successor in office, Dr. Andrew H. Smith, a paper was presented by Dr. Max Einhorn, on Cardiopiosis and its Association with Floating Liver. On Monday evening, January 12th a meeting of the Section in Surgery was held. The Section in Orthopædic Surgery met on Friday evening. On January 19th the Section in Ophthalmology will hold a clinical meeting, when the election of officers will take place. The Section in Genito-Urinary, Diseases will elect officers at the meeting to be held on January 21st.

Academy of Medicine of Toledo and Lucas County, Ohio.—At the regular meeting of the Academy of Medicine of Toledo and Lucas County the following officers were elected: President, Dr. Julius H. Jacobson; vice-president, Dr. S. S. Thorn;

secretary, Dr. H. E. Smead; financial secretary, Dr. Charles P. Wagar; treasurer, Dr. W. W. Grube; Board of Censors, Dr. Wm. H. Fisher, Dr. O. Hasencamp, Dr. W. J. Gillette, Dr. John A. Wright and Dr. S. W. Beckwith; Members of the Library Board, Dr. S. S. Thorn, Dr. Harrison Hathaway, Dr. W. J. Gillette, Dr. Park L. Myers and Dr. A. L. Steinfeld; Committee on Legislation and Public Health, Dr. W. C. Chapman, Dr. C. L. Van Pelt and Dr. W. G. Dice.

The Study of Mental Diseases.—At the Pathological Institute of the New York State Hospitals for the Insane on Ward's Island, a course in the modern methods of investigation of mental disease was begun on January 12th, to be continued until the twenty-third. Assistant physicians of all the hospitals will take part. The introductory course which was given in the first week of December, 1902, for the superintendents, is to be repeated and extended by the addition of practical work. Several of the State hospitals send two assistants, and in order to give a chance to as many as possible of the physicians to whom the insane of the State are entrusted the course will be repeated in February and in March. The ten days will be devoted to demonstrations of the modern methods of examination of patients, of keeping the records, and of arriving at diagnoses and therapeutic and prognostic indications.

A Tuberculosis Institute Endowed.—It is announced that Henry Phipps, of New York, once a partner of Andrew Carnegie, will establish in Philadelphia an institute for the study, treatment, and prevention of tuberculosis, and will endow it with \$1,000,000 or more. It will be named the Henry Phipps Institute, and will be located in the centre of the city among the poor, if a suitable site can be obtained, where it will be easily accessible, and where the best scientific talent can be obtained for the various positions in the institute. Dr. Lawrence Flick, of Philadelphia, will be the director. The institute will be an entirely independent charity. The buildings will cost probably between \$200,000 and \$300,000, and the endowment will be \$1,000,000 or more to yield an income of about \$40,000 a year for the institute's maintenance.

The New Orleans Meeting of the American Medical Association will take place on May 5th to 8th. The Southern Railway has announced that a reduced rate of one fare for the round trip from Washington, or from any point on their system to New Orleans and return. Tickets will be on sale May 1st to 4th and will be good for continuous passage in each direction with a final limit of ten days from the date of sale. Tickets can be extended for a longer period, however, provided they are deposited in person, by the original purchaser, with the Special Agent at New Orleans not later than May 12th, 1903, and fee of fifty cents is paid at the time of deposit, when the final limit will be extended to a date not later than May 30th. Further information may be obtained from the chairman of the committee on transportation, Dr. H. L. E. Johnson, Jefferson Place, Washington, D. C.

The Reorganization of the Army Hospital Corps.—Secretary Root has forwarded to Congress with his hearty commendation a plan prepared by Surgeon General O'Reilly for the reorganization of the Army Hospital Corps. A bill, prepared to accomplish this purpose, provides that hereafter the Hospital Corps shall consist of 300 first-class sergeants with salaries of \$540 each per annum; three hundred sergeants with salaries of \$300, twenty corporals with salaries of \$240, and sixteen hundred privates with salaries of \$182, making a total annual cost of \$770,400. It is explained that the proposed distribution of the appropriation for the Hospital Corps would result in an actual gain of ninety-five in the personnel, at no additional cost to the government. The surgeon general says that the proposed classification of enlisted men is for the purpose of giving them titles more in accord with those used to designate the enlisted men in other branches of the service. One feature of the plan is that while it does not increase the cost of the corps it provides for the pay of corporals out of the pay of privates. Secretary Root says the proposed legislation will be of material benefit to an important branch of the military establishment.

Official News.

Public Health and Marine-Hospital Service:

Official List of Changes of Station and Duties of Commissioned and Non-commissioned officers of the Public Health and Marine-Hospital Service for the Seven Days ending January 8, 1903:

- BAILHACHE, PRESTON H., Surgeon. Granted leave of absence, on account of sickness, for thirty days from January 6.
- CARTER, H. R., Surgeon. Leave of absence for three days from January 5, 1903, under paragraph 179 of the regulations.
- GREENE, J. B., Passed Assistant Surgeon. Relieved from duty at New York (Stapleton).
- GRUBBS, S. B., Passed Assistant Surgeon. To proceed to Guaymas, Mexico, for special temporary duty.
- PARKER, H. B., Assistant Surgeon. To report to chairman of board of examiners at Washington, D. C., January 12, 1903, to determine his fitness for promotion to the grade of passed assistant surgeon.
- VON EZDORF, R. H., Assistant Surgeon. To report to chairman of board of examiners at Washington, D. C., January 12, 1903, to determine his fitness for promotion to the grade of passed assistant surgeon.
- ANDERSON, J. F., Assistant Surgeon. To report to chairman of board of examiners at Washington, D. C., January 12, 1903, to determine his fitness for promotion to the grade of passed assistant surgeon.
- ROBINSON, D. E., Assistant Surgeon. Relieved from duty at Seattle, Washington, and special temporary duty at Port Townsend Quarantine, and assigned to duty at Port Townsend Quarantine.
- KEYES, J. M., Acting Assistant Surgeon. Granted leave of absence for thirty days from January 5.
- SAMS, F. F., Acting Assistant Surgeon. Granted leave of absence, on account of sickness, for thirty days from January 1, 1903.
- BROWN, F. L., Pharmacist. Granted leave of absence for ten days from December 25.
- SCHLAAR, W. F., Pharmacist. Relieved from duty at Washington, D. C., and directed to proceed to Boston (Chelsea) Mass., and report to medical officer in command for duty and assignment to quarters.

Resignation.

Acting Assistant Surgeon J. M. KEYES resigned to take effect February 3, 1903.

Board Convened.

Board convened to meet at Washington, D. C., January 12, 1903, for the examination of assistant surgeons to determine their fitness for promotion to the grade of passed assistant surgeon. Detail for the board: Assistant Surgeon General W. J. PETTUS, Chairman; Assistant Surgeon General G. T. VAUGHAN. Assistant Surgeon General H. D. GEDDINGS, Recorder.

Infectious Diseases in New York:

We are indebted to the Sanitary Bureau of the Health Department for the following statement of cases and deaths reported for the two weeks ending January 10, 1903:

DISEASES.	Week end'g Jan. 3.		Week end'g Jan. 10.	
	Cases.	Deaths.	Cases.	Deaths.
Typhoid fever.....	68	17	80	11
Scarlet fever.....	159	10	206	11
Cerebro-spinal meningitis ..	3	0	0	0
Measles	118	8	120	6
Diphtheria and Croup.....	322	45	344	46
Small-pox	4	0	1	0
Tuberculosis.....	190	142	246	164

Naval Intelligence:

Official List of Changes in the Medical Corps of the United States Navy for the Week ending January 10, 1903:

- BIGERT, E. S., Medical Director. Retired, detached from the Naval Recruiting Station, New York, and ordered to continue duty at the Marine Recruiting Station, New York.
- DICKSON, S. H., Medical Inspector. Detached from the Iowa and ordered to the Newark as Fleet Surgeon of the South Atlantic Station.
- GUTHRIE, J. A., Passed Assistant Surgeon. Detached from the Yorktown and ordered to the Vicksburg.
- HAAS, H. H., Passed Assistant Surgeon. Detached from the Montgomery and ordered to the Prairie.
- HOLLOWAY, J. H., Assistant Surgeon. Commissioned Assistant Surgeon from September 26, 1902.
- OHNESORG, K., Assistant Surgeon. Detached from the Vicksburg and ordered to the Yorktown.
- PAGE, J. E., Passed Assistant Surgeon. Detached from the Newark and ordered to the Montgomery.
- PECK, A. E., Assistant Surgeon. Detached from the Annapolis and ordered to the Naval Station, Cavite, P. I.
- STEPHENSON, B. F., Medical Inspector. Retired from active service on account of disabilities incurred in the line of duty, January 3, 1903, and ordered to continue on duty at Naval Hospital, Portsmouth, N. H.
- WEBB, U. R., Assistant Surgeon. Detached from the Naval Station, Cavite, P. I., and ordered to the Annapolis.
- WOOLVERTON, T., Medical Inspector. Retired and ordered to the Naval Recruiting Station, New York.

Army Intelligence:

Official List of Changes in the Station and Duties of Officers serving in the Medical Department of the United States Army for the week ending January 10, 1903:

- BROWN, J. M., Colonel and Assistant Surgeon General. Leave of absence is extended to include February 13, 1903.
- DEVEREUX, J. R., First Lieutenant and Assistant Surgeon. Arrived in New York from Havana, Cuba, on thirty days' leave of absence.
- FISHER, HENRY C., Captain and Assistant Surgeon. Relieved from duty at Jackson Barracks, Louisiana, and ordered to proceed to Baltimore, Maryland, for duty as Attending Surgeon and Examiner of Recruits.

LYSTER, WILLIAM J. L., First Lieutenant and Assistant Surgeon. Assignment of duty at Fort Wayne, Michigan, is revoked, and instead is assigned to duty at Fort McDowell, California.

REILLY, JOHN J., First Lieutenant and Assistant Surgeon. Relieved from duty at Fort Porter, N. Y., and ordered to proceed to Jackson Barracks, Louisiana, for duty.

RUSSELL, F. F., First Lieutenant and Assistant Surgeon. Granted leave of absence for fourteen days.

VAN DUSEN, JAMES W., First Lieutenant and Assistant Surgeon. Leave of absence is extended one month.

VASE, WILLIAM E., First Lieutenant and Assistant Surgeon. Relieved from further duty at Columbia Arsenal, Tennessee, and ordered to Fort Logan H. Roots, Arkansas, for duty.

Public Health and Marine-Hospital Service Health Reports:

The following cases of smallpox, yellow fever, cholera, and plague were reported to the surgeon-general during the week ending January 10, 1903:

Smallpox—United States.

Location.	Dates.	Cases.	Deaths.
California—Sacramento	Dec. 20-27	1	
California—San Francisco	Dec. 21-28	12	
Colorado—Denver	Dec. 20-27	3	
Illinois—Chicago	Dec. 27-Jan. 3	6	
Indiana—Evansville	Dec. 27-Jan. 3	1	1
Indiana—South Bend	Dec. 27-Jan. 3	1	
Maine—Biddeford	Dec. 27-Jan. 3	26	
Maryland—Baltimore	Dec. 27-Jan. 3	1	
Massachusetts—Boston	Dec. 27-Jan. 3	20	4
Massachusetts—Cambridge	Dec. 27-Jan. 3	5	
Massachusetts—Chelsea	Dec. 26-Jan. 2	1	
Massachusetts—Fall River	Dec. 27-Jan. 3	3	
Massachusetts—Lawrence	Dec. 27-Jan. 3	1	
Michigan—Grand Rapids	Dec. 27-Jan. 3	7	
Nebraska—Omaha	Dec. 27-Jan. 3	3	
New Hampshire—Manchester	Dec. 27-Jan. 3	8	
New Hampshire—Nashua	Dec. 27-Jan. 3	2	
New Jersey—Camden	Dec. 27-Jan. 3	3	
New York—Buffalo	Dec. 27-Jan. 3	1	
New York—New York	Dec. 27-Jan. 3	126	21
North Carolina—Charlotte	Dec. 1-31	7	1
Ohio—Cincinnati	Dec. 26-Jan. 2	7	
Ohio—Cleveland	Dec. 27-Jan. 3	7	1
Ohio—Dayton	Dec. 27-Jan. 3	10	
Pennsylvania—Altoona	Dec. 27-Jan. 3	3	
Pennsylvania—Erie	Dec. 27-Jan. 3	5	
Pennsylvania—Philadelphia	Dec. 27-Jan. 3	15	1
Pennsylvania—Pittsburg	Dec. 27-Jan. 3	16	7
Pennsylvania—Williamsport	Dec. 27-Jan. 3	1	
Rhode Island—Newport	Dec. 27-Jan. 3	1	1
Rhode Island—Warwick	Dec. 24-31	4	
South Carolina—Charleston	Dec. 27-Jan. 3	4	
Tennessee—Memphis	Dec. 27-Jan. 3	4	
Wisconsin—Green Bay	Dec. 28-Jan. 4	2	
Wisconsin—Milwaukee	Dec. 27-Jan. 3	4	

Smallpox—Foreign.

Argentina—Buenos Ayres	Oct. 1-31	12	
Belgium—Ghent	Nov. 8-15	1	
Belgium—Ghent	Dec. 6-13	2	
Brazil—Bahia	Nov. 20-Dec. 13	12	
Canada—Quebec	Dec. 20-27	2	
Ecuador—Guayaquil	Dec. 13-20	3	
France—Marseille	Nov. 1-30	37	
Great Britain—Leeds	Dec. 13-20	11	
Great Britain—Liverpool	Dec. 13-20	56	
Great Britain—London	Dec. 6-13	1	
Great Britain—Manchester	Dec. 6-13	3	
Italy—Palermo	Dec. 6-20	25	
Mexico—City of Mexico	Dec. 14-28	4	1
Russia—Moscow	Nov. 29-Dec. 6	4	
Russia—St. Petersburg	Dec. 6-13	16	3
Turkey—Constantinople	Dec. 7-14	1	1

Yellow Fever.

Colombia—Panama	Dec. 22-29	4	
Ecuador—Guayaquil	Dec. 13-20	12	
Mexico—Tampico	Dec. 20-27	14	
Mexico—Vera Cruz	Dec. 20-27	14	4

Cholera—Insular.

Philippine Islands—Manila	Nov. 2-15	184	124
Philippine Islands—Provinces	Nov. 1-15	252	170

Cholera—Foreign.

Egypt—Alexandria	Dec. 1-13	82	64
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Plague—United States.

California—San Francisco	Dec. 11	1	1
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Plague—Foreign.

Mexico—Ensenada	Dec. 31, 1902	Officially reported.	
Mexico—Mazatlan	Dec. 31, 1902	Officially reported.	

Births, Marriages, and Deaths.

Married.

BURNS—ZIEGLER.—In St. Louis, on Tuesday, January 6th, Dr. Robert Burns and Miss Kathryn Ziegler.

FOX—KERR.—In Dresden, Canada, on Monday, December 29th, Dr. William Raybould Fox, of Golden, Colorado, and Miss Lizzie Kerr.

GREENE—BURKE.—In Alexandria, Virginia, on Wednesday, January 7th, Dr. Louis Storror Greene and Miss Louise Packwood Burke.

GRUBBS—BAUGHMAN.—In Harrison, Ohio, on Tuesday, January 6th, Dr. Owen W. Grubbs and Miss Florence Baughman.

MURRAY—MURRAY.—In Redbank, N. J., on Wednesday, December 30th, Dr. Patrick Murray, of Brooklyn, and Miss Mary F. Murray, of Greenpoint.

SLOAN—SMITH.—In Potosi, Missouri, on Wednesday, December 24th, Dr. J. M. Sloan and Miss Helen Clark Smith.

STAFFORD—ALEXANDER.—In Charlotte, North Carolina, on Tuesday, January 6th, Dr. Alvah Mortimer Stafford and Miss Evelyn Johnston Alexander.

STRODE—JEFFERY.—In Denver, on Tuesday, January 6th, Mr. Amos Morris Strode, of Mullax, Idaho, and Dr. Alicia Jeffery.

WOODMAN—DAVIS.—In Middletown, N. Y., on Tuesday, January 6th, Dr. Robert Carlisle Woodman and Miss Ethel Louise Davis.

SCHRACK—CAVENY.—In Philadelphia, on Tuesday, January 6th, Dr. William Dunton Schrack and Miss Elinor Pennypacker Caveny.

Died.

AMISS.—In Harrisonburg, Virginia, on Sunday, January 4th, Dr. J. B. Amiss, in the sixty-eighth year of his age.

BEAHAN.—In Rochester, N. Y., on Saturday, December 27th, Dr. James Beahan, in the eighty-first year of his age.

BOGIE.—In Kansas City, Missouri, on Sunday, January 4th, Dr. Marcus A. Bogie, in the sixty-third year of his age.

CLARK.—In Saginaw, Michigan, on Monday, January 5th, Dr. Waldo E. Clark, of St. Ignace, Michigan, in the fortieth year of his age.

FARRAR.—In Richmond, Virginia, on Tuesday, January 6th, Dr. William Field Farrar.

GALLAGHER.—In New York City, on Monday, January 5th, Dr. William C. Gallagher, in the fortieth year of his age.

HAYS.—In Chicago, on Saturday, January 3d, Dr. Jacob Hays, in the sixty-second year of his age.

JAMES.—In Philadelphia, on Tuesday, January 6th, Dr. Bushrod Washington James, in the sixty-seventh year of his age.

LANDIS.—In Boston, on Thursday, December 25th, Dr. Simon N. Landis, in the seventy-fourth year of his age.

LOW.—In Atlanta, Georgia, on Friday, January 2d, Dr. James H. Low, in the eighty-third year of his age.

PADRON.—In New Orleans, on December 30th, Dr. Arthur Joseph Padron.

SCOTT.—In Toronto, Canada, on Saturday, January 3d, Dr. A. Y. Scott, in the forty-second year of his age.

TRIMBLE.—In Washington, D. C., on Tuesday, December 30th, Dr. John Trimble.

VAN OSTRAND.—In Yankton, South Dakota, on Thursday, December 25th, Dr. Henry Van Ostrand, in the eighty-second year of his age.

Miscellaneous.

French Physicians of Old Time and Ecclesiastical Obligations.—According to an ordinance of King Louis XIV, reproduced in the *Revue médicale de Normandie* for October 25, 1902, the physicians of France of those days had to play the part of ecclesiastical policemen, whipping up their patients to a due performance of their religious observances. The ordinance runs as follows:

DECLARATION OF THE KING

WHICH obliges Physicians, Surgeons and Apothecaries, under the penalties imposed by the present Proclamation, to warn the Sick to confess themselves: With prohibition to the said Physicians, Surgeons & Apothecaries, against visiting the said Patients the third day unless a Certificate from their Confessor has been shown to them.¹

Given at Versailles the eighth day of March, 1712.

LOUIS BY THE GRACE OF GOD, KING OF FRANCE AND NAVARRE: To all those who shall see these Presents, GREETING. The attention that We have always given to rendering fruitful the zeal of the Bishops of our Kingdom, in all that they have thought fit to do for the welfare of Religion and the health of the People of their Dioceses, has led Us always to grant them our protection, when they have requested it, & We have deemed it necessary for the execution of their pious intentions: And as nothing has appeared to Us more useful to our Subjects, nor to merit more the support of our authority, than the Ordinance that our very dear and well-beloved Cousin the Cardinal de Noailles, Archbishop of Paris, has thought fit to make on March 9, 1707, to call upon the Physicians, conformably to the Decrees of the Holy Councils, & among others of a Council held at Paris in 1429, & of many Provincial Councils of our Kingdom, to warn the Sick of his Diocese, from the commencement of their illnesses, to pay attention to their consciences, and not to defer speaking about them until such time as the gravity of the disease no longer admits of putting them in order, with the necessary freedom and attention; We have learnt with pain, that so salutary an Ordinance, has not had up to the present the compliance that it deserves: & fearing that the one made by our said Cousin the Cardinal de Noailles on the sixteenth of last month, to renew the former one, has not had greater success, & that similar Ordinances that other Bishops of our Kingdom have made, or may make on the same matter, will remain also without result, if We do not assure its execution, by the fear of temporal punishments; We have resolved to invest it with our authority, in the manner which has seemed to Us most suitable. **FOR THESE REASONS** & others directing Us to this, of our certain knowledge, plenary might & Royal authority, We have by these Presents signed by our hand, said, declared & ordained, do say, declare & ordain, our Will & Pleasure, that all the Physicians of our

Kingdom, be enjoined the second day that they shall visit Patients attacked with fever, or other disease, which by its nature may result in death, to warn them to confess themselves, or to cause advice to be given them so to do by their Families; & in case that the Patients or their Families should not appear disposed to follow this advice, the Physicians shall be enjoined to give notice thereof to the Curate or the Vicar of the Parish in which the sick persons reside, & to obtain a Certificate signed by the said Curates or Vicars, showing that they have been advised by the Physician to go and see the said Patients. **WE FORBID** Physicians to visit them on the third day, if it does not appear by a Certificate signed by the Confessor of the said Patients, that they have been confessed, or at least that he has been summoned to see them, & that he has seen them in effect, to prepare them to receive the Sacraments. **PROVIDED** that the Physicians who shall have notified the Curates or Vicars of Parishes where the Patients reside, may continue to visit the said Patients, without incurring the penalties below laid down; & We charge in this case, the honour and the conscience of the Curates or Vicars, to furnish to the Patients the spiritual aid of which they are in need. **IT IS OUR WILL** that such Physicians as shall have contravened our present Declaration, be condemned for the first offence to a Fine of three hundred pounds, that they be suspended for the second offence, from all function & practice during three months; & for the third declared deprived of their Degrees, & that they be erased from the Roll of Doctors or Licentiates of the Faculty where they may have taken their Degrees, & be deprived for ever of the right to practise Medicine in any place in our Kingdom. **WE ORDAIN** that the same shall prevail in like manner, & under the same penalties, with the Surgeons & Apothecaries, who may be called to see Patients in places where there are no Physicians. **FURTHER** it is not our purpose to exempt Physicians, or Surgeons & Apothecaries in the said places, from warning the Sick, even before the second day of their diseases, to confess themselves, when the nature of the illness shall require it. **IT IS OUR WILL** that those who shall fail therein, be subject to the penalties imposed by our present Declaration. **SO WE GIVE IT IN COMMAND** to our trusty & well-beloved people holding our Court of Parliament at Rouën, that they cause these Presents to be published & registered, & the things contained herein to be kept & observed: **FOR SUCH IS OUR PLEASURE.** In witness whereof We have here affixed our Seal. **GIVEN** at Versailles the eighth day of March, in the year of grace one thousand seven hundred & twelve: And of our Reign the sixty-ninth. Signed, LOUIS. And subscribed, By the King, PHELYPEAUX. And sealed with the grand Seal in yellow wax.

Registered in the Registers of the Court; Heard, and at the requisition of the Procurator General of the King, to be executed according to its form and tenour, immediately following on the Stay intervening for the verification of the said Declaration. At Rouën in Parliament, the Hearing of the said Court sitting, the twelfth day of April one thousand seven hundred & twelve. Signed AUZANET.

¹ ROUËN, of the press of MAURRY, Printer in ordinary to the King, at the corner of the Fontaine St-Lô, at the Printing Press of the Jouvete, MDCCXII. WITH THE PRIVILEGE OF HIS MAJESTY.

Pith of Current Literature.

PRACTICE OF MEDICINE.

The Diagnostic Value of Bronchial Casts.—Dr. Th. G. Ianovski (*Roussky Vrach*, November 30th) reports a case in which he found many fibrinous casts from the bronchi. The patient was a woman, aged twenty-seven years, who had suffered from acute articular rheumatism some years previously. Two months before admission there appeared dyspnoea, palpitation, and oedema of the legs, ascites, etc. The upper right lobe showed dulness and bronchial breathing, and there was a systolic and a presystolic murmur at the apex. The expectoration was bloody, nummular, such as occurs in hæmorrhagic infarcts, and contained a considerable number of bronchial casts. This continued for five days, when the patient began to get worse and died on the fifteenth day. The autopsy showed dilatation of the heart, endocarditis in the aortic and mitral valves, mitral stenosis, chronic adhesive pleurisy on the right side, acute serofibrinous hæmorrhagic infarct in the left lung, sclerosis of the liver, and infarcts of the spleen and of the kidney. The upper lobe of the right lung was consolidated, studded with caseous masses, and contained a hæmorrhagic infarct. There was no reason to suppose the presence of a fibrinous bronchitis, and the casts evidently depended upon the infarct. The size of the casts was considerable. Some of them were eight centimetres long when unrolled, and the diameter of the branches was from three to four millimetres. When expectorated they were faintly pink, but quickly lost this color on washing in water. They were solid, homogeneous on section, and consisted microscopically of straight parallel fibres closely packed with a small amount of homogeneous binding substance containing a number of red and white blood cells. These casts responded to the fibrin test and cleared up immediately on the addition of acetic acid. They differed from the casts of pneumonia by the greater thickness of their fibre, the straight and parallel arrangement of these fibres, and the small amount of binding substance. They differed from the casts of fibrinous bronchitis by the absence of the characteristic arrangement in layers. As regards the mechanism of these casts in hæmorrhagic infarcts, it is probable that in cases of cardiac origin, the circulation around the bronchi is so disturbed that the fluid which is poured into these passages is rich in fibrin-forming substances, and that as a result it clots quickly, filling up the bronchi in the neighborhood.

A Case of Interlobular Pleurisy with Rupture of the Pus Subcutaneously.—Dr. I. V. Studzinsky (*Roussky Vrach*, November 30th) reports the case of a man, aged twenty-four years, who gave the history of an attack of pleurisy three weeks before, and entered hospital complaining of a swelling in the back, anorexia, general weakness, and chilly sensations recurring periodically. The left side moved less with respiration than the right and there was a swelling between the spine and the left scapula; the lower end of the swelling was larger than the upper and it felt like a sac under the skin.

On percussion this sac seemed partly filled with liquid and gas, the skin was unaltered over it, and the ribs were normal. Pus obtained from this sac after puncture gave a pure culture of *Staphylococcus pyogenes albus*. The sac gradually became smaller until a month later, when it entirely disappeared. This was undoubtedly a case of interlobular empyema which had burst under the skin and at the same time into a bronchus (as evidenced by the abundant purulent expectoration of which his previous history had spoken).

Congenital Hypertrophic Stenosis of the Pylorus. By Dr. C. Rivière (*Lancet*, December 27th).—Of late many instances of this affection have been reported by various observers. Formerly it was held to be a rare condition, and to the morbid anatomist it still remains a rare disease. The author holds that the increased number of cases reported is due to mistakes in diagnosis—the mistaking of cases arising from other causes than this condition. It is not a condition which is likely to be caused by spasm, but is probably due to a primary error of development. Two other conditions closely resemble it—congenital hypertrophy or hyperplasia of the colon, and congenital hypertrophy or hyperplasia of the urinary bladder with hydronephrosis and dilated ureters. In neither of these conditions, also, can any obstruction be found, to account for the secondary hypertrophy. The author reports the case of a male infant, aged three weeks. Since the second week there had been no movement of the bowels and the child had wasted rapidly. Later, vomiting set in, with diarrhoea, there being from two to eight movements daily. The child lived almost three months, there being but little loss of weight. He weighed five pounds six ounces when first seen and five pounds three days before death. At the autopsy the pylorus was found to be represented by a cylinder one inch long, its circumference internally being three quarters of an inch. All the coats appeared to be thickened. The end bulged into the duodenum with a convex surface, resembling a cervix uteri. The stomach was large and elongated, its wall being greatly thickened. All the other organs were quite natural.

A Lecture on Malaria. By Sir W. MacGregor. (*British Medical Journal*, December 20th).—In this article the author discusses malaria as it occurs in Lagos, and reviews the various methods for its prevention and stamping out. He holds that blackwater fever is malarial in nature, as it never occurs except where malaria is coexistent. The most successful treatment for blackwater fever is the method of Gouzien, consisting essentially in the subcutaneous injection of a standard saline solution, seven grains of sea salt to 1,000 of water. In mild cases, enemata of the solution may be given instead. Fifty-three successive cases were cured by this method. The author strongly recommends Ross's new method of microscopical diagnosis of malaria, which he describes as follows: About 20 cubic millimetres of blood are taken on a slide and spread slightly, by means of a needle, over an area about the size of an ordinary cover glass. It is allowed to dry. Then the film of blood is covered with a

one-per-cent. aqueous eosin solution—the same as is used in the Romanowsky method. The eosin solution is allowed to remain on the film about a quarter of an hour. It abstracts the hæmoglobin of the dried corpuscles, and stains the residual mass of corpuscular stroma with the adherent parasites, the leucocytes and the blood plates. The eosin solution is then gently washed off, and a weak solution of the methylene blue employed for the Romanowsky method is run over the film and left for a few seconds. Then the blue is in turn washed off gently, and the film is dried and mounted in Canada balsam. This method is an enormous advance in saving time and in certainty of diagnosis.

Eleven Acute and Eighteen Chronic Cases of Influenza. By Frederick T. Lord. (*Boston Medical and Surgical Journal*, December 18th).—Dr. Lord, in 100 cases of cough taken from the out-patient service of the Massachusetts General Hospital, found the influenza bacillus present in 60 cases. In 29 of these cases the influenza bacillus was present in overwhelming numbers and it was on these cases that the recorded study was based. Dr. Lord draws the following conclusion from his paper: "(1.) Infection with influenza bacilli is prevalent apart from an epidemic of influenza. Influenza bacilli have been found in the sputa of sixty of one hundred unselected cases with cough. In about one half of these sixty cases the influenza bacilli were in practically pure culture. (2.) There is nothing distinctive in the clinical manifestations of influenza apart from epidemics, and the diagnosis can with certainty be made only by the examination of the sputum for influenza bacilli. (3.) The duration of the cough and expectoration after an attack of acute influenza does not usually exceed six weeks, but in some cases the duration is for months and years. (4.) Many of the cases formerly classed as chronic bronchitis are cases of chronic influenza. (5.) Cases of chronic influenza with paroxysmal dyspnoea may closely resemble asthma. (6.) Chronic influenza is not infrequently mistaken for pulmonary tuberculosis."

A Contribution to the Clinical Study of Anachlorhydria. Researches on Intestinal Putrefaction and their Treatment.—Dr. Luigi Feranini (*Riforma medica*, November 8th, 10th, and 13th) calls attention to the fact that while there are numerous studies on hyperchlorhydria, there are none of consequence on anachlorhydria. Secondary anachlorhydria was first found in carcinomata of the stomach by Golding Bird, in 1842, in atrophic gastritis not associated with a neoplasm by Löwy, Ewald, and others, and in various diseases in which the different secretions are diminished, as for example in acute fevers. Primary anachlorhydria is, however, a condition which has been studied but very little. It does not depend upon a lesion of the gastric mucosa, but upon a depression in the nerve supply of the lining of the stomach, just as certain cases of hyperchlorhydria depend on an increased excitability in the nerve-endings of the stomach. Primary anachlorhydria was first described by Ewald, in 1886, and subsequently, Einhorn, believing that the chief factors in these cases were the

deficiency in ferments and the consequent disorders of proteolysis, called the trouble achylia gastrica. Martins added to this designation the word "simple," in order to distinguish it from the secondary form due to organic lesions of the mucosa. Very few cases of simple achylia gastrica have been published since then. The disorder is found not infrequently in neurasthenics and hysterical persons. It has been stated that while primary anachlorhydria is transient, being functional in origin, secondary anachlorhydria is permanent. This is not a constant rule by any means, as in secondary cases the absence of hydrochloric acid may recur at intervals, and the amount of acid present may fluctuate considerably. The author reports two cases of anachlorhydria in hysterical patients. In the first of these the absence of hydrochloric acid remained for over two months without interruption, although there were no signs of organic lesions of the mucosa, and the anachlorhydria was distinctly primary and functional. In the second case the anachlorhydria was secondary to a chronic gastritis, and appropriate treatment restored the normal amount of hydrochloric acid in the gastric juice. The author also emphasizes the anti-fermentative action of hydrochloric acid, stating that he found that proteids could be converted into peptones by the protracted action of gastric juice deficient in pepsine, and also by the action of such juice without hydrochloric acid, but containing pepsine. As an anti-fermentative, however, hydrochloric acid cannot be replaced in the intestinal tract by any other acid. The author estimated the amount of sulphuric ethers eliminated in a case of anachlorhydria, comparing this amount at various intervals in the case, with the amount of hydrochloric acid in the gastric contents. He found that the amount of sulphuric ether was diminished as the acid increased. The gastric and intestinal mobility are not affected in primary anachlorhydria. In speaking of the treatment of these affections, the author says that symptomatic remedies, such as pepsine, hydrochloric acid, etc., are of only temporary value, as they cease to have any effect as soon as they are discontinued. Wainowitch, Rummo, and others, having found that atropine inhibits the secretion of hydrochloric acid in hyperchlorhydria, Riegel and others tried pilocarpine, the antagonist of atropine, for the opposite effect in anachlorhydria. After having tried in vain the various bitters and disinfectants, the author used pilocarpine in the second case (secondary anachlorhydria due to chronic gastritis), giving one centigramme of the hydrochloride daily by hypodermic injection. Nineteen days later hydrochloric acid appeared in the gastric contents. The symptoms of vomiting, etc., had, however, become less severe from the start of the treatment. Injections of strychnine were also used in the latter part of the disease, when the pilocarpine had already produced its effect. A month under the strychnine treatment brought no diminution in the amount of hydrochloric acid in the stomach. In a third case, hydrochloric acid was found after four days of treatment with strychnine hypodermically, one milligramme being given daily. The author therefore recommends pilocarpine and strychnine as agents that restore the normal hydrochloric acid to the juice, increase the mo-

tility of the stomach, and render the uncertain symptomatic treatment unnecessary.

Report of a Case of Bilharzia from the West Indies. By Dr. P. Manson. (*British Medical Journal*, December 20th).—The author reports a case of bilharzia disease occurring in a man aged thirty-eight years, resident of Antigua, in the West Indies, where he had lived for fifteen years. He complained of headache and lumbar pain, and was somewhat anæmic. Examination of his fæces showed the presence of the ova of bilharzia. With the exception of Mesopotamia, Cyprus, and Mauritius, the disease has hitherto been supposed to be peculiar to Africa.

A Generalization on Aortic Regurgitation. By Dr. H. W. Syers. (*Treatment*, November, 1902).—Only a small percentage of cases of aortic regurgitation are due to rheumatic endocarditis, and in these the mitral valve is almost invariably involved and the cases occur in young people. The majority of cases occur in middle-aged men with a history of syphilis. Overstrain and alcoholic excess also play an important part in the causation of the disease. The patients usually seek advice on account of gastric disturbance, especially flatulence. In addition there is often a complaint of "cutting" or "burning" pain in the precordial and lateral regions. The patients are irritable, apt to take offense easily, and worry about trifles.

Serum Reaction of Bacillus Pestis in Plague. By Dr. R. Row. (*British Medical Journal*, December 20th).—The author's experiments show that when a quantity of serum is infected with an appreciable amount of plague bacilli, and is left alone for twenty or more hours, while the *Bacillus pestis* flourishes in the sera of normal individuals or of advanced or bad cases of plague, it is destroyed in the serum of plague convalescents and inhibited in the serum of plague cases at an early stage of the disease, or those tending to recovery. The value of the reaction is of scientific interest, but of doubtful value from a diagnostic point of view; since the reaction takes twenty hours, while the clinical features develop with such rapidity as to leave no doubt of the nature of the disease.

The Treatment of Diphtheria by the Intravenous Administration of Antidiphtheritic Serum. By Dr. D. L. Cairns. (*Lancet*, December 20th).—The author reports a series of cases of severe malignant diphtheria, in which antitoxine was given by means of intravenous injection, and asserts that the results of antitoxine injection in diphtheria may be improved in two ways: (a) By the use of larger doses than those commonly recommended; and (b) in certain cases by the intravenous use of the remedy. Serum given subcutaneously in its passage through the lymphatic vessels and glands undergoes a qualitative change, whereby its power of neutralizing toxine is considerably diminished. The intravenous administration of antitoxine was first tried in cases of diphtheritic bronchopneumonia, where the diphtheritic process had extended from the throat to the pulmonary bronchioles and alveoli.

This specific bronchitis or bronchopneumonia is the most frequent cause of death after tracheotomy; where it is at all well marked recovery is rare. Tracheotomy fails to relieve the dyspnoea, which is pulmonary and not laryngeal. The author reports five cases of diphtheritic bronchopneumonia treated by the intravenous injection of antitoxine: in all recovery ensued. Cases of the so called malignant type also call for the same mode of treatment; the author reports two in which the patients were apparently moribund, but recovered on the intravenous use of antitoxine. Some of the most obvious results of this mode of treatment are: (1) The strikingly rapid disappearance of the signs of toxæmia; (2) the rapid disappearance of the great glandular enlargement in malignant cases; and (3) in pneumonic cases the marked diminution of the restlessness which is so distressing a feature of such cases. The almost immediate improvement after the intravenous injection of serum in cases of pulmonary diphtheria is most striking. Of fifty cases of diphtheria, in twenty of which the intravenous method was used, only three patients died—a mortality of six per cent. The three deaths were due to (1) malignant diphtheria, (2) paralysis and chorea, and (3) double bronchopneumonia. A serum rash was present in seventy per cent. of the cases. The dose employed subcutaneously varied from 4,000 to 20,000 units, and intravenously from 20,000 to 35,000 units! The largest amount injected was 82,000 units in three separate doses. Despite the large doses, no untoward results beyond the usual serum rash were observed. At no time could the presence of albuminuria be attributed to the use of the serum. The general indications for the use of the intravenous method of treatment are as follows: (1) Malignant forms of the disease—with nasal hæmorrhage, marked adenitis, cellular infiltration, etc.; (2) any marked involvement of the lungs; (3) a moribund condition of the patient on admission; and (4) a profoundly toxæmic condition of the patient. An initial dose of 20,000 units is not excessive, to be repeated in twenty-four hours if the patient has not improved.

Reflexes: their Relation to Diagnosis in Rheumatoid Arthritis. By Dr. R. L. Jones. (*Lancet*, December 27th).—In rheumatoid arthritis the deep reflexes on the diseased side (in asymmetrical cases) are much more brisk than on the other. The superficial reflexes show less uniformity in their behavior. They may be very exaggerated or very sluggish. A striking correlation exists between the diseased joints and certain reflexes. If the joints of the ring and middle fingers are alone affected, the reflex of the flexor tendons at the wrist is increased; if the index finger and thumb are the joints affected, then the flexor tendons respond more vigorously. When the disease is confined to the knee joint the plantar reflex is usually excessive: it is sluggish when the ankle joint is involved. There is a striking harmony between the plantar and gluteal reactions on the same side; this occurs independently of any disease of the hip joint. The knee jerks are often increased to a degree compatible with sclerosis; they may even be clonic, and the same high degree may be reached by the reflexes in the

upper limb. Ankle clonus is fairly common, but only in the more acute forms of the disease. In the few cases where recovery from the fusiform stage of the disease occurs, there is a corresponding wane in myotatic irritability; so that any unusual persistence of the irritability at a high level is significant of an imperfect convalescence, and the possibility of a fresh outbreak is not remote. On the other hand, diminution is of good omen. It must be borne in mind that in very rare cases of rheumatoid arthritis the tendon reflexes are extinguished. The abdominal reflexes are often brisker on the affected side, and the reflexly stimulated functions are occasionally interfered with—defecation, urination, phonation, etc. A rare affection of the muscles subserving respiration occasionally occurs in rheumatoid arthritis. The light reflex of the eye may be diminished or even lost, but the power of accommodation is retained.

The author holds that rheumatoid arthritis owes many of its clinical features to some disorder of the central nervous axis. The evidence in favor of the infective theory is strong, yet proof of change in the spinal cord is wanting. But specificity probably cannot be claimed for any one microbe. Given any source of self intoxication the resulting toxæmia may, through its action in the cord segments, produce what is called rheumatoid arthritis. The changes in the muscular and sensory systems in this disease have been neglected by observers, attention having been fastened upon the joint changes.

Unrecognized Influenza. By Dr. J. W. Washbourn and Dr. J. W. H. Eyre. (*British Medical Journal*, December 20th).—In making autopsies upon cases of bronchopneumonia the authors have frequently found the influenza bacillus in the lungs in cases in which the disease was not suspected. An interesting point bearing upon the pathogenesis of the influenza bacillus was observed during the progress of the work. Pfeiffer and Cantani have stated that while intravenous injections of the influenza bacillus into rabbits cause paralysis of the hind limbs, and sometimes death, in no case was septicæmic infection brought about. Yet in two instances the intraperitoneal injection into rabbits of material containing the influenza bacillus from the authors' cases, caused septicæmia and death. Yet when the organism was grown upon culture media it lost its virulence, even in the earliest generations.

On "Dysphasia" or Aphasia as an Initial Symptom of Tuberculous Meningitis. By Dr. M. McI. Sinclair. (*British Medical Journal*, December 20th).—The author reports the case of a man, aged twenty-eight years, suffering from pulmonary tuberculosis. He suddenly developed almost complete motor aphasia, both for speaking and writing. He could speak correctly at the beginning of a conversation, but in a few minutes his speech degenerated into mere gibberish. His condition improved slightly the following day, but that night symptoms of meningitis appeared and he died within a week. The author has found two other cases in the literature of the subject, in which the onset of tuberculous meningitis was heralded by an attack

of aphasia. In all the cases the cerebral trouble was secondary to a tuberculosis preexisting elsewhere; so that the author insists that the occurrence of an aphasia, even of a transitory character, in a person already suffering from any form of tuberculous disease, should be looked upon with the gravest suspicion, and regarded as the probable precursor of further meningeal trouble.

SURGERY AND ANATOMY.

Note on the Value of Roux's Operation for the Radical Cure of Femoral Hernia. By Dr. J. C. Renton. (*British Medical Journal*, December 27th).—Roux's operation for the radical cure of femoral hernia consists: (1.) In making an incision over the crural canal. (2.) In isolating the sac, putting a catgut ligature around its neck, and cutting off. (3.) In passing a metal staple obliquely through Poupart's ligament over the crural canal, taking care to avoid the femoral vein, and then gently hammering it into the pubis. (4.) Stitching the skin incision. Care must be taken not to put the staple in too tightly, which would injure Poupart's ligament; still it must be sufficiently secure to prevent any reappearance of the hernia. The staple remains permanently *in situ*; it causes no irritation, and does not injure the bone. The operation can be easily and quickly performed by any one who follows the above steps. Roux has operated on over sixty cases without the retention of the staple giving rise to the least trouble, or the recurrence of hernia.

X Light in Therapeutics. By Clarence Edward Skinner, M. D., LL. D. (*Medical Record*, December 27th).—The x light has been found useful in the treatment of acne, psoriasis, eczema, rheumatism, and some forms of neuralgia. Experiments with these diseases have been limited, however, and too sweeping conclusions must not be drawn. In the case of neuritis, anthrax, lupus, and cancer, some very brilliant results have been obtained. In lupus the curative effect of the ray is greatly increased by combining with it the static brush discharge, the patient being isolated negatively. There are four theories as to how the x ray produces its curative effects in cancer, that are worthy of note: (a) through stimulation of the reparative function of the tissues; (b) the ray exercises a selective destructive influence on aberrant tissues of low vitality; (c) the ray exercises a destructive influence on the cancer germ or increases the resistance of the tissues to the germs; (d) malignant disease is a reversion of tissue to a primitive type, and the ray, by influencing this aberrant tendency, overcomes the condition. None of these theories is wholly satisfactory. For the purpose of x-ray therapy, it is necessary to consider cancer as of two kinds, superficial and deep. The effects on the former are fairly well understood, and the reported cases are numerous. With the latter, little has been done. Thirty-three cases of the author's give the following results: Disappearance of the malignant growth in 3 cases; reduction in size in 13 cases; temporary reduction in size in 1 case; permanent arrest of growth in 2 cases; no effect in the size of the tumor in 14 cases. So far as the pain was con-

cerned, relief failed to be obtained in only 4 cases. The following conclusions are drawn from the cases: (a) The pain in deep seated cancer can be relieved or abolished in a large number of cases; (b) the progress of many cases is markedly retarded; (c) some cases are cured; (d) a small number show no change under treatment; (e) symptoms of toxæmia not infrequently occur during treatment; this self infection is capable of producing death. Small cancers may be treated with the x ray exclusively. With large cancers it is better to call in the aid of surgery, and treat with the x ray afterwards. In small superficial cancers, it makes little difference whether the coil or the static machine is used, but in the treatment of internal cancers the coil is at a distinct disadvantage.

Operation for Chronic Ulcer of the Stomach. By Dr. C. W. Mansell Moullin. (*Lancet*, December 27th).—A chronic ulcer of the stomach rarely heals spontaneously; the longer it lasts the less the chance of healing. Excision of such an ulcer is comparatively simple, and the wound left by its removal heals at once. There is no reason why the operation should be more dangerous than an interval operation for appendicular inflammation, and it offers as certain a prospect of cure. But after complications set in, it may easily become one of the most difficult and dangerous operations in surgery. Such complications are perforation and general septic peritonitis, subphrenic and perigastric abscesses, ulceration into the liver or pancreas, adhesions, hourglass contraction of the stomach, pyloric stenosis, hæmorrhage, and cancer. An untreated and neglected chronic gastric ulcer almost certainly ends in one of them. The author has excised or ligatured in various ways an ulcer of the stomach in thirteen instances. In many the loss of blood had been extreme. In six, transfusion had to be done on the table or immediately afterward. Two patients died; both were almost moribund when operated on. The rest recovered without a bad symptom and were cured. The author is convinced that if ulcers of the stomach were operated upon as soon as it was recognized that they had become chronic there would be many fewer deaths from hæmatemesis and perforation, and that such troubles as pyloric stenosis, hourglass contraction, pain and dyspepsia from adhesions, perigastric and subphrenic abscesses, dilatation of the stomach, etc., would become far more rare than they are now.

OBSTETRICS AND DISEASES OF WOMEN.

Hydrops Tubæ Profluens, with Report of Cases. By F. Hurst Maier, M. D. (*American Medicine*, December 27th).—Two cases are reported and about half a dozen others are cited from the literature. The chief symptoms in the recorded cases were: In Case I, a periodic flow of a large quantity of tea-colored fluid from the vagina, coming with a gush two weeks after the beginning of menstruation. This condition had existed for five years. Examination before the discharge showed on the left side a cyst the size of a large adult fist. After the discharge had occurred the cyst dimin-

ished to the size of a small egg. In Case II, the discharge occurred at irregular intervals only. A tumor the size of a Tangerine orange could be felt on the right side of the pelvis, which disappeared after the evacuation of the fluid. The pathology of this condition is nearly the same as that of ordinary hydrosalpinx, the difference lying mainly in the form of occlusion that exists: in the one, inflammatory changes have destroyed the patency of the canal, while in the other the obstruction is only temporary, the action being purely mechanical. The bacterial origin of the condition has been investigated by Menge and Döderlein, who believe the condition to be due mostly to a mild streptococcus infection of puerperal origin. The gonococcus is probably responsible for a few cases.

Transverse Position of the Child with Prolapse of the Arm and Impaction. By Stricker Coles, M. D. (*American Medicine*, January 1st).—This condition is invariably due to neglect. When it does occur the child may lie in one of four positions, but from the clinical standpoint only two positions need be considered. First, when the child's back is anterior; and secondly, when the child's back is posterior. When the back is anterior it can be shoved up and anteriorly, without very much moving of the head or breech, and then a foot can be brought down without much trouble. The great danger of rupturing the uterus in performing the version must always be borne in mind, for in these cases the uterus is in a state of tetanic contraction and the pressure that it has been subjected to has reduced its vitality. Another great danger is sepsis; and the most scrupulous care is imperative if infection is to be avoided. When the back is behind it is impacted under the promontory of the sacrum, which makes the condition very much harder to treat, for to perform version, the entire child must be shoved up, and this is often impossible without rupturing the uterus. In these cases the patient should be placed under deep chloroform anæsthesia, the bladder and rectum emptied, and the external genitals and the parturient tract rendered as nearly aseptic as possible. The best method of delivery, especially when the back is posterior and the prolapsed arm is gangrenous, is by decapitation with Braun's hook. This should be done at once and no attempts at version made. As soon as the head is severed, by making gentle traction on the arm, the body can be delivered, and then the head extracted by the aid of forceps. If the head is so far up that decapitation cannot safely be done, the prolapsed arm should be amputated and the other arm then brought down and also amputated. This will allow the head to be moved upward and inward, the foot can then be brought down and the delivery completed. The placenta should be removed at once, an intrauterine douche given, and the womb packed with iodoform gauze for thirty-six hours. If there should be a rise of temperature or a foul lochial discharge following the delivery, and a curetting or even an intrauterine douche is decided upon, the greatest care must be exercised or the uterus will be perforated. The records of five deliveries illustrating the author's method are given.

Disease of the Heart as an Indication for the Artificial Termination of Pregnancy.—Dr. I. U. Jacob (*Roussky Vrach*, November 30th) concludes an interesting study of a number of cases of heart disease in pregnant women, by the following summary: Heart disease is a serious, sometimes a very dangerous, complication of pregnancy. Young women with markedly developed heart lesions should be advised not to marry, but in each case the social condition of the patient, in the sense of her material comfort, must be considered. Women with heart disease who have borne one or two children should be advised to "beware of further pregnancy." Artificial labor should be induced at the first signs of a disturbance of compensation. In multiparæ, in whom there have been severe symptoms on the part of the heart during previous pregnancies and labors, the operation should be performed, even when the heart's action is sufficiently compensated. The best time to induce artificial labor is during the fourth or fifth month in these cases. The most trustworthy and rapid method of inducing contraction is by means of the intrauterine balloon, which can be applied without chloroform. In labors at term in women with heart disease, the second stage of labor should be shortened by the application of forceps or by other appropriate means. A woman with heart disease should be under constant medical supervision during pregnancy, labor, and the period after labor, and should remain in bed not less than two weeks post partum.

CUTANEOUS MEDICINE AND SURGERY.

Cutaneous Angiomata and their Significance in the Diagnosis of Malignant Disease: a Statistical Study Based upon the Observation of Nearly Four Hundred Cases. By Douglas Symmers, M. D. (*Medical News*, December 27th).—The author concludes "that skin angiomata bear no relationship to malignant disease and that their existence, even in large numbers, is not to be viewed with any degree of alarm so far as cancer is concerned. That they form a frequent, practically an invariable, concomitant of the decay of advancing years, and in both young and old are probably significant of some form of well marked arterial degeneration." Since writing his article the author has seen Rosenbaum's article based on four hundred similar cases, from which the same conclusions were drawn.

OPHTHALMOLOGY.

A Case of Herpes Zoster Ophthalmicus Complicated by Oculomotor Palsy. By William Zentmayer, M. D. (*American Medicine*, December 27th).—The case is taken as the text for a discussion of herpes zoster ophthalmicus. Paralysis of the ocular muscles as a complication of this affection is rare. There are several theories to account for the oculomotor palsy. Ginsberg holds that in the majority of cases there is an inflammation of the Gasserian ganglion and that the oculomotor nerve becomes involved by continuity. Vernon holds that both these conditions are due to a common cause, that is, to rheumatism. Wyss believes that the paralysis is owing to inflammation

of the muscle tissue. The ætiology of herpes zoster is varied. The present tendency is to view it as an infectious disease. It may be due also to rheumatism, cold, arsenic, self intoxication, etc. Head and Campbell, who have made thus far the most complete pathological study of the condition, believe it to be similar in nature to acute poliomyelitis. The nature of the irritating agent, they believe, is still unknown. What causes the skin eruption is unsettled. Friedreich believes that the inflammation of the terminal nerve filament involves the skin by continuity. Ebstein and Recklinghausen both consider it due to vasomotor disturbance. The theory advanced by Abadie is that the eruption is due to disease of the capillaries, supplying the affected skin area, and of their vasomotor nerves. This latter theory fits most cases very well.

GENITO-URINARY DISEASES.

The Surgical Treatment of the Enlarged Prostate. By George E. Armstrong, M. D. (*Philadelphia Medical Journal*, December 27th).—Operative intervention in prostatic hypertrophy is very unsatisfactory. The author has tried McGill's method of suprapubic removal in nine cases, and has had a large mortality. Sir William Macewen has abandoned this operation for the same reason. Bottini's operation has apparently given fair results. Freudenberg has collected 752 cases in which results were good in 86 (six per cent.), failures were 6 (seven per cent.), and the mortality was 4 (five per cent.). The author is now using a special method, and reports seven cases of his own and three cases by the same method by his colleague, Dr. Elder. The results in these ten cases were good in 5, fair in 3, death in 1, and in one case it is too early to say. Of these cases two had Bright's disease, and one, malignant disease of the prostate. The operation used is performed as follows: By means of a suprapubic section the bladder is entered and the obstructing lobes of the prostate carefully removed by the thermocautery. The internal orifice of the urethra must not be damaged. The advantages claimed for the operation are: First, nothing is done in the dark, and hæmorrhage is under complete control; secondly, the contracting scar resulting from the burn opens and lowers the internal orifice of the urethra and lifts the floor of the bladder; thirdly, a non-absorbing charred surface is left behind and good drainage is easily obtained by means of the suprapubic opening with the addition of a catheter in the urethra. It is not possible in any case to close the suprapubic opening. Dr. Armstrong believes the method to be exceedingly safe in all cases that are seen early.

Suprapubic Prostatectomy.—Dr. Edward H. Taylor (*Dublin Journal of Medical Science*, November) summarizes the important facts in connection with suprapubic prostatectomy as follows: (1) It is an operation from which good results may be expected in suitable cases, *i. e.*, cases in which the enlargement is due to encapsulated masses, especially of the adenomatous type. When the enlargement affects the prostatic tissues in a more or less general manner, an attempt at suprapubic prosta-

nectomy will result in failure. It is also well adapted to cases in which the enlargement is mainly confined to the middle lobe, whether it is due to an adenomatous or a fibromyomatous growth. (2) It is doubtful if the operation should, as a rule, be attempted in very old men, if their vital powers have reached a low ebb, and in whom it is probable that there is grave organic renal disease associated with chronic cystitis of long standing. (3) In the absence of severe cystitis, and provided the patient's health is fairly good, the suprapubic operation may be employed without obvious risk. (4) In prostatectomy, as in other operations of an extensive character, it is desirable that the various steps of the procedure be carried out in as expeditious a manner as possible, consistent, of course, with safety and efficiency. It is an operation in the performance of which a definite policy can be followed, and it becomes much easier in proportion as one acquires familiarity with its details. (5.) Suprapubic prostatectomy, as practised at the present day, remains in its essential features the operation of M'Gill and of the Leeds school. It aims at enucleation of encapsulated growths, and meets all the requirements of the case.

HYGIENE AND SANITARY SCIENCE.

Foot-and-Mouth Disease. By Langdon Frothingham, M. D. V. (*Boston Medical and Surgical Journal*, January 1st).—Foot-and-mouth disease, or epizootic aphtha, is an acute, infectious, exanthematous disease, peculiar to cloven-footed animals both wild and domestic, although the disease may occur in other animals such as horses, dogs, cats, poultry, and occasionally in man. It is the most contagious disease known among animals, and it is not sufficient to quarantine the sick animals alone, but all their products, from milk to manure, must be quarantined. It is this that makes the financial loss of an epidemic so great. There have been, so far, three outbreaks of the disease in the United States; the first in 1870, the second in 1884, and the present one. The following symptoms occur in cattle: after an incubation of from twenty-four hours to five days there are malaise, digestive disturbances and a rise of temperature to about 107° F. This is followed by the eruption of the typical vesicles on the muzzle and in the mouth. When the feet are involved the vesicles appear in the cleft of the hoof and at the coronet where the hoof and the hair meet. If complications do not arise, recovery takes place in from two to three weeks. In man the disease has been frequently observed, especially where the exposure has been very great. Occasionally the vesicles are not confined to the mouth, face, and hands, but may extend over the neck, chest, and arms. The disease is rarely fatal in man, except in children, though Hulin reports a mortality of 23 in a village of 1,000 inhabitants. In adult animals the mortality is from one to five per cent.; in young animals it may vary between fifty and eighty per cent. The true nature of the infection still remains unknown. The subject of immunity is one of great importance, but the problem is beset on all sides by extraordinary difficulties. Loeffler, in Prussia, and Hecker, in Saxony, are each at the head of a government com-

mission whose duty it is to try and solve this difficult problem. So far they have met with no success, though they have thrown much light on the subject, and to that extent have probably brought the solution of the problem nearer than it has been.

Disappearance of Yellow Fever from Havana, Cuba. By W. C. Gorgas, M. D. (*Medical News*, January 3d).—The author reviews the general history of the geographical distribution of yellow fever and shows that the only logical explanation for its persistent restriction to certain regions is on the theory of its being a mosquito-born disease. This theory also explains why the disease is endemic in certain localities and epidemic in others. The only two localities on this continent where the disease is endemic are Havana and Rio Janeiro. In Vera Cruz, Santiago, and other places, while the disease may recur for a number of years in succession, yet it dies out entirely at times, and so is only epidemic in character. These considerations are of importance when it comes to the question of suppressing the disease. An interesting table is given of the yellow fever mortality in Havana from the year 1856 to the year 1901, which shows the brilliant results obtained by the American sanitary department. The measures adopted were based on what was then the assumption that yellow fever was propagated exclusively by the *stegomyia* mosquito. The work of suppression was attempted by the following means: (a) By preventing the female *stegomyia* from biting a patient suffering from yellow fever. This was accomplished by having all cases of yellow fever reported at once and then screening the house at public expense, usually within two hours of the receipt of the notification. The patient was interfered with in no other way. Bedding could be taken in or out, clothing sent to the wash, etc. (b) By attempting to kill all the female mosquitoes that might have become infected in the neighborhood of a yellow fever case. This was accomplished by sealing as completely as possible the infected as well as the adjoining houses, fumigating them with pyrethrum powder, and then removing the dead and half dead mosquitoes. (c) By attempting the destruction of all larvæ of the *stegomyia*, and so reducing the breeding of it. This latter was a task of great magnitude and the three following general measures were employed: First, the fresh water (rain water) collecting cisterns were made mosquito proof. Secondly, cesspools were treated with petroleum about once a month. Thirdly, drainage of wide areas was energetically undertaken. When drainage was not possible petroleum was used. The use of petroleum should be looked upon, however, as an acknowledgment of failure. A fourth general measure, adopted later, and designed to prevent the importation of cases from the outside, consisted in subjecting all non-immunes to a daily inspection by a medical officer, until six days had expired from the time of their last exposure. This measure was entirely successful, as of 1,275 non-immunes that came to the city, 27 developed yellow fever, and yet in no case was the fever developed in which the subject was not under the observation of an inspector, and in no case did the disease spread. The results have been

most brilliant. Havana has never been free from yellow fever in the past 130 years of its history, and the mortality from this disease has been on an average of from 500 to 1,000 deaths a year. The first fumigation was made on February 4, 1901, and the death record to date is as follows: in January 7; in February 5; in March 1; in April, May and June 0; in July 1; in August and September, 2, and from that time to the present none. In conclusion we quote: "And with Rio and Havana gone as foci of infection, I think that yellow fever would gradually become a disease of the past, the first disease to become extinct, of which man has any history. And the parasite of yellow fever, like the dodo and the buffalo, will disappear from his earthly haunts."

MATERIA MEDICA, PHARMACY, AND THERAPEUTICS.

Ethyl Chloride as a General Anæsthetic. By Charles Greene Cumston, M. D. (*Boston Medical and Surgical Journal*, January 1st).—Only pure ethyl chloride should be used. The author recommends either "Kelene," "Antidolorin" or "Anodynone." Of special inhalers there are two on the market; one manufactured by the makers of "kelene," which is useful but expensive, and the other made by Tiemann & Co., on the pattern devised by Dr. Ware, which is low in price and gives satisfactory results. It takes about 10 c. c. of ethyl chloride to produce a satisfactory anæsthesia of about four minutes' duration. The advantages claimed for this anæsthetic are: (a) Rapidity in obtaining narcosis and in recovering consciousness; (b) absence of nausea and vomiting; (c) freedom from danger. The objections to its use are: (a) The brevity of the unconsciousness; (b) the lack of complete muscular relaxation; and (c) the newness of the agent. The indications for its use would seem to be, first, in all operations of short duration; and second, in starting a narcosis which is to be prolonged with either chloroform or ether. In these latter cases the preliminary period of excitement can be reduced to a minimum and the narcosis will not be followed by much nausea or vomiting. To conclude: " . . . as to contraindications, it may be said that up to the time of writing none have been given. The method is as yet too young for us to assert that such will always be the case." Forty-five illustrative cases conclude the article.

PHYSIOLOGY AND PATHOLOGY.

Errors in the Estimation of Urea by the Hypobromite Method. By Elliott P. Joslin, M. D. (*Boston Medical and Surgical Journal*, December 25th).—The estimation of urea for clinical purposes is usually performed by the hypobromite method and it is therefore well to know that this method has its limitations. In a case of diabetic coma studied by the author, the hypobromite method, using Squibb's apparatus, gave an error of nearly one hundred per cent. The reason for this was that, in diabetes, in addition to other substances, we find in the urine ammonia, acetone and b-oxybutyric acid. These substances are decomposed

by the hypobromite solution and water is displaced in the Squibb apparatus in exactly the same way as if urea had been present. The following check test is recommended. Diacetic acid is sought for by the ferric chloride method. When this test is positive, acetone and b-oxybutyric acid are always present and an excess of ammonia is probable. In such cases the hypobromite method of determining the quantity of urea will give fallacious results.

Tabes and Aortitis.—Dr. Pier Francesco Arulani (*Riforma medica*, November 6th and 7th) calls attention to the frequency with which tabes dorsalis and aortic insufficiency are found associated. He reports two cases in which the symptoms showed the presence of both these conditions. Tabes and aortitis are certainly more frequently concomitants than is generally supposed. A careful and minute examination of the heart and arteries is necessary in all cases of tabes in order to define the frequency of aortic lesions in tabetics. The presence of an aortitis as an accompaniment of tabes explains the clinical fact noted some time ago that, if a patient with locomotor ataxia has a heart lesion, it is generally aortic insufficiency. This insufficiency is almost always relative, *i. e.*, dependent upon a dilatation of the aorta which has undergone changes of inflammatory character, and may be present without attracting any notice on account of the indistinct murmur which it produces at the beginning. The murmur often becomes apparent only after exertion, and often the aortic lesion is only discovered at autopsy. The frequency of aortitis in tabetics also explains the occurrence among these patients of aortic aneurysm, and it must not be forgotten that the same toxic cause that produces these also produces arteritis, namely syphilis. The question as to whether the nervous lesion in locomotor ataxia has anything to do with causing, or at least aggravating, the vascular lesion of aortitis and aortic aneurysm is one that has not been studied as yet.

The Influence of the Micrococcus Tetragenis on Tuberculosis of the Lungs.—Dr. Alberto Michelazzi (*Riforma medica*, October 18th and 20th) concludes his researches regarding the relations between the micrococcus tetragenis and the bacillus of tuberculosis in the lung as follows: The *Micrococcus tetragenis* offers an obstacle to the development of the bacillus of tuberculosis. The tetragenis, if inoculated previously in an animal, not only inhibits the growth of the tuberculosis bacillus, but also the spread of tuberculosis into other organs than the lung. This effect is not observed, however, if the infection with the bacillus precedes that with the tetragenis. In the latter case the tubercle bacillus develops with virulence in the lungs and invades the body in general. The lesions found in guinea pigs after the inoculation of the tetragenis are exactly similar to those induced by the presence of the tubercle bacillus, *i. e.*, tuberculous pneumonia, cavities, etc. These lesions, when found in man, may be due to the action of the *Micrococcus tetragenis*, and not of the tubercle bacillus.

Book Notices.

A Textbook of the Science and Art of Obstetrics.

By HENRY J. GARRIGUES, A. M., M. D., Consulting Obstetric Surgeon to the New York Maternity Hospital, etc. With Five Hundred and Four Illustrations. Philadelphia and London: J. B. Lippincott Company, 1902. Pp. xxx-844.

The appearance of a new textbook on obstetrics calls for extended notice, especially when it comes from an obstetrician and teacher of the fame of Dr. Garrigues. That he has produced a textbook of merit, fit to be associated with his textbook on diseases of women, goes almost without saying. Here and there differences of opinion from those of the majority of teachers of midwifery appear, the most serious being the author's firm belief in the value of symphysiotomy. In general, however, the text is most modern in its thought, and its didactic value is enhanced by this fact and by the additional one of the great experience of the author, which is reflected in every page. In the science of obstetrics purely, that is, in those elements of the subject which appertain to embryology and to the anatomy and physiology of the organs concerned in reproduction, we find, of course, nothing novel or new, but the facts are presented in an attractive way and the illustrations of this branch of the subject are secured from trustworthy sources.

The author, as we have noted, is an advocate of symphysiotomy when the indications offered by the pelvis are present. His plea is an ingenious one, and he does not belittle the dangers or the disadvantages of the operation; also he admits that the indications based on pelvic measurements are not always reliable. With Pinard's influence for the operation and Leopold's against it, there is still, it appears, a difference of opinion on this question; and we believe, in this as in other mooted points, a teacher of midwifery should not throw the weight of his opinion upon the radical side when the followers of his advice—frequently untrained—may easily meet with disaster.

In normal cases, the author prefers the side position for delivery, placing the patient in the dorsal decubitus for the third stage. Spinal cocainization is dogmatically condemned as an unnecessary and dangerous procedure, and hypnotism as an anæsthetic is considered useless. While Dr. Garrigues deplores the necessity of midwives, he is an advocate of measures to reduce their harmfulness to the utmost. He speaks of the perineal injuries he has seen in dispensary practice as evidence of the injury which they inflict on patients, and says that undoubtedly had they been primarily repaired, the patients would have been saved much suffering. The reviewer has seen the same thing again and again, and some three or four years ago, when an agitation against midwives was in progress in New York, he took occasion to question his dispensary patients. About fifty per cent. of those presenting perineal and cervical lesions had been delivered by physicians, so that the fault is not entirely that of the midwife. Primarily, it lies in the method of instruction of medical students in the obstetrical art. While we cannot fail to recognize the faults in a system which permits untrained

midwives to practise their art, we must simultaneously condemn the improper instruction of the physicians who are supposed to be their superiors.

Among the minor things to criticize in Dr. Garrigues's book are his tacit permission to bathe the baby soon after its birth—to which custom Jacobi assigns many cases of bronchopneumonia in the new-born—and his failure to mention placing the new-born infant on its right side immediately upon its birth. The author temporizes too long, we think, in cases of placenta prævia when the child is not yet viable. In our experience, the first hæmorrhage is a danger signal which must not be toyed with. Again, no mention is made of the urea test in the urine of pregnant women, but stress is laid upon albuminuria. While authorities still differ upon this point, it is well for a teacher, we believe, to point out that eclampsia is no single entity, that it does not depend upon albuminuria alone, that it does not depend upon a diminished excretion of urea alone, but that it is a complex of symptoms to which the student's attention must be carefully drawn and which he must conscientiously study.

In the main, as we have indicated, the teaching of the book is *en rapport* with the thought of the day, and especially does the author teach the great lesson of asepsis with ever recurring emphasis. It is a safe book and a most laudable effort to present to the student the science and art of obstetrics as it is understood at the present time. The illustrations are, many of them, original, and, with a few exceptions, as on pages 195, 197, and 199, are clear and expressive.

Physical Diagnosis. Disease of the Thoracic and Abdominal Organs. A Manual for Students and Physicians. By EGBERT LE FEVRE, M. D., Professor of Clinical Medicine and Associate Professor of Therapeutics in the University and Bellevue Hospital Medical College, etc. Illustrated with 74 Engravings and 12 Monochrome Plates. Philadelphia and New York: Lea Brothers & Company, 1902. Pp. viii-17 to 448.

Entirely too little of merit has been written in the English language upon this most important subject, and we are glad to be enabled to note this book as a valuable addition to the list. The author has laid great stress upon the relation which the anatomy of the organs under consideration bears to the physical signs. In every instance he explains the causation of the various signs, both normal and pathological, thus rendering his treatment of the subject more comprehensive and interesting. Sufficient of pathology and physiology is interspersed to give the student a satisfactory idea of what he is studying.

A short account of examination with the x ray, together with a few photographs, is appended. The work is written in a clear, concise, and careful manner, and the author has succeeded in rendering entertaining what is ordinarily rather heavy reading. We take pleasure in recommending the book most highly to both students and practitioners, and feel certain that it will meet with the success which it merits.

Directions for Laboratory Work in Physiological Chemistry. For the Use of Students in the University and Bellevue Hospital Medical College. By HOLMES C. JACKSON, Ph. D., Instructor in Physiological Chemistry. First Edition. New York: John Wiley & Sons, 1902. Pp. v-62. (Price, \$1.)

In the preface, the author states that the book is intended especially for students in the course on physiological chemistry, as given in the University and Bellevue Hospital Medical College. The subject is covered in an elementary but fairly complete manner. The book is full of questions and tests, the answers and solutions of which are probably to be worked out in the classroom. It is written in a clear and concise manner.

International Clinics: A Quarterly of Illustrated Clinical Lectures and Especially Prepared Articles on Medicine, Neurology, Surgery, Therapeutics, Obstetrics, Pædiatrics, Pathology, Dermatology, Diseases of the Eye, Ear, Nose, and Throat, and other Topics of Interest to Students and Practitioners. By Leading Members of the Medical Profession throughout the World. Edited by HENRY W. CATTELL, A. M., M. D. Volume III. Twelfth Series. Philadelphia: J. B. Lippincott Company, 1902. Pp. viii-306.

This volume of a well known publication embraces articles on therapeutics, medicine, surgery, obstetrics, and gynæcology, diseases of the eye, ear, and throat, and two special articles, one on *The Function of the Digestive Glands*, by Dr. Borrissoff, of St. Petersburg, the other on *A Theory of Inflammation*, by Professor Hans Schmaus, the famous Munich pathologist. The articles are all of interest, and some of them are splendidly illustrated. We have before pointed out the high didactic value of this series of books.

Cancer of the Uterus. A Clinical Monograph on its Diagnosis and Treatment, with the After-results in Seventy-three Cases Treated by Radical Operation. By ARTHUR H. N. LEWERS, M. D., Lond., F. R. C. P., Lond., Obstetric Physician to the London Hospital, etc. With 51 Original Illustrations and 3 Colored Plates. Philadelphia: P. Blakiston's Son & Company, 1902. Pp. xiii-328. (Price, \$3.)

Next to the fight against tuberculosis, it is safe to assume that the combat against cancer occupies most largely the professional mind. Every scientific contribution to the subject is of importance, if based upon exact observation and tempered with judgment. Dr. Lewers's book, while entirely clinical in its treatment, and therefore not in any sense comparable with Cullen's superb work, possesses such a character.

The main points for which the author contends are the early recognition of malignant disease of the uterus, the excellent outlook for permanent relief secured by early operative intervention, and the promulgation of knowledge among women of the early signs of uterine carcinoma. The early symptoms and signs of cancer are well depicted, and the methods of recognition are thoroughly described.

The author records nineteen cases of his own, fourteen of the cervix, and five of the body of the uterus, in which there has been no return in from four to fifteen years. Cancer of the body of the uterus is notoriously not so fatal as that of the cervix, yet its early recognition is sometimes more difficult. Dr. Lewers has fortified the diagnosis in these nineteen cases by microscopical evidence.

The book is an interesting, scientific monograph, and will be read, no doubt, by those interested in the subject. The illustrations are fair only, but are clearly reproduced and enhance the interest of the text.

New Inventions.

THE ORTHOPÆDIC HOSPITAL PELVIC REST.

By RUSSELL A. HIBBS, M. D.

The accompanying photographs show a pelvic rest which I have used for some time at the Orthopædic Hospital, in the application of the plaster dressings after reduction of congenital dislocation of the hip.



FIG. 1.

This rest with its attachments for the head and shoulders holds the patient's body securely in a horizontal plane, thus making the application of the dressings less difficult than does the simple rest



FIG. 2.

ordinarily used which elevates only the pelvis, and is also insecure. The rest here shown is made of sheet steel and is adjustable to any patient.

Lorenz a Theme for Poets.—The following verses appeared in the *Sun* for December 20th:

LORENZ.

How fade the glories of the kings of earth,
The triumphs of the Cæsar and the Star
That rose o'er France—all, all seem nothing worth
Where one true man and Love and Wisdom are!

JOHN JEROME ROONEY.

Miscellany.

The late Dr. Henry J. Bigelow on Vivisection.

—At the request of the corresponding secretary of the American Antivivisection Society, we publish the following, which is said to have been written by Dr. Bigelow a short time before his death:

The worst vivisection is oftener mitigated by anæsthetics than formerly, and antivivisectionists deserve the credit of the change. But, on the other hand, there is a great deal more vivisection now, and more work is required to keep it within proper limits.

There can be no question that the discussion of vivisection arouses antagonistic human instincts. It is no common subject which enlists such earnest and opposite opinions. That there is something wrong about it is evident from the way in which the reputation of its inflicting torture is disclaimed. That for some reason it is a fascinating pursuit is equally evident from the bitter contest made for the right to practise it.

Having, in another connection, clearly stated my own views upon this subject, I need not again re-cite them in detail. There is little in the literature of what is called the horrors of vivisection which is not well grounded on truth. For a description of the pain inflicted I refer to that literature, only reiterating that what it recounts is largely and simply fact—selected, it may be, but rarely exaggerated.

Vivisection is not an innocent study. We may usefully popularize chemistry and electricity, their teaching and their experimentation, even if only as one way of cultivating human powers. But not so with painful vivisection. We may not move as freely in this direction, for there are distinct reasons against it. It can be indiscriminately pursued only by torturing animals; and the word "torture" is here intentionally used to convey the idea of very severe pain—sometimes the severest conceivable pain, of indefinite duration, often terminating, fortunately for the animal, with its life, but as often only after hours or days of refined infliction, continuously or at intervals.

A man about to be burned under a railroad car begs somebody to kill him. The Hindu suttee has been abolished for its inhumanity, and yet it is a statement to be taken literally that a brief death by burning would be considered a happy release by a human being undergoing the experience of some of the animals who slowly die in a laboratory. Scientific vivisection has all the engrossing fascination of other physical sciences, but the transcendent torture sometimes inflicted has no parallel in any one of them. As to its extent, we read that in the course of ten years seventeen thousand dogs were dissected alive in one laboratory.

The difficulty is that the community, for want of time or opportunity themselves to investigate the subject, are willing to rely upon the discretion of scientific men. This is an error. In matters of this sort people are reluctant to doubt the infallibility of their doctors. A recent Boston journal says: "The scientists who practise vivisection are neither brutes nor savages, and it is going to be hard work to convince sensible people that they are." The answer to this remark is, that it would have formerly ap-

plied with equal force to the upholders of slavery, and yet, after some hard work, sensible people were convinced and abolished it.

A recent distinguished writer, a good judge of men, makes the following observation: "Who can say why the votaries of science, though eminently kind in their social relations, are so angular of character? In my analysis of the scientific nature, I am constrained to associate with it, as compared with that of men who are more Christians than scientists, a certain hardness, or rather indelicacy of feeling. They strike me as being somewhat unsympathetic, and capable only of cold friendship, coolly indifferent to the warmer human feelings."¹

It should not for a moment be supposed that cultivation of the intellect leads a man to shrink from inflicting pain. Many educated men are no more humane, are in fact far less so, than many comparatively uneducated people. Having seen something of surgery for half a century, I unhesitatingly give the opinion that unwillingness to inflict physical pain, whether upon man or brute, is largely an implanted instinct, with which human nature is very unequally endowed; also, that this instinct becomes blunted by habit. The more eminent the vivisectionist, the more indifferent he usually is to inflicting pain; however cultivated his intellect, he is sometimes absolutely indifferent to it.

Let us consider the question of the abstract right to vivisection. A dog has at least as perfect senses, as acute feeling, and as perfect physical machinery, as a man. He has also a not inconsiderable share of the mind possessed by the human race. The right to vivisection a dog for the benefit of mankind inevitably involves the right, apart from human legislation, to dissect alive a living idiot or the lowest grade of savage.

The argument may be stated thus. Man has no prescriptive right to torture his fellow-man for his own benefit, no matter how imperfect or defective his organization may be. On the same ground, he has no prescriptive right to torture an intelligent dog, a horse, or an elephant for profit, unless it can be distinctly shown, from a scientific as well as a theological standpoint, that man is the highest creation possible to the universe—that he possesses the might that is said to make right. On that questionable ground—for there is no other—man might offer a plausible pretext for subjecting the world beneath him to torture which he can sometimes turn in a comparatively small degree to his own advantage.

But is it the case? Man is but a parasite upon a speck of dust whirling in infinite space. Who will deny that in infinite space there are higher beings than man? The possibility is all that is needed for the argument. The vivisection of dogs would undoubtedly object to being himself dissected alive by a superior being for the good of anybody, whether in the pursuit of science or of a fascinating amusement or with the hope of making a discovery or of increasing the reputation of a college or of gaining a little scientific prominence. In offering this objection to being himself dissected alive for the benefit of somebody else, the vivisectionist would have the support of the community. Why, then, has not

¹Henry M. Stanley, *In Darkest Africa*, Vol. II., p. 161, 1890.

the dog a right to the active defense of the community?

But, in order to oppose vivisection to the best advantage, and especially lest he place himself in a false position, the antivivisectionist should bear clearly in mind that what he opposes is *painful* vivisection only. For there have been wholly painless experiments upon living animals which have led to useful results. Some of the greatest discoveries in medical science were made with no pain whatever; except by a perversion of the term, they involved no vivisection. And yet they have been often and sophistically cited by the vivisector as plausible argument for inflicting both excessive and useless pain. The fact that a few able men have made discoveries by certain painless experiments upon living animals is used to justify the demonstration of torture to medical students—to whom it is as profitless as any medical information can be—and its practice by them. The discovery of anæsthesia has been time and again quoted in favor of vivisection. This is simply preposterous. In making that discovery the experiments from the beginning were painless, and were therefore wholly unobjectionable, as I happen to know, having seen the first of them. The same is true of Jenner's vaccination, which was a wholly painless discovery. Little pain was involved in all that was needed to discover the circulation of the blood, which was inferred from the valvular construction of the veins and then easily substantiated.

The greatest prizes in the lottery of physiological and pathological discovery have involved little or no pain. But the usual and staple work of so called laboratory of vivisection, physiology or pathology, for the education and practice of medical students in the unrestricted cutting of living animals, *and for the indiscriminate and endless repetition of experiments already made*—where a live dog can be bought and his living nerves dissected, exactly as, in a common dissecting-room, you can buy a dead human subject and dissect its nerves—all this is a very different affair.

A distinguished vivisector once remarked: "To us pain is nothing." When it is remembered that this pain may be, and sometimes intentionally is, of the most excruciating nature possible for human science to invent, and that in a large majority of instances it is to little or no purpose, the remark of this vivisector covers the objectionable ground.

There is no objection to vivisection except the physical pain it inflicts. I believe that in the end it will be advantageous for both the vivisectionist and his opponent to recognize the line which this fact suggests. But it is exceedingly hazardous at the present time to draw this line, or to compromise with and justify even painless experimentation upon living animals, because there can be no question that the practice of vivisection hardens the sensibility of the operator and begets indifference to the infliction of pain, as well as great carelessness in judging of its severity.

Indeed, vivisection will always be the better for vigilant supervision, and for whatever outside pressure can be brought to bear against it. Such pressure will never be too great, nor will it retard progress a hair's breadth in the hands of that very limited class who are likely materially, to advance

knowledge by its practice. The ground for public supervision is that vivisection, immeasurably beyond any other pursuit, involves the infliction of torture to little or no purpose. Motive apart, painful vivisection differs from that usual cruelty of which the law takes absolute cognizance, mainly in being practised by an educated class, who, having once become callous to its objectionable features, find its pursuit an interesting occupation under the name of science.

In short, although vivisection, like slavery, may embrace within its practice what is unobjectionable, what is useful, what is humane, and even what is commendable, it may also cover, like slavery, what is nothing less than hideous. I use this word in no sensational sense, and appeal to those who are familiar with some of the work in laboratories and out of them to indorse it as appropriate in this connection.

In order that painful vivisection may be as nearly as possible suppressed, not only by public opinion, but by law, it is essential that public opinion should be frequently informed of what it is and may be. Here lies the work of the antivivisectionist. Further, every laboratory ought to be open to some supervising legal authority competent to determine that it is conducted from roof to cellar on the humanest principles, in default of which it should be, as slavery has been, uncompromisingly prohibited wherever law can accomplish this result.

The whipping post, the knout, flogging in the navy, the *auto da fé*, the burning of martyrs and of witches—all have been, or are, considered to be right and justifiable. When the Church ruled governments, men were burned to death for the glory of God and the advantage of religion. Although religion is better understood, and a correct knowledge of physical facts is the aim of a large part of the learned world, worse horrors still exist, and men learned in a new direction are perpetrating them. A torture of helpless animals—more terrible by reason of its refinement and the effort to prolong it than burning at the stake, which is brief—is now being carried on in all civilized nations, not in the name of religion, but of science.

"But burning was useless, while vivisection is profitable." Here we reach the kernel of the argument of the pain-inflicting vivisector. The reply is that by far the larger part of vivisection is as useless as was an *auto da fé*. It does not lead to discovery. The character of the minds of most of those who usually practise it makes this hardly a possibility. Real discoverers are of a different texture of mind, which you cannot create by schools; nor can you retard their progress by restrictions, put on all you may. But restrictions will and should cut off the horde of dull torturers who follow in the wake of the discoverer, actuated by a dozen different motives, from a desire for research, down to the wish to gratify a teacher or to comply with a school requisition.

Every discoverer of a new truth, or inventor of the method which evolves it, makes a dozen, perhaps fifty, useless combinations, experiments, or trials for one successful one. In the realm of electricity or of mechanics there is no objection to this. But when such rejected failures involve a torture

of animals, sometimes fearful in its character, there is a distinct objection to it. If a class of young men having no special aptitude for making discovery—for in this particular the chances are very largely against any of them—are encouraged to practise themselves in its pursuit by exploring living nerves as they would the electric coil, it is time to object further. The law should interfere. There can be no doubt that in this relation there exists a case of cruelty to animals far transcending in its refinement and in its horror of anything that has been known in the history of nations.

There will come a time when the world will look back to modern vivisection in the name of science as it now does to burning at the stake in the name of religion.

Bloodless Reduction of Congenital Dislocation of the Hip-joint and Demonstration of Several Cases.—This is a report (*Chicago Medical Recorder*, November) of a demonstration by Professor Lorenz to the Chicago Medical Society, on October 15th, and being presumably the *ipsissima verba* of the professor himself, we transcribe it, as likely to be of special interest to our readers on that account.

"CASE I.—This is a case of bilateral dislocation. The prominence of the great trochanter is visible on both sides. The highest point of the trochanter is about 4 cm. above Nelaton's line. The degree of abduction is diminished. You can see the prominent ridge formed by the adductor muscles when the leg is abducted. The soft parts are rather resistant. Although this child is only five years old, I think it will be rather difficult to reduce the dislocation.

"We begin by making a little extension of the leg, followed by a free rotary movement. Then I try to overcome the contracture of the soft parts and especially of the adductor muscles. In bilateral cases the difficulties are always greater than in the unilateral cases. Abduction must be carried to the point where the prominence of the adductor muscles disappears. They are torn subcutaneously, the hand acting as a wedge. After the resistance of the adductor muscles has been overcome, then begins the reposition.

"You make extension in rectangular flexion of the thigh and by forced abduction the head of the bone is carried into place. The posterior border of the acetabulum is very low and the head of the femur must be slipped over this ridge into the cavity. You can hear the bone going into place with an audible snap. The head is driven into the acetabulum still further by stretching the anterior wall of the capsule. Now, the flexors of the knee are too short so that the leg cannot be extended. This contracture of the muscles must be overcome by forced extension and then the reposition is complete. Dislocation and reposition can now be done with great ease. I will now apply the cast with the leg in rectangular flexion and you can see how it is done better than I can tell you.

"This cast will remain intact at least six months and in the meantime all passive motion is allowed. The child may sit or push herself on her chair; she may creep and even stand. I have seen many of these children walking quite comfortably with the aid of a stick.

"CASE II.—The shortening of the leg in this case

is considerable. The top of the great trochanter is on a level with the anterior superior spine of the ilium. There is a shortening of about 4 cm. It will be advisable to begin with extension in order to overcome the resistance of the long muscles. Now, you will see that a very difficult reposition has not only its bad but also its good side. The more difficult the reposition, the greater the probability of the head remaining in the acetabular cavity. I will try and show you how far you can diminish the degree of abduction without producing a relaxation. You can go nearly to parallelism of the leg before it will slip out of its socket in many cases. You see I can adduct this leg completely. I once had a case come to me from Finland and it was a good reduction, one just like this, and I chose this position so as to make it easier for the child to walk. When he came back six months later I removed the cast and found the head out of position and in its original luxation. So now I always put on the cast with the leg in rectangular abduction.

"CASE III.—This is another case of bilateral luxation. The little girl is seven years old, and although I have not even examined her, I am sure, judging from the x ray photographs, that an attempt at reduction would not be successful. The heads are too high up. It is impossible to overcome the shortening and if any treatment were to be undertaken it would be absolutely necessary to begin with a preparatory treatment cutting all the flexors of the knee-joint, the spinal muscles, all the adductors and abductors, and institute an extension treatment which would last perhaps for several months. Then you could try to perform a reduction. I would not even try to reduce this case as it is now if I were in Vienna, much less here.

"You will notice that the lordosis which existed in this first child before the cast was put on, has completely disappeared and we now have a kyphosis lumbalis. The cast has been trimmed up and while there is not much of it it is very substantial and firm. The leg from the knee down is freely movable. The skin under the cast is kept clean by means of this strip of gauze which is pulled to and fro once or twice a day and is then replaced by a fresh strip."

Cyclic Disturbances in Insanity.—Dr. H. A. Tomlinson (*Journal of Nervous and Mental Diseases*, November) says that to the careful student of insanity there is no one element so conspicuous as the tendency of its manifestations to occur in cycles; excitement, followed by depression in both motor and mental disturbance, or its converse, with a period of apparent restoration between. Furthermore, this wave-like tendency is most marked in those who are most defective, and is most conspicuous in those individuals who break down in early life.

In the defective individual whatever gives rise to the outbreak of mental disturbance also starts the process of reduction in capacity for coordination of functional activity in the nervous system, and this process once started seems to have a tendency to proceed definitely to a certain degree, and this is most marked in those in whom the process of degeneration starts earliest, and in these subjects the reduction is most extreme. The presence of motor manifestations in some, and not in others, is

accounted for by the antecedence of some form of motor involvement, as in the cases reported by the author, in two of which there was hysteria, and in the other convulsions.

Each cortical cell has a definite potentiality, and a capacity governed by the completeness of its reconstitution. Temporary conditions may exist, which exhaust capacity and confusion supervenes, to be followed by incoordination. This is illustrated in the mental and motor disturbance accompanying typhoid fever, pneumonia, or septicæmia; and in more marked degree in chronic uræmia. These conditions are recovered from, however, and capacity is restored. But, in the defective individual, the potentiality of the neurone is more limited, and its capacity for reconstitution is lessened; so that there is a progressive failure of power, manifested first by increased irritability, then, by spasm, incoordination, and finally by exhaustion. If the vegetative functions remain intact, there is a gradual recuperation, with restoration of capacity and return of function. We can only presume, says the author, that the changes which produce these results are primarily chemical, and have their origin in instability which is extreme, with the resulting tendency to respond excessively to slight stimuli.

Army Surgeons among the Ancient Britons.—

The *Lancet* for October 18th, in a review of Part I of *Social England*, edited by the late Mr. H. D. Traill, D. C. L., and Mr. J. S. Mann, M. A., says that "of medicine and surgery at this period 'we do not possess any trustworthy details,' as the editor says. We learn, however, that in the later Welsh laws, a doctor followed the army, or resided in the King's court. 'It is probable that each tribal community had a medicine man of some kind . . . to give medicine free to the family, only getting the blood-stained clothes; except in the case of the three dangerous wounds, for dressing which he gets a money payment.' We are told of his procedure 'that he applied red ointment to a wound, and herbs to a swelling, and he let blood.'"

Donkeys—of Sorts—and Physicians.—According to the *British Medical Journal* for November 22d, the following incident is taken from an Italian medical journal: "A medical practitioner was peacefully going his rounds on a bicycle in a country district when suddenly a donkey started in pursuit. The doctor tried hard to escape, but after a fast run of two kilometres he was overtaken by the donkey, which attacked him furiously and injured him in various parts of the body."

We join with our contemporaries in presenting our respectful sympathies to our unfortunate professional brother, and in hoping that he has, ere this, fully recovered from his injuries. We also appreciate sympathetically the parable drawn by our contemporaries to illustrate the working of the anti-medical bias. "Do we not every day see," it is asked, "medical science going peacefully on its path of beneficence attacked, with aggressive brays, by folly and fanaticism? What is it that excites their animosity? Probably they could give no better account of the matter than their symbolic representative which ran down the doctor. If we may attempt to explain such a mystery, we should say that in both cases it is the instinct of self-preservation

that supplies the motive of the hostility. The donkey doubtless had a misty suspicion that the curious looking thing moving swiftly along in some way threatened his welfare. In like manner folly and fanaticism foresee that the triumph of science means their own extinction."

The Temple of Æsculapius Discovered.—According to the *Lancet* for November 15th, Dr. Rudolf Herzog has been more lucky than previous archæologists, and has been able to locate the site of the temple of Æsculapius under an ancient Byzantine church, dedicated to the Blessed Virgin of "Tarsus," ἡ Παναγία Τάρσος on the island of Cos in the Ægean Sea, off the south-west of Asia Minor. The island appears to be variously called Cos, Ko, Kos, Stanko, Stanchio, and Istankoï. The word Τάρσος is a corruption of τοῦ ἄλσους, the grove, i. e., of Æsculapius. The columns of the temple have been found. They are lying whole or in pieces in the place called Condjé Baktchessi, or the garden of the flower buds. The temple is seventeen metres wide and thirty-seven metres long. The following inscription has been found on the entrance hall (Πρόδομος) of the temple:

Υψίσματα κεκοίσαντο
οἱ διάφοροι πρέσβεις ταῖς διαφόροις πολιτείαις
τὸ ἱερὸν τοῦ Ἀσκληπιοῦ
Ἀσυλὸν παραδέξασθαι—

which may be translated as follows:

"Sundry elders from different states have decided by vote to carry on this holy Asylum of Æsculpius." At the same time a statue of Hygeia has been found, as well as a portion of the image of a serpent, the symbol of Æsculapius. Some votive offerings have also been discovered. The excavations are being continued.

Extrauterine Gestation.—Dr. Coyteux-Prévost (*Union médicale du Canada*, September), in a paper based on fourteen personal observations, arrives at the following conclusions: (1) The general physician, as well as the specialist, should be able to recognize extrauterine foetation at the earliest possible moment, in order to be able to practise or recommend early and effective intervention. (2) It is not possible to affirm positively the existence of ectopic pregnancy in the absence of pain, a symptom which is scarcely ever wanting. (3) The appearance of pain, of whatever intensity, by no means signifies that rupture has taken place, even when this pain is accompanied by a tendency to syncope, the subjective reaction of lesions of the tuboovarian apparatus being subject to individual susceptibilities, real and of daily experience. (4) Given its frequent recurrence, and since one cannot be sure of the integrity of the annexa by a simple macroscopical examination, is it not better, in the course of an operation for ectopic pregnancy, to remove at the same time the tube of the opposite side? (5) In the great majority of cases, retrouterine hæmatocele should be considered as the product of an ectopic pregnancy, even in the absence of positive signs revealed by microscopical examination. Every extrauterine pregnancy should be operated on when diagnosticated. This treatment, indicated by contemporary surgery, imposes no moral responsibility on the surgeon, foeticide in cases of this kind being, according to the theologians, absolutely lawful, *salvo meliori judicio*.

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Lectures and Addresses.

THE NEW YORK ACADEMY OF MEDICINE.

VALEDICTORY ADDRESS OF THE RETIRING PRESIDENT.*

By ROBERT F. WEIR, M. D., Hon. F. R. C. S., ENGLAND,
NEW YORK.

You have heard the reports of the various officers of the Academy and have learned that its affairs are progressing satisfactorily, and that the year closes with a surplus—though not a large one—in the treasury. This latter I particularly regret, as it shows that the needs of the Academy as at present conducted necessarily absorb practically all its income. Two years since the number of its resident members was 774, of which there were 739 from the city and 35 from the State. Now, at the close of my term of office it remains nearly at the same figures, viz., 789 resident Fellows, of whom 740 are from the city and 59 from the State. I had hoped that some measure ere this would have been presented whereby the gates of the Academy, now narrowed by a large annual subscription, might have broadened by lessened dues, so that many of the able but struggling young men of the profession might enter its doors. It was hoped early in my administration that a minimum yearly due of \$5 or \$10, such as has been accorded to the State members, might be extended for a limited number of years in a graduated manner to entering members, as an inducement to attract what is the life and progress of any medical society, viz., the young men of the profession; for without them there is no advance. It has, however, been found impracticable to effect this without disturbing the financial adjustment of the institution. Therefore I am compelled to leave the solution of this question to my successors. I believe it, however, to be of vital importance to the future of the Academy to guard against the threatening ease of senility that is apt to assail long existing societies.

During the past year the average attendance at

the stated meetings of the Academy has been, for 1901, 87; for 1902, 104. The maximum attendance was, for 1901, 140; for 1902, 210. As this is larger than it has been in the past, my thanks for these results must be given to the vice-presidents and others of my professional friends who have aided me in carrying out these meetings. The most zeal is manifested at the section meetings, and though there is more activity to be expected and found in the branches than in the body, yet the old fable teaches us that the belly and the members cannot be separated. The average attendance at these meetings of the sections was as follows:

Medicine	70
Otology	67
Laryngology and rhinology	40
Obstetrics and gynæcology	37
Pædiatrics	36
Ophthalmology	35
Surgery	32
Genitourinary diseases	32
Orthopædics	25

Since the foundation of the New York Academy of Medicine, in 1847, there have been 27 presidents elected. The term of service until 1859 was for one year. It was then lengthened to two years, which rule holds good at the present time. Several presidents, by their popularity and ability, have been reelected for one or two additional terms of office. These were Dr. Anderson, president from 1861 to 1866; Dr. S. S. Purple, 1875-78; Dr. For-
dyce Barker, 1879-84; Dr. A. Jacobi, 1885-88, and Dr. A. L. Loomis, 1889-92. Notwithstanding these distinguished servitors of the Academy did admirable and laudable work for the institution and fully deserved their reward, yet since this last date a growing feeling has silently developed that the one term service is to be advocated. In this I fully concur and trust that it will become the rule. The conferring of the distinction of being the presiding officer of your noted body cannot lessen the dignity of the position by occurring fifty times in a century.

Among all these names so well known in the history of medicine and surgery in this city and country, there are to be found only those of six surgeons. Dr. Valentine Mott, 1849-1857; Dr. A. H. Stevens, 1851; Dr. Willard Parker, 1856;

* Delivered at the New York Academy of Medicine, January 15, 1903.

Dr. John Watson, 1859; Dr. A. C. Post, 1867; and Dr. J. D. Bryant, 1895. Why surgery has been so slightly represented in so august a position as this, it is not easy to say. It may be from the modesty of character for which the surgeon is so noted, or perhaps from his freedom from ambition, or perhaps from his inability to understand or manage what is called medical politics. The lesser position that surgery held to medicine forty years ago is more likely to account for the preeminence justly given to the pure physician; but this no longer holds. Surgery leads now-a-days as the curative agent, and will continue, I believe, in this lead. Important and numerous diseases then treated medically are now treated surgically, and the reverse seldom occurs. It is true that perhaps with the advent of an improved serum therapy the tables may again be turned.

It may be of possible interest to some of the Fellows who knew these eminent surgical worthies, as well as to those whose knowledge of them is naught or but scanty, to recall certain facts in their career. To me individually this would be an interesting retrospect, as I knew them all personally.

The first of the surgical presidents, and one of the founders of the Academy, was Valentine Mott. He was born in 1785, and was still practising surgery and lecturing at the University Medical College when I was a medical student from 1856 to 1859. He was and is yet regarded as the most eminent of American surgeons. Of him Sir Astley Cooper said, "He has performed more of the great operations than any man living or that ever did live." His original operations consisted of

- Ligature of the innominate artery;
- Ligature of the common iliac artery;
- Resection of the entire clavicle;
- Resection of the lower jaw;
- Resection and ligature of the deep jugular vein;
- Suturing wounds of veins.

Mott was a very distinguished looking man and was in a finely preserved condition of health when I first met him. He was neatness personified, carefully valeted, and in clothes of spotless black, displaying a shirt front that would have driven a Chinese washman mad with envy. In earlier life Mott was dressed in the old Quaker style that I last saw in the person of the late George Trimble, a Quaker and president of the New York Hospital—snuff colored long, single breasted coat with large skirts, an ample waistcoat reaching to the iliac bones, small clothes or knickerbockers to the knee with silk stockings, and low shoes with steel buckles. Dr. Gurdon Buck, my preceptor, told me that Dr. Mott changed this becoming dress to that of the ordinary gentleman, because of a mishap that arose from a

fond mother placing her infant on the doctor's knee to be dandled on a gala occasion, when he was attired correspondingly in his best light knickerbockers.

I only once saw him operate in an important case. It was on a patient having a subclavian aneurysm, in which it was decided at the consultation held by Mott with Dr. Buck and Dr. Markoe, to ligate the artery on the distal side of the aneurysm. Mott chose to ligate below the clavicle and, with the bone held in position by "my son Alexander," with one sweep of his scalpel the artery was laid bare. As a medical student I was overwhelmed with admiration at a so well calculated incision. But Dr. Markoe said *sotto voce* afterwards in the next room that the artery had had a narrow escape. It had.

Dr. Mott died in 1865 from thrombotic gangrene. His estate was valued at a million of dollars. His largest fee was \$1,000, and this he only received twice. This is a striking contrast to the inflated charges of the present day.

But though Mott was the most noted, yet the surgeons of this city pinned their faith to his rival, Dr. Alexander H. Stevens, who was president of this Academy in 1851, and also one of its founders, and who was for many years professor of surgery in the old Crosby Street college—the College of Physicians and Surgeons. Born four years later than Mott, their careers ran side by side and each died in years well beyond the allotted span of life. Like Mott, he also was a surgeon to the New York Hospital, and there served over twenty years as attending surgeon and, with Mott, was the first to introduce clinical instruction in that institution. Their methods of operating distinctly varied; indeed, Dr. Stevens remarked in his eulogium delivered before this Academy on the occasion of Dr. Mott's death that he not infrequently cut in a manner purposely avoiding neatness, in order to show the students that patients would get well without that delicacy of manipulation and nicety of treatment which some surgeons deemed so essential. Which remark smacks somewhat of that of Volkmann, who tersely said, "Give me antiseptics and I'll operate in a privy."

Dr. Stevens was a very successful operator and was expert in the many little things that bring out the best results. As a teacher he was very impressive, and I yet remember the occasional words that as president of the college he would let drop from a huge mouth rendered apparently larger by a thin cadaveric face and deep set eyes. He was always spoken of with the deepest respect and never did I hear from my predecessors, who knew him well, any word of detraction.

Dr. Willard Parker, the third of the Academy's

surgical presidents, was elected in 1856. What better can be said of him than the quotation from Coriolanus heading his memorial by Dr. Francis, "A worthy man." Of a magnificent physique and magnetic manner, never failing cheerfulness and frankness, he was an attractive man to every one. A good surgeon, but a better teacher. Though when I was a student his time was passing, yet the principles of surgery that he hammered into the students generally were clearly and forcibly expressed, and never forgotten. Though Rest and Diet made up the greater part of his remarks, yet they have borne fruit, and have been corroborated by writers and by experience.

Born in 1802, and starting active life, first, as a farmer's boy, ambition forced him through the positions of village school teacher, then college graduate paying his own way, and finally a graduate in medicine, in 1830. A month following his graduation, strange to say, found him lecturing on anatomy in the College of Physicians and Surgeons. This, however, only lasted a few weeks. He subsequently held a professorship in the Cincinnati Medical School and, in 1839, succeeded Dr. Alexander H. Stevens in the chair of surgery of the College of Physicians and Surgeons in this city. He was surgeon to Bellevue and to the New York Hospital, and it was in the latter place that I served under him as house surgeon. He was then overwhelmed by an immense practice and his hospital time was often limited. I remember once visiting the wards with him, and as he entered the long room he said, "Dr. Weir, the by-laws state that as attending surgeon I shall see every patient at least three times a week." As he uttered these words he took a complete look around the whole ward and remarking, "I have done it," turned on his heel and went out. The next day, I should say in justice, he made an extra long visit.

Dr. Parker made two (perhaps more) memorable hits in surgery. He was the first to advise and do perineal cystotomy for the relief of intractable cystitis, carrying out the principle that he so earnestly insisted on, of placing and keeping inflamed parts at rest. The second was the dawn of a great surgical epoch. He was the first to operate on appendicitis. He was also the first to insist on dispensing with splints in the treatment of Colles's fracture of the radius, relying upon thorough replacement and the final retention by a band of adhesive plaster, a plan recently advocated at one of our sittings here.

The next name on my list of surgical presidents is that of Dr. John Watson, born in Ireland, in 1827, who was the partner and successor in practice to Dr. Alexander H. Stevens. He was for many years

the senior surgeon to the New York Hospital. He was a testy and irritable man and was possessed of great learning and less knowledge, for there is a distinction between the two. From him we juniors acquired much by listening to his remarks, but of him in his operations it was said by the house staff that we learned most from his blunders. This cal-low criticism was not confined to him, but was referred generally to the attending staff, and is yet made, not only of the past surgeons, but alas! even of those of the present period. Nothing is so keen as the judgment of a hospital interne.

Dr. Watson's treatment of specific disorders, thanks to his familiarity with the then new doctrines of the French school, was much ahead of his colleagues, and was very beneficial, not only to his patients, but to the house staff and to the students who then walked the wards of the hospital. His quickness of temper betrayed him and Dr. Markoe once into an excess of language that shocked us who knew them both to be strict members of the Presbyterian Church. The occasion was this: In the course of a difficult removal of a tumor from the neck by Dr. Watson, in which there was a large exposure of the parts with a rather troublesome hæmorrhage from a deep vessel, and when the artery had finally been caught up by the now disused tenaculum and was ready to be tied, Dr. Markoe, who was the surgeon of the other surgical division of the hospital, and hence was called upon to assist Dr. Watson, said, "Stop a moment, Dr. Watson, that we may observe the handsome anatomical display you have made in your operation. See how finely," he continued, "is shown the carotid artery, the jugular vein and—" "Devil take all that," said Dr. Watson, with emphasis. "Will you tie that artery or not?" "Devil take it," promptly replied the other church member, "I will, since you are in such a devilish hurry." A pretty example, wasn't it, for us juniors?

But Dr. Watson was, withal, a just and kind man to all his subordinates, and his faithfulness and zeal in his professional duties commended him to his fellows, and he was properly honored in his election to the presidency of the Academy in 1859. He died in 1863 from cancer of the rectum.

The next surgeon filling this office was Dr. Alfred G. Post. Very wise, very industrious, and so upright in his character, speech, and doings, that some said he bent backwards. His labors never ceased, his interest was great in small things as well as in large matters. Every detail of surgery aroused his zeal; every society found him present with pockets always holding some minute specimens that he perhaps had removed that afternoon at his clinic; the details of which would be given

in a very precise tone of voice and with most careful enunciation of each syllable, and uttered with the choice of the longest possible Greek words or combination of Greek derivatives to describe the disease or condition that the specimen illustrated.

Once he presented at the Medical and Surgical Society the thigh bone of a chicken that had a queer growth on it, which he pronounced an enchondroma. Dr. Metcalf, the most genial wit in the medical coterie of that time, interrupted Dr. Post by saying, "Pardon me, Dr. Post; you mispronounced the word; you should say of the specimen that it is a *hen-chondroma*."

While we all admired Dr. Post's talents and zeal, we irreverent juniors would not always refrain from joking a bit about him. At another time in the Surgical Society, after he had indulged in the narration of several cases much larded with long and Greek-laden words, I had the opportunity to show a case of refracture of the thigh, but as I did this (with one eye on Dr. Post) I stated that I begged to present an illustration of the operation of dysmorphosteodiasclasis, a word that I had found in a German *Surgery*, and which, with the help of my Greek dictionary, I had carefully worked up for Dr. Post's particular delectation. As I uttered the jaw-breaker, which was the Greek version of "a refracture of a badly united bone," Dr. Post stuck his head forward with one ear inclined strongly to me and asked sharply as I finished, "Will Dr. Weir kindly repeat that word?" And as I did so he jotted it down and set to work to analyze it, which he did in a few minutes, and after the meeting joined us mildly in the joke then detailed to him.

Born in 1806, and a descendant of a well known New York family, he became in course of time connected with the College of Physicians and Surgeons and with the New York Hospital, for these were the two goals of ambition to the able and young medical men of that time. There was no other noted medical college or hospital, excepting Bellevue, until a later period. His plastic work, like that of Dr. Buck was very successful and meritorious, but he knew better how to use the scalpel than when to refrain from its employment. His removal from his old home and office in Seventeenth Street to Madison Avenue just above Forty-second Street, in about 1860, illustrates our city's marvelous growth. His friends then all jeered at him by saying that he had become a country practitioner.

The last of the surgical holders of this chair is my friend, Dr. Joseph D. Bryant, who was elected in 1895, and is yet living to enjoy the additional honors that he deserves. The old maxim, to say nothing but good of the dead, does not encourage one to do the opposite and sling malice at the living.

Were it even so, neither I nor any man could do or say aught but good of so able and so kindly a man as Dr. Bryant. Happy indeed should I be could I have the same regard from the profession.

My little endeavor to recall the surgeons that you have in the times past called to the presidential chair, is finished, and there only remains a few words to be said on the work of the Academy during the past two years under my supervision. At first I feared lest the energy and activity of the sections would possibly detract from the attention and attendance given to the stated meetings. But this fear has not been verified. The subjects presented at the general meetings have been of much interest and have been most acceptably received, as the increased attendance shows. Listening, sometimes enforced upon me by my position, has not only benefited me (much like a listless student by a didactic lecture), but has renewed again and again in me my appreciation of the enormous advances made by medicine and surgery in the last forty years, and particularly so by surgery, and I regretted exceedingly that it had not occurred to the Academy to join in the Jubilee celebration of the fiftieth anniversary of the medical birth of Lord Lister, which took place December 13, 1902, and was duly honored in London, and particularly so in the pages of the *British Medical Journal* of that date. It is hard to say which is the greater boon to surgery, anæsthesia or antiseptic surgery. Owing to the rancorous contention of the friends of Morton and Wells, the monument on Boston Common carries no name but simply the words "To the discoverer of Anæsthesia." I had rather it had been adorned with Holmes's witty suggestion, "To Either." But no such confusion rests with the promulgator of the antiseptic treatment of wounds. This treatment has saved thousands and thousands of lives, it has rendered possible previously impossible surgical procedures, it has developed the art of surgery beyond the expected, and it has stimulated the science of medicine to an incalculable degree. But it could not have done all it has done without anæsthesia. If the soldiers of France would not go into battle unless Ambroise Paré was with them, no more would they more willingly now go forth without the help of anæsthesia, for the direst messages in the Civil War, in positions of the greatest straits, read often, "We are without food and chloroform."

Naught further remains now for me to say or do. Let me therefore close by thanking the Fellows for their support and attention during my term of service, and transfer the gavel, the symbol of the office, to my distinguished successor, Dr. Andrew H. Smith.

Original Communications.

A STUDY OF THE DEATHS OCCURRING
IN NEW YORK CITY ON THE OPPO-
SITE SIDES OF TWENTY STREETS
DURING THE YEAR 1895.By ALFRED E. THAYER, M. D.,
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The following study of the deaths occurring on the two sides of twenty streets in New York City during the year 1895 was undertaken with a view to determine if there was any difference in the mortality on the northern sides of the streets as compared with that on the southern. The twenty streets from Fourteenth to Thirty-third were chosen because of their general east and west direction, and it was believed that the number of deaths tabulated, and the number of the population, would be large enough to afford reliable data and justify conclusions. An additional reason for the choice of these streets is found in the character of their population, the private residences being relatively in larger proportion and the tenement houses in smaller proportion than in some other sections of the city. On many streets there are private houses nearly to the river both east and west, while farther up town the tenements begin at Sixth Avenue west, and at Fourth Avenue east. The total number of deaths tabulated was 3,973, and the total population was 170,741. The results of this study are presented in the accompanying six tables.

Table No. I presents the deaths for the time and streets mentioned, divided into those occurring on the north side of each street and those on the south, distributed according to sex and certain age groups. The deaths upon the north side are 2,104, as compared with 1,869 on the south, and in the case of each age group the northern deaths exceed the southern, except in the group sixty-five years of age and over, where the deaths on the south side are 20 more than on the north—the number is too small to justify the conclusion that conditions on the south side are more conducive to old age than on the north. The greatest excess is among children under five years of age, with whom there were nearly 100 more deaths on the north side of the streets. The males in each case outnumber the females, and this also is more marked on the north.

Table No. II exhibits the total northern deaths distributed according to the chief cause of death, and also the populations of the northern sides of the streets and the corresponding death rates. It will be observed that the deaths on the north side of any street considered vary between 53 as the lowest (on north Twentieth Street) and 172 as the

highest (on north Twenty-sixth Street), and on those two streets the populations are respectively low and high, although the highest population is on north Sixteenth Street, which has nearly as many deaths as north Twenty-sixth Street. There are also great variations in the deaths from any one class of diseases. Thus, there were but 3 deaths from zymotic diseases on north Thirty-second Street, out of a total of 112 and a population of 4,884, while there were 21 deaths from zymotic diseases on north Sixteenth Street, or seven times as many, out of a total of 170 deaths and a population of 6,652. The diarrhoeal diseases vary from 1 on north Twenty-third Street to 15 on north Sixteenth Street. Many similar discrepancies are found among other diseases, and the death rates vary from 18.35 per 1,000 on north Twentieth Street to 28.43 on north Twenty-sixth Street. The column marked "Others" in Tables II and III contains the deaths from several causes which singly have but few deaths credited to them yearly or which were not considered important for this inquiry. Such are accidents and violence, diseases of development, of the integument, and of organs of special sense.

The totals show that the deaths are most numerous from constitutional, respiratory, zymotic, and renal diseases in the order named, the figures being as follows:

Constitutional (chiefly tuberculous)	422
Respiratory (chiefly pneumonia)	376
Zymotic (chiefly diphtheria)	203
Renal (chiefly chronic nephritis)	184
	1,185

That is to say that, out of a total of 2,104 deaths, 1,185, or slightly more than half, belong in these four groups. The death rate for the north is 24.33 in a population of 86,482.

Table No. III exhibits for the south sides of the chosen streets the facts which Table No. II contains for the northern side of the same streets; namely, the total southern deaths with the chief causes, the southern populations, and the death rates. The total southern deaths vary between 55 on south Twenty-third Street and 179 on south Sixteenth Street; the populations vary between 2,823 on south Twenty-fourth Street and 6,311 on south Sixteenth Street; and the death rates vary from 16.68 per 1,000 on south Twenty-first Street to 33.50 on south Thirtieth Street. Variations are observed in the case of any one class of diseases similar to those on the north street. The chief causes of death are as follows:

Constitutional	340
Respiratory	333
Zymotic	214
Nervous	167
	1,034

or, in other words, of the 1,869 deaths on the south sides of these streets, 1,034 belong in the classes mentioned. The total death rate for the south is 22.18 in a population of 84,259.

Comparing the two tables of diseases with each other, it appears that in most cases the deaths from any class of diseases are in greater number on the north, the exceptions being zymotic, nervous, and generative diseases, and the disorders of pregnancy. These differences are not large in any case; the most important is the excess of zymotic diseases, which is eleven more than on the north. The figures are as follows:

	North.	South.	Excess South
Zymotic.....	203	214	11
Nervous	164	167	3
Generative	3	4	1
Pregnancy	24	25	1
	394	410	16

On the other hand, the deaths on the north sides are in excess in constitutional, circulatory, respiratory, digestive, and renal diseases, and the differences are in some cases notable, as follows:

	North	South.	Excess North.
Diarrhœal	151	116	35
Constitutional	422	340	82
Circulatory	126	123	3
Respiratory	376	333	43
Digestive	144	137	7
Renal	184	147	37
	1,403	1,196	207

Here, also, the constitutional, respiratory, and renal diseases appear of most importance, and, taking the figures for both sides of the streets we have the following:

	North.	South.	Total.
Constitutional	422	340	762
Respiratory	376	333	709
Renal	184	147	331
	982	820	1,802

showing that of the deaths studied, 3,973 in all, 1,802, or nearly half, were in these three classes, and the death rate from these alone in a population of 170,741 was 10.55 per 1,000. Adding the total deaths from zymotic diseases, in the same population, we have 2,219 deaths and a death rate of 13.00 per 1,000.

Table No. IV exhibits the death rates of these twenty streets arranged for convenience of comparison, and shows that the northern death rate is the larger in twelve instances, and where it is larger the differences are usually considerable; that the

southern death rates are larger in the case of eight streets, but only in the case of one street, Thirtieth Street, is this difference very marked. The total excess of northern death rates is 61.31 as compared with a southern excess of 23.83, being a difference of 37.48 against the northern sides and an average excess to the street of 1,874 for each northern side. The average northern death rate is 24.35 per 1,000 and the average southern is 22.18, being an excess on the north of 2.15.

It becomes necessary, therefore, to explain this excess of mortality on the north sides of these streets, and, from what has already been shown, it appears that what may be called a "normal" preponderance of deaths from constitutional, respiratory, and renal diseases tends to make the death rate on the north side of any street in the area considered higher than the death rate on the south side of the same street. This normal excess of northern deaths is probably due to the fact that people generally live in the back part of the house, and that on the north side of the street the rooms at the rear are seldom visited for long by direct sunlight. The sleeping rooms, being chiefly at the back, are those where the light and ventilation are least perfect. On the south side, however, the back of the house is well sunned for the greater part of the day, and the sleeping rooms share in this sunlight. Furthermore, because of the sunlight and the fact that the kitchen range is usually at the back of the house, on the south side, the windows are more likely to be opened from time to time, and the ventilation of the bedrooms and others is consequently better than on the north side of the street. The question thus far resolves itself into one of ventilation and access of sunlight, with their combined influences upon the health of the inmates of the house. The diseases involved are just those which are affected by such conditions, namely: Phthisis, pneumonia, and chronic nephritis.

There is, however, a disturbing element which in the case of several streets gives a higher death rate on the south side, and this variation from the normal is apparently due to zymotic diseases. Table No. V exhibits in parallel columns, for the north and the south sides, the cases of contagious diseases reported during the first six months of 1896, the deaths from zymotic diseases during 1895, and the general death rates for 1895. It will be seen that, almost without exception, where the death rate is higher on the south the deaths from contagious diseases are also higher on the south, and, in many cases, the contagious diseases reported for the first half of 1896 are also in excess on the same sides of the same streets.

Table No. VI gives the zymotic cases reported during the first half of 1896, and it is observed that diphtheria is the most important, for while the cases of measles are more numerous, diphtheria is more fatal in its effects.

If zymotic causes were the only ones, the southern mortality would perhaps be the greater if a large enough number of cases were tabulated; if constitutional, respiratory, and renal causes were the only ones, the northern death rates would probably be uniformly the larger; as it is, the two sets of diseases tend to balance each other, with a general northern excess. It is interesting to note that the deaths among children at the school age, from six to fifteen years of age, are few on both sides of the streets. It is probable that the older children bring zymotic diseases home with them from school, and, communicating them to the infants of the family, tend to increase the mortality in the age group of less than five years of age, while themselves escaping or generally recovering from the disease.

An attempt was made to explain the excess of northern mortality in the district studied, by plotting upon a map every factory, gasworks, stable, etc., which might be considered a source of injurious influences; but it was seen at once that the explanation must be something far more general than this, which would apply to large numbers of houses and entire sides of streets.

Foreign reports have been consulted to determine if another city or part of any city had ever been studied with regard to the house mortality in relation to the points of the compass. Nothing similar was discoverable, the nearest approach to it being a table in the *Berlin Statistisches Jahrbuch* for 1893, where deaths from fifteen principal causes were arranged with reference to the floor of the house on which decedents had lived. The figures are incomplete (for instance, 41 per cent. of the cases of phthisis are lacking), and the only conclusion to be drawn is that more deaths occur on the upper floors than in the cellars or on the first floors. This is probably explained by the fact that far more people live on or above the second floor than below it; but the populations by floors are not given and there is no way to control the figures or make accurate conclusions.

In the building laws for the city of Rome, Italy, issued by the Minister of the Interior for 1896, the height of houses is regulated as follows:

Chap. IV, No. 2, Art. 39. "The height of houses giving on a public street must not be greater than the width of such street, with the exception of houses on streets which run north and south, where the height may be one and a quarter times the height of the street."

Such houses would have the sunlight in front and back all day, except at noon, and, without danger to the inmates, might safely be built higher than the houses not so sunned.

Summary.

1. The mortality on the north side of any street in the district studied is liable to be higher than the mortality on the south side of the same street.

2. The higher northern mortality is due chiefly to three diseases: pneumonia, phthisis, and nephritis. The first two are especially fatal during cold weather, when the proper ventilation of living and sleeping rooms is most likely to be neglected; the third is also affected by lack of air and sunlight, both directly and also indirectly by the depression of mind consequent upon darkness and poor air.

3. On the south side the greater freedom from these causes of death is due chiefly to the advantages of sunlight and ventilation enjoyed.

4. The supply of air and sunlight has more effect upon the health of people living on the south side of a street and less upon the north, owing to the general habit of New Yorkers of living in the rear of the house, *i. e.*, in the more sunny and airy rooms upon the south side and in the less sunny and airy upon the north.

5. Zymotic diseases appear to be independent of these conditions and may occur in excess upon the south side of the street; in such cases the mortality also may be higher on that side.

6. "Rear" houses are situated less favorably than single houses on a lot, because not only are they darker and less ventilated themselves, but they also deprive the other house of its proper light and air. This is applicable to the south side of the street; on the north, the house on the street acts as a "rear" house to the one behind it, by cutting off its light and air.

7. The width of any street and the distance across yards, measured from the back of one house to the back of another, should be as nearly as possible the same, *i. e.*, the latter should never be less than the former; and the height of dwelling houses should bear some relation to these measurements, so that one house may not deprive another of its light and air.

8. In the case of contagious diseases in any family, the importance of keeping the other children from school is closely related to the question of infant mortality below the age of five years.

9. In general, people should be urged to keep their windows open and their shades up as much as possible, and this especially for dwellings on the north side of the streets and during the colder months of the year, when ventilation is most neglected.

TABLE NO. I.

Deaths during 1895 on the two sides of twenty streets, distributed according to sex and age.

NORTH.									SOUTH.									
Street.	Males.	Females.	Under		15-24	25-44	45-64	Over 65	Males.	Fe- males.	Under		15-24	25-44	45-64	Over 65	Street	
			5	5-14							5	5-14						
XIV	57	35	39	1	14	19	15	4	60	47	41	4	9	24	21	8	XIV	
XV	65	71	47	4	9	25	28	23	34	35	19	1	5	18	16	10	XV	
XVI	93	77	64	4	22	33	36	11	90	89	81	5	20	36	36	11	XVI	
XVII	69	58	59	3	10	25	22	8	75	76	67	2	15	29	26	12	XVII	
XVIII	52	39	32	4	11	23	15	6	47	35	41	1	11	12	11	6	XVIII	
XIX	42	52	30	2	15	23	19	5	36	41	20	0	14	17	19	7	XIX	
XX	26	27	14	0	8	11	11	9	33	33	21	1	9	20	11	4	XX	
XXI	40	34	14	2	10	12	21	15	27	29	16	0	11	5	19	5	XXI	
XXII	40	32	25	2	9	19	12	5	25	45	15	2	8	14	18	13	XXII	
XXIII	51	26	21	1	5	19	26	5	38	17	11	2	6	8	16	12	XXIII	
XXIV	44	55	36	4	11	25	15	8	31	33	10	2	8	25	14	5	XXIV	
XXV	41	39	34	3	8	18	11	6	46	48	37	2	13	23	13	6	XXV	
XXVI	90	82	58	4	26	49	29	6	56	55	44	1	10	30	20	6	XXVI	
XXVII	59	66	63	2	12	24	19	5	59	58	51	5	9	29	16	7	XXVII	
XXVIII	42	52	35	2	5	31	15	3	42	44	39	1	7	19	14	6	XXVIII	
XXIX	45	61	41	3	15	25	18	4	55	43	33	2	10	21	22	10	XXIX	
XXX	61	56	50	2	9	33	19	4	55	45	36	2	9	21	20	12	XXX	
XXXI	43	53	35	2	7	18	21	13	45	48	36	3	10	19	13	12	XXXI	
XXXII	64	48	49	2	11	23	20	7	60	47	31	2	15	20	25	14	XXXII	
XXXIII	62	55	38	4	16	34	17	8	48	39	39	0	9	18	12	9	XXXIII	
Totals	1,086	1,018	784	51	233	492	389	155	962	907	688	38	208	408	352	175	Totals	
		2,104							1,869									

TABLE NO. II.

NORTH.

Street.	Total Deaths.	Zymotic.	Diarrhoeal.	Constitutional.	Nervous.	Circulatory.	Respiratory.	Digestive.	Renal.	Generative.	Pregnancy.	Others.	Population.	Death-rates.
XIV	92	16	12	14	11	7	9	5	7	0	1	10	4,336	21.22
XV	136	14	5	20	13	7	26	11	18	0	1	21	4,824	28.19
XVI	170	21	15	29	14	6	36	9	20	0	1	19	6,652	25.94
XVII	127	10	10	18	8	5	23	12	7	0	2	32	4,385	23.01
XVIII	91	14	9	17	3	6	20	5	10	1	0	6	3,288	27.68
XIX	94	13	4	20	11	3	12	7	6	0	1	17	4,231	22.22
XX	53	4	5	9	2	5	11	3	9	0	1	4	2,888	18.35
XXI	74	10	5	17	7	5	8	9	7	0	0	6	3,432	21.56
XXII	72	7	5	24	3	1	14	2	4	0	2	10	3,522	20.44
XXIII	77	5	1	17	6	8	20	5	4	0	1	10	3,044	25.29
XXIV	99	9	6	24	5	3	21	5	9	0	0	17	3,910	25.32
XXV	80	9	6	18	10	7	11	5	1	1	1	11	4,083	19.59
XXVI	172	17	5	40	6	14	31	9	19	0	2	29	6,051	28.43
XXVII	125	12	10	25	12	9	23	11	8	0	1	14	4,911	25.45
XXVIII	94	8	7	20	7	11	13	6	6	0	2	14	3,842	24.47
XXIX	106	8	8	27	8	4	20	1	9	0	4	17	4,515	23.48
XXX	117	6	14	19	10	9	28	8	9	0	1	13	5,494	21.30
XXXI	96	8	6	17	10	4	18	7	10	0	1	15	3,885	24.71
XXXII	112	3	9	20	10	5	15	17	13	0	0	20	4,889	22.93
XXXIII	117	9	9	27	8	7	17	7	8	1	2	22	4,305	27.18
Totals	2,104	203	151	422	164	126	376	144	184	3	24	307	86,482	24.33

TABLE NO. III.
SOUTH.

Street.	Total Deaths.	Zymotic.	Diarrheal.	Constitutional.	Nervous.	Circulatory.	Respiratory.	Digestive.	Renal.	Generative.	Pregnancy.	Others.	Population.	Death-Rate.
XIV	107	16	6	19	8	8	18	5	8	0	1	18	4,388	24.38
XV	69	7	2	15	4	6	4	4	9	1	1	9	4,095	16.85
XVI	179	33	12	28	19	6	41	17	7	0	3	13	6,311	28.36
XVII	151	18	12	25	15	5	27	8	6	0	4	31	6,174	24.46
XVIII	82	9	10	12	8	8	14	6	5	0	2	8	4,833	16.77
XIX	77	4	3	9	5	5	16	8	11	1	2	13	3,989	19.30
XX	66	10	2	20	5	4	12	1	4	0	0	8	3,527	18.71
XXI	56	5	4	10	11	6	4	2	7	1	1	5	3,434	16.68
XXII	70	7	3	12	10	8	13	1	8	0	0	8	3,220	21.74
XXIII	55	5	1	12	5	7	9	4	6	0	1	5	2,992	18.38
XXIV	64	8	4	11	3	3	13	4	7	0	0	11	2,823	22.67
XXV	94	5	5	19	6	5	20	5	4	0	2	23	4,244	22.15
XXVI	111	8	7	25	7	10	21	9	9	1	0	14	4,542	24.44
XXVII	117	16	11	13	11	4	15	8	14	0	2	23	4,954	23.62
XXVIII	86	13	2	13	8	6	17	12	6	0	0	9	4,494	19.13
XXIX	98	10	9	18	9	5	13	9	8	0	1	11	4,325	22.66
XXX	100	16	4	18	9	8	15	11	6	0	1	12	2,985	33.50
XXXI	73	11	5	18	7	9	14	7	6	0	0	16	4,192	22.19
XXXII	107	9	5	22	11	7	21	7	8	0	1	16	4,590	23.31
XXXIII	87	4	9	21	6	3	14	9	8	0	3	10	4,147	20.98
Totals	1,869	217	116	340	167	123	333	137	147	4	25	263	84,259	22.18

TABLE NO. IV.
DEATH-RATES.

Street.	North.	South.	Difference.
XIV	21.22	24.38	3.16
XV	28.19	16.85	12.34
XVI	25.94	28.36	2.42
XVII	23.01	24.46	1.45
XVIII	27.68	16.77	10.91
XIX	22.22	19.30	2.92
XX	18.35	18.71	.36
XXI	21.56	16.68	4.88
XXII	20.44	21.74	1.30
XXIII	25.29	18.38	6.91
XXIV	25.32	22.67	2.65
XXV	19.59	22.15	2.56
XXVI	28.43	24.44	3.99
XXVII	25.45	23.62	1.83
XXVIII	24.47	19.13	5.34
XXIX	23.48	22.66	.82
XXX	21.30	33.50	12.20
XXXI	24.71	22.19	2.52
XXXII	22.93	23.31	.38
XXXIII	27.18	20.98	6.20
Average	24.33	22.18	—
Total Northern Excess.....			61.31
Southern Excess			23.83
Average difference			3.065
Total Excess of North Rates.....			37.48
Average Excess of North Side to the Street.....			1.874

TABLE NO. V.

Cases of Contagious Diseases on the two sides of Twenty Streets for Six Months of 1896, compared with Deaths from Zymotic Diseases on the same streets for 1895, with Death Rates from all causes for 1895.

Street.	NORTH.			SOUTH.		
	Contagious Cases, 1896, Jan.-July.	Deaths from Contagious Diseases, 1895.	General Death-rates, 1895.	Contagious Cases, 1896, Jan.-July.	Deaths from Contagious Diseases, 1895.	General Death-rates, 1895.
XIV	33	16	21.22	34	16	24.38
XV	23	14	28.19	14	7	16.85
XVI	74	21	25.94	43	33	28.36
XVII	40	10	23.01	32	18	24.46
XVIII	26	14	27.68	45	9	16.77
XIX	25	13	22.22	18	4	19.30
XX	11	4	18.35	20	10	18.71
XXI	24	10	21.56	27	5	16.68
XXII	16	7	20.44	25	7	21.74
XXIII	18	5	25.29	30	5	18.38
XXIV	31	9	25.32	31	8	22.67
XXV	81	9	19.59	40	5	22.15
XXVI	82	17	28.43	41	8	24.44
XXVII	37	12	25.45	37	16	23.62
XXVIII	63	8	24.47	37	13	19.13
XXIX	48	8	23.48	62	10	22.66
XXX	53	6	21.30	61	16	33.50
XXXI	32	8	24.71	36	11	22.19
XXXII	51	3	22.93	54	9	23.01
XXXIII	22	9	27.18	34	4	20.98
Totals	790	203	24.33	721	214	Av. 22.18

TABLE NO. VI.

Cases of Contagious Diseases on the two sides of Twenty Streets, Reported during the First Half of 1896.

NORTH.							SOUTH.						
Street.	Diphtheria.	Croup.	Measles.	Scarlatina.	Typhoid.	Total.	Diphtheria.	Croup.	Measles.	Scarlatina.	Typhoid.	Total.	Street.
XIV	12	1	6	13	1	33	13	0	10	9	2	39	XIV
XV	9	0	8	5	1	23	4	0	10	0	0	14	XV
XVI	20	1	33	19	1	74	19	1	21	2	0	43	XVI
XVII	15	0	19	5	1	40	13	0	10	9	0	32	XVII
XVIII	8	0	15	3	0	26	24	0	8	12	1	45	XVIII
XIX	5	0	11	9	0	25	6	0	8	4	0	18	XIX
XX	5	0	6	0	0	11	12	0	6	1	1	20	XX
XXI	8	2	12	2	0	24	8	0	9	9	1	27	XXI
XXII	5	0	6	5	0	16	6	0	13	6	0	25	XXII
XXIII	4	0	11	3	0	18	9	0	14	5	2	30	XXIII
XXIV	11	0	18	2	0	31	7	0	17	7	0	31	XXIV
XXV	22	0	44	15	0	81	16	0	15	8	1	40	XXV
XXVI	19	1	55	6	1	82	13	0	23	3	2	41	XXVI
XXVII	14	1	15	7	0	37	13	0	18	5	1	37	XXVII
XXVIII	23	0	31	8	1	63	13	0	21	2	1	37	XXVIII
XXIX	12	1	28	5	2	48	17	0	40	5	0	62	XXIX
XXX	19	0	20	13	1	53	14	0	38	9	0	61	XXX
XXXI	12	0	13	5	2	32	9	0	18	9	0	36	XXXI
XXXII	28	0	20	3	0	51	10	0	31	5	0	54	XXXII
XXXIII	7	0	11	4	0	22	10	0	16	7	1	34	XXXIII
	258	7	382	132	11	790	244	1	346	117	13	721	

CASES ILLUSTRATING SOME OF THE NEWER POINTS IN THE SURG- ERY OF THE DAY.*

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Chondroma.

This young woman, twenty-four years of age, noticed a small mass attached to the upper part of the left humerus about the first of June of the present year. There was no pain or discomfort and she was annoyed simply by the presence of the mass. It increased rapidly in size, and various diagnoses were made. It was thought to be an exostosis, gumma, sarcoma, or some rare condition which could not be clearly diagnosticated. At the present time the mass has increased to the size of a hen's egg at the principal part, and there are a number of outlying nodules all firmly fixed and immovable. In a case of this sort where it is indeed difficult to know whether we are dealing with a benign or a malignant growth, I follow the plan of having the patient prepared for a shoulder amputation. We then make a small incision, remove a segment of the neoplasm,

make a frozen section on the spot and proceed in accordance with our findings. If the growth proves to be benign we stop with the removal of the growth. If it proves to be malignant we go on to the complete shoulder amputation.

This plan of making spot diagnosis by frozen section is one of very great value in cases in which we do not know just what to expect from the evidence obtainable before operation. In tumors of the breast, for instance, when a very small growth is first discovered we can do a radical operation with the practical certainty of curing the patient, even with the most malignant forms of cancer; but if we wait until we are sure of a diagnosis of malignant disease the chances are that the case is then at a hopeless stage. In such cases of tumor of the breast the patient is prepared for a complete operation, but through a small incision we remove the tumor, make a frozen section diagnosis on the spot, and perhaps allow the patient to escape with no further operation, having determined that the neoplasm was benign in its nature. In the present case I make an incision extending between the two heads of the triceps muscle and expose the tumor, which is adherent to the shaft of the humerus near the head. Dr. Brooks is given a small segment of the tumor, but finds that it contains so many bone

* A clinical lecture delivered at the New York Post-Graduate Medical School, December 6, 1902.

salts that it is difficult to make a frozen section, so I remove the growth with a chisel and gouge and will wait for a few days until the section can be made for microscopical examination in another way. In removing the growth I first find the musculospiral nerve and the superior profunda artery, then hold them out of the way with retractors. It is a good rule in operating near important structures of this sort to find the important structures at the outset and not to trust to running across them in the course of the operation. The tumor extends well into the shaft of the humerus, and from its appearance I judge it to be either a sarcoma or a chondroma, but the macroscopical appearance is not a sufficiently good guide to allow me to determine upon the ultimate course of procedure just at this moment. Bleeding vessels are now tied and the wound is closed without drainage. In closing the wound we use a subcuticular suture of very small catgut which will be absorbed in two or three days. (The subcuticular suture avoids the danger of making stab cultures of the staphylococci which live about the roots of hairs.) To give more lasting support to the margins of the wound I spread over the suture line a single thickness of gauze and pour upon it flexible collodion. This will support the margins of the wound after the catgut is absorbed and the skin margins will then be united so finely and prettily that the patient will have a scar that is barely visible six months from now. These little refinements in technique are very important, especially when we are operating upon a young woman, as in the present case, in which a scar three inches in length upon the arm would be unsightly. Sometimes, instead of the collodion gauze dressing, I place a strip of Cargile membrane next the suture line. This becomes adherent and supports the margins of the suture nearly as well as the collodion and gauze. It is used chiefly in cases in which there is likely to be some oozing from the wound surface and the membrane is sufficiently porous to allow serum to escape through it into the overlying absorbent dressing, while at the same time it protects the surface from the irritation caused by such dressing.

It is a method of treatment that has not as yet come into general use, but will soon become popular with the surgeons who believe in the artistic side of surgery, which gains cosmetic effects as well as saves life.

Dr. Brooks, on returning to the laboratory, has found a part of the tumor that would allow the preparation of a frozen section, and he now reports that the case is one of chondroma.

Islands of cartilage representing an embryonal defect are sometimes found in the interior of the long bones near the epiphysal cartilages. Sometimes the

defect is symmetrical, as when the epiphysis of the tibia includes the tuberosity of the tibia, but the islands of cartilage which make these tumors are apt to occur as ill-defined groups of chondroblasts in the bone or periosteum. The phalanges of the fingers and toes are the parts most often involved in chondroma. The neoplasm does not belong to the malignant class, and yet it is far from harmless, as it may become very large, and necessitate amputation. It is very prone to recur, unless it has been removed in the most thorough manner. In this young woman's case we can fairly expect recurrence, because the part of the shaft of the humerus that remained looked suspiciously as though the entire diameter of the bone had become invaded. In case of recurrence we shall try x ray treatment before deciding to amputate the arm.

Compound Fracture of the Frontal Bone.

This young man, twenty years of age, was struck upon the forehead by a falling bar of iron, four days ago, and received a lacerated wound extending the entire length of the forehead and nose; at the same time there was a depression of the outer table of the frontal bone. He was brought to the hospital immediately, and the wound was cleansed from dirt and dressed with compress to stop the hæmorrhage. This is a case in which the patient would be certain to have an unsightly scar if the wound were treated as an open one, and he would be equally sure to develop sepsis under suturing for primary union at the time when he came in. We applied a principle in treatment which is of the greatest importance, but which is only now becoming recognized. The wound has been treated with balsam of Peru and gauze packing until to-day. This treatment has stimulated the reparative processes and kept the wound practically aseptic until a local hyperleucocytosis has been presumably established. Now that the local hyperleucocytosis is adequate to protect against infection I trim the margins of the wound with an extremely sharp scalpel, and suture so accurately that there will be practically no scar line remaining, and I expect to obtain primary union. The wound line is sealed in with collodion gauze, because the very fine catgut which I employ for the subcuticular suture will be absorbed long before the margins of the wound could safely be left without support.

Appendicitis with Short Incision.

This young man is the one who interested the class so much recently, because I removed a gangrenous perforated appendix through a one-inch-and-a-half incision, making no effort at thorough cleansing of the peritonæum, and closed the wound without drainage. Septic peritonitis was well un-

der way at the time of the operation. Some of the members of the class watched his chart of vital signs for several days. We apparently obtained primary union, and I was about to allow the patient to return home on the tenth day after operation, when there was a rise of temperature and an evacuation of a subcutaneous collection of pus, which did not involve deeper structures. I kept the patient in bed for four or five days longer, and now allow him to go about at his ordinary occupation, although the margins of the skin wound are not yet entirely united. The principle which we employed in this case, we should not, under any circumstances, have dared to make use of until very recently. It was a case of the most dangerous class, and the pus welled out from the peritoneal cavity and poured out of the perforation from the distended appendix while it was being removed, and yet we obtained primary union of all important structures. How did we do this? By depending upon the leucocytes and a proper management of the lymph channels of the peritonæum. In former years we should have felt impelled to make a longer incision, to cleanse the peritonæum very carefully, and some of us no doubt to pack the cavity with gauze, so that we should have had an opening in the abdominal wall through which a postoperative ventral hernia would be expected to make its appearance at a later date. The gauze packing would have excited an unnecessary amount of adhesion formation, and the shock attendant upon a more extensive operation would have interfered with the natural resistance factors of the patient, which were all conserved in our rapid work through a short incision, and the leaving of the peritonæum to make its own toilet under our assistance in the management of peritoneal lymph currents. In many such cases we obtain complete primary union. In others, secondary abscess forms, but we have this advantage—this safety valve—that when secondary abscess does form, it always points at the line of incision, apparently, so that the patient loses nothing, or at least is not subjected to a risk by a method of treatment which is totally opposed to the text-book teaching upon the subject. It is not a method of treatment for beginners to employ, but there are many members of the class experienced in abdominal work, who can give their patients the advantage of advanced newer methods.

Ununited Fracture of the Tibia and Fibula.

Four months ago this man was kicked by a horse and received a compound fracture of the left tibia and fibula at the junction of the lower and middle thirds. His physician succeeded in avoiding septic complications but there was non-union of the fracture. An x ray picture that we made showed the fragments of the fibula to be nearly an inch

apart, and the patient was sent to us for an operation which would unite the fragments.

This patient's skin is very hirsute, but you will notice how cleanly the hair has been removed from the leg upon which we are to operate. This was done with a sulphide depilatory, which removes the hair in about five minutes and leaves the skin thoroughly aseptic at the same time, thus avoiding the elaborate preparation which has been customary in routine practice until very recently. By this method of preparation of the field of operation, the whole work of removing superficial hair and of sterilizing the skin is accomplished in about five minutes, and the patient is then apparently as completely prepared for operation as if we had expended a number of hours in the preliminary work. I experimented gradually with this method of preparation, beginning upon rabbits and gradually feeling my way into work with patients, until now I employ it in all my surgical cases. The method is one which I believe will come into general use very soon. An incision is now made down to the point of fracture of the tibia and the fragments are found to be united by imperfect fibrous union. The fibrous mass is removed, and the faces of the fragments chiseled, in order to obtain fresh bone surface. They are then drilled and sutured with silver wire. Turning now to the fibula we find the fragments far apart as the x ray showed before operation. The fibula fragments are drilled and wired and both skin wounds closed without drainage. A plaster of Paris splint is applied over all. My favorite way for treating this sort of case after operation is to suspend the leg, with the knee flexed, in a sling over a bar placed over the bed. When the knee is flexed we have muscular relaxation, thus avoiding the muscular spasm that is often a source of so much suffering when the leg is put up in a suspended position.

58 WEST FIFTY-SIXTH STREET.

A Fatal Case of Mandrake Poisoning.—Dr. A. W. Buck (*Boston Medical and Surgical Journal*, November 15th) reports the case of a woman, thirty-one years of age, who took a teaspoonful of what she supposed to be licorice powder, mixed in a little water. She then ate some egg and bread for breakfast, but was soon seized with vomiting and purging. She complained of feeling chilly and went to bed. A physician who saw her four hours later, failed to recognize the cause, the mistake being then unknown, and gave her sodium bromide and bicarbonate, with syrup of ginger in warm water. After three doses she appeared to be resting quietly, and an hour and a half later vomiting and purging stopped. She became drowsy and passed away in her sleep. The writer points that the only prominent features were the vomiting and purging, their cessation on the approach of coma, and the deepening coma without stertorous breathing.

CHRONIC GASTRITIS AND GASTRIC MOTOR INSUFFICIENCY IN CHILDREN.*

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Recent years have deluged us with a flood of literature on chronic gastritis and gastric motor insufficiency, with a very notable tendency to make a sharp clinical differentiation between these affections. Thus, Boas states that these two diseases are rarely associated, and Riegel asserts that we are very much inclined to overrate the frequency of chronic gastritis. I would therefore preface the following clinical résumé, based on the observation of children between the ages of two and twelve years, with the preliminary statement that, not only is chronic gastritis one of the very commonest affections of childhood, but that motor insufficiency of the stomach is quite often associated with it, concurrently or secondarily. These introductory remarks will present my excuse for bringing these two subjects together under one title, at least in pædiatric work; even though so many authorities on diseases of the stomach might take exception to this plan of discussion.

Beginning with the matter of diagnosis, it should hardly be necessary to state that every thorough examination includes the use of the stomach tube, comparison of the removed stomach contents being made with the record of recent ingesta. Nowhere is the untrustworthiness of an anamnesis better exemplified than in this department of medicine, for the patient and his parents are generally forgetful and too often indifferent. The procedure may subsequently be repeated after a test breakfast or test meal, as the case seems to demand.

The introduction of the stomach tube is rather easier in the child than in the adult, serious difficulty being infrequent and more likely to occur in older children than in the very young. The kind offices of the parents in intimidating and shaking their offspring play a prominent but not useful part; the subduing of their restless energy is often as essential as the reassuring of the little patient. I shall doubtless be pardoned for dwelling on the stomach tube; many practitioners still deem it rather superfluous, possibly not realizing that without it our work becomes reduced to a matter of the crudest guessing; it is indeed the *sine qua non* of accurate gastric diagnosis.

The outlines of the stomach may be defined by percussion before and after inflation with Seidlitz powder, probably the most reliable and certainly the easiest of all methods. The value of succu-

sion must not be ignored, and care should be taken to determine the upper border of the organ to guard against being deceived by any displacement. Motor activity is best determined by inspecting the stomach contents for food remnants from the previous day, no other means being available in polyclinic practice, the salol test being wholly impracticable with an out-patient *clientèle* of rather low intelligence. A not very serious objection to this off-hand method is that very mild degrees of motor insufficiency may be overlooked or can only be made out from the symptoms, such as gastric discomfort eight or more hours after a meal, vomiting of food after a similar interval, etc.

Chemical tests of the stomach contents should be made regularly, for general acidity, free acid, and peptones; in special cases the fatty acids and ferments may be made the subjects of investigation. Any excess of mucus is readily noted, but care should be taken not to consider swallowed mucus or mucus of nasopharyngeal origin as of gastric derivation, an error the inexperienced might possibly commit.

The taking of the history in my case included the habits of eating; for instance, bolting of food, indiscriminate swallowing of tendons and fruit stones, indulgence in cheap confectionery, habitual gorging. The quality of the child's home fare was investigated, often with startling results; furthermore, the dentition of the patient was scrutinized.

As to ætiology, the field is almost endless. Anybody who observes the gluttony with which some children hastily bolt large masses of digestible and indigestible food, who recalls the way some parents have of stuffing their children with smoked meats, salt fish, pickles, fried potatoes, tea, coffee, and beer; who sees others pampering theirs with an almost exclusive diet of sweets, who looks with horror on the fearful and wonderful compositions sold as confectionery, ice cream, and soda water, at prices to fit the little victims' purses, will not be surprised to know that the commonest chronic children's diseases are affections of the stomach, which regularly follow one of three types.

First and most frequent of these is simple chronic gastritis. The patient is pale and usually looks underfed, occasionally is fairly stout but is reported to have lost weight, has a coated tongue, complains of headache and moderate epigastric pain or discomfort, more or less continuous but aggravated by the ingestion of food. Constipation is not invariably present, but may be a feature of the case. The appetite is poor, any slight revival is invariably stilled with cakes, candy, acid or highly seasoned food. The child's sleep is almost always more or less fitful.

* Read before the Metropolitan Medical Society, December 23, 1902.

The stomach tube, if it is employed some time after a meal, usually removes little food, but sometimes tell-tale masses of unripe fruit or ostensible chocolate are brought to light, and often to the astonishment of an unsuspecting parent. The small tube that must be used in examining children is almost always clogged with these masses, and large quantities of mucus, the latter being especially characteristic of chronic gastritis, requiring for its thorough removal repeated washings with a weak alkaline solution; sometimes the tube must be withdrawn and re-introduced. This lavage invariably affords the patient great relief.

The reaction of the stomach contents is feebly acid, free HCl is scanty or absent, some peptones are produced before the deficient gastric secretion is exhausted. In my series no case of gastritis *acida* came under observation. If the ingesta are abundant they are largely unaltered, the various articles of food being quite readily identified by their almost unchanged appearance and odor.

The management of these cases is simple, if we can gain the intelligent cooperation of the parents, who are often too busy or indifferent to give the subject much attention when they learn that the disease is not likely to prove directly fatal. The child can never be left to its own devices, since on the slightest improvement it will return to its evil ways unless closely watched; while the average mother, among the poorer classes at least, lets her little one run wild and follow its own misguided inclinations. Treatment may be grouped under three heads; lavage, diet, and medication. Among these, lavage is as important as any, and is best employed before the principal meal of the day, but is useful at any time, the improvement being marked and rapid, so that the patient soon learns to submit to the procedure with the greatest willingness. As to diet, it is wise not to restrict its variety too closely, provided indigestible and irritating articles of food are proscribed. Far more important is it to insist on proper cooking, slow eating, thorough mastication, and the removal or correction of dental defects. As the motor activity of the stomach is approximately normal in these cases, our object must be to throw most of the task of digestion on the small intestine and avoid irritating the gastric mucous membrane with acids, spices, and large lumps of food. Tea and coffee must be absolutely barred, and of course alcohol in any form must be interdicted. Mention of the last will not appear ridiculous to those who have observed parents giving stimulants to their children from early infancy.

Medication is relatively unimportant. I regularly give HCl and a so-called bitter tonic, largely

as a placebo. The quantity of HCl we can give is absurdly small, and the only bitters, such as *nuxvomica*, that can have any notable effect, do not act because of their taste, but probably largely by general stimulation and still more largely by suggestion. One lavage will aid the appetite more than any quantity of drugs.

The second type of cases is perhaps best illustrated by a specimen:

CASE.—Jennie G., aged ten years, complains of anorexia, constipation, nausea and gastralgia, the latter most marked towards morning. The supposedly empty stomach contains much undigested residue, including particles of an orange eaten on the previous day, little mucus. Reaction of contents, feebly acid, free HCl and peptones absent. Inflation of the stomach brings the lower border of that organ two centimetres below the umbilicus, the lesser curvature being at the normal level. Rapid improvement under treatment.

The foregoing case is plainly one of motor insufficiency of the stomach, though the element of gastritis cannot be excluded, the marked muscular atony masking such mild inflammatory changes as may be present. Usually, indeed, the picture just presented is a terminal stage of the third type, to be treated of presently, namely the combination of gastritis and impaired motor activity; on the other hand, since the studies of Comby, there is no doubt that many cases are of rhachitic origin, beginning in earliest infancy, and due to imperfect development and innervation of the gastrointestinal muscular coat. Careful examination for rhachitic remainders will often aid in determining the *ætiology*, but the exact pathological condition will nevertheless frequently continue obscure, as both causes may have been at work to produce the condition present.

A characteristic and conspicuous subjective symptom is gastralgia, varying and irregular, often quite severe at times when the stomach should normally be empty, progressively increasing after the taking of food. Local tenderness is usually present, much more regularly and more marked than in simple gastritis. Second or even first among prominent symptoms should be placed constipation, usually very obstinate, most of all in rhachitic cases. Anorexia is sometimes not very noticeable; we are frequently told that while the child is thriving poorly, it is taking abundant nourishment; perversion of the appetite is not so prominent, as it usually is in gastritis. Abundant eructation of gases is characteristic. Objectively the appearance of the child is apt to be rather worse than in even prolonged gastritis; general thinness is contrasted with a prominent abdomen; the facial cast is often suggestive; rhachitis of course shows

its well known stigmata, some of which merely accentuate the features just stated. The very common occurrence of lymphatic hypertrophy in the faucial and pharyngeal tract is perhaps not a mere coincidence. The other results of physical examination are well illustrated by the case I have narrated.

A few words as to true dilatation of the stomach, while not within the scope of this paper. The moderate degrees of this affection cannot be said to differ from mere muscular insufficiency except in degree, but such symptoms as the presence or vomiting of masses of food twelve or more hours after a meal and fermentative changes in the vomited matter are suggestive of the more severe lesion. The extreme cases result from pyloric stenosis and do not concern us here, besides being as a rule very easily distinguished clinically; as to the milder cases of supposed dilatation, many of these turn out, on observation and treatment, to be merely intensified instances of motor insufficiency, and therefore cannot very well be discussed by themselves.

As to treatment, lavage is of value only if there is very prolonged retention of ingesta, say over twelve hours, in such cases the best time is before breakfast, if possible; otherwise more will be achieved by diet, attention being directed to the giving of small meals at three hour intervals, the variety of food being adjusted as far as possible to the sufficiency of the gastric secretion as established by the chemical tests. Among drugs, nuxvomica takes the front rank, acting as a general stimulant to peristalsis; it is well combined with bismuth and sodium bicarbonate to check fermentation, and magnesia to counteract the constipating tendency of these two. Sometimes the constipation dominates the picture and requires the most attention, and in these cases, I have found cascara sagrada the most valuable drug. When circumstances permit, massage should be employed; while inapplicable to the *clientèle* of a dispensary, in private practice its value is promptly made evident.

Passing to the third type, that of chronic gastritis combined with motor insufficiency, the clinical picture, as may be supposed, presents gradations and combinations between the two. Briefly recapitulating, retention of ingesta points to motor insufficiency, abundant mucus to gastritis. The following case may be illustrative:

Adeline G., aged eleven years; history rather indefinite, but constipation, anorexia, nausea, eructations, and great gastric discomfort most conspicuous. Patient habitually eats hastily and of improper food. Stomach contents show undigested food dating back six hours, but no abnormal fermentation; total acidity, 37, free HCl, 3, abundant mucus. Stomach outlines normal. Test breakfast removed after two hours, partly undigested; mucus very abundant; total acidity 18; free HCl a trace.

Such cases are far from rare, constituting about one tenth of my series of cases of chronic gastric diseases in children. It will readily be understood that where habitual overeating or rhachitis is a factor, these two stomach lesions may very well be combined. The treatment of these cases requires some individualizing, according to the predominance of one or the other group of symptoms. Lavage is very often in order, the subdivision of meals is always indicated. As to medication, it will vary with the case and often play a rôle subordinate to the other therapeutic measures, Nuxvomica, however, usually has a place; HCl or the alkalies may be exhibited according to the indications presented by the case in hand; the constipation, of course, must not be neglected, and the general condition may require toning up. As a rule, it will be advantageous to give chief attention to the element of muscular insufficiency, even if the gastritis seems the predominant feature. Treatment of the latter exclusively will often be disappointing in its results, for we have no right to expect brilliant success in the management of the diseased mucous membrane if the organ as a whole continues to be overburdened with work to which it is unequal. For this reason, at least, I feel justified in joining these two affections into one chapter, trusting that any loss in scientific clearness may be compensated by the presentation of a surely recognizable clinical type.

105 EAST EIGHTIETH STREET.

THE TREATMENT OF NON-PARALYTIC STRABISMUS, INCLUDING A NEW OPERATIVE PROCEDURE.*

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Strabismus is an anomaly of the eyes in which the lines of sight do not meet at the point upon which the gaze is fixed. When due to paralysis, it is, as a rule, a symptom of some lesion in the central nervous system. Non-paralytic strabismus, in which there is perversion of function in the motor apparatus without paralysis, is a condition that demands attention for the following reasons:

Because squint is always a deformity that may not be concealed, and differentiates a patient from his fellow men in an unsightly manner. Inasmuch as the great majority of non-paralytic squints develop in childhood, they are especially important psychologically and sociologically. Children become sensitive and timid, or suspicious and morose,

* Read before the New York Medical Union, October 28, 1902.

through the attention which their playmates and unreflecting adults bestow upon their deformity, and, owing to this and to other reasons, they are handicapped in the struggle for existence. The cosmetic importance of pretty and attractive eyes to the female cannot be overestimated.

In the second place, strabismus demands attention because the deviating eye is excluded from binocular vision, and its function, therefore, may either deteriorate or it may not develop properly until the *possibility* of binocular fixation has been established. Even though the squinting eye may never equal the other in functional power, no matter how assiduously we may treat it, still, even in the least amenable cases, the total visual power of the individual is much enhanced by enabling the squinting eye to become associated with its fellow in the visual act.

Strabismus may be either recurrent or permanent. In recurrent strabismus, the intervals between the periods of deviation, as well as the duration of the deviation, may be long or short. In all cases, however, strabismus tends to become permanent. There are cases of convergent strabismus in which, after a longer or a shorter period of permanency, the squint spontaneously disappears. They are exceptional, and sooner or later in them a permanent divergence supervenes. Each eye having about the same acuteness of vision, the squint may be alternating. In permanent strabismus, the deviating eye has less visual power than its fellow. In permanent strabismus, especially when it is of long standing, the affection is *practically* unilateral; whereas in recurrent, alternating strabismus, it is evident that the motor apparatus of both eyes is affected.

Hypermetropia, astigmatism, myopia and combinations of astigmatism with hypermetropia and myopia play important rôles in the ætiology of strabismus. In a certain percentage of recurrent cases, and in a small number of permanent cases, correction of the error of refraction will suffice to cure the squint; but the patient must, in nearly all cases, wear glasses many years, if not for the remainder of life. The refraction should be corrected with the eyes under the full influence of atropine. Intelligent employment of the ophthalmoscope, the ophthalmometer, and the fundus reflex test is an essential requisite to a proper estimation of the refraction. And the treatment of every case of strabismus must properly begin with a painstaking correction of the refraction, no matter what the subsequent steps may be.

In the class of cases that are cured by glasses, no pathological changes in the muscles, or in Tenon's capsule, or in the fibrous tissue about the muscles have taken place. There is a purely functional derangement of the balance between accommodation

and convergence. This is true also in many cases of permanent squint. Contracture of the overacting muscle and of the fibrous envelope of the muscle, together with atrophy of the antagonistic muscle from disuse and stretching, is observed in a certain percentage of permanent squints. When such contractures have taken place, an important anatomical element has been added to the condition. The squint is then no longer simply a loss of physiological balance between convergence and accommodation, and glasses must surely fail to effect a cure when such conditions prevail. Moreover, glasses will fail when strabismus has become permanent and the deviating eye is markedly amblyopic. While, finally, they should be carefully fitted and refitted from time to time to every patient having strabismus who is old enough to wear them, no further reliance should be placed upon them as an efficient curative measure, unless, within the first year of trial, the deviation is corrected while the glasses are being worn. Exercises with the stereoscope and with prisms, to strengthen the ocular muscles and to stimulate a desire for binocular vision, and reading exercises for the squinting eye, if practicable, may be employed during this time, as well as later in the treatment.

In the great majority of fixed squints, and in many cases of periodic squint, operative interference will be required. The problems presented by them are among the most perplexing in surgery. The technique of tenotomy and of advancement of the ocular muscles may be mastered by any dexterous person; but the nicest judgment is required to determine the time when operation should be undertaken, as well as the extent to which it should be carried.

The objective of the treatment of strabismus is threefold, namely, (1) to remove deformity, (2) to establish normal association of movement between the eyes, and (3) to reclaim the deviating eye from amblyopia. Operative treatment alone cannot accomplish all these things, nor will it accomplish much for either of them unless intelligently undertaken. The failures of the prevailing methods of operation for strabismus are many, and may be enumerated as follows: (1) the deformity remains uncorrected, (2) after a period of apparent cure, a relapse to the former state is observed, or a deviation in the opposite direction supervenes, (3) the eye operated upon looks larger than its fellow and staring, although perhaps not squinting, and (4) motion in one of the cardinal directions is more or less restricted. These are the salient faults commonly observed, and they occur in the practice of all operators, both celebrated and obscure. The reason for these failures may be sought in the method of operating, and it seems to me that they are due especially to the free division of the over acting muscle

so universally practised. Tenotomy of a muscle diminishes its functional power, and after it the eyeball is no longer sustained in its normal position in the orbit, but projects forward to a greater or lesser degree. This is especially true after free division of an internal rectus. After free tenotomy of an internal rectus, the tissues at the inner angle of the eye sink back into the orbit, leaving a sulcus and exposing more of the sclera than we are accustomed to see. The exophthalmus and the retraction of the tissues at the inner angle cause the eye to appear larger than its fellow and give it a staring expression.

Free tenotomy weakens the muscle and restricts rotation of the eyeball in the direction of its action, without really increasing the strength of the antagonist. Advancement of a muscle, on the other hand, increases its power without diminishing the strength of its antagonist. We should regard strabismus as a symptom of weakness in the visual apparatus, and we should be very careful how we contribute to that weakness. I do not wish to convey the impression that tenotomy should never be performed, but rather that I am convinced that the operation is performed much too frequently and too freely.

Ten or twelve years ago I made my first attempts to correct strabismus by advancement of the antagonist without tenotomy of the overacting muscle. Some of those operations were performed in my private office in Burlington, Vermont, and others were performed at my clinic in the Medical Department of the University of Vermont. The desirability of perfecting such a method of operative treatment for squint was then and there fully and publicly discussed. In fixed strabismus, I have confined my operations in probably ninety per cent. of the cases to the deviating eye. I have advanced the opposing muscle in the great majority of the cases, and, in most of them, cut the overacting muscle. This method was an improvement upon the practice of operating on both eyes; but, although the general result was apparently excellent, it was not satisfactory to myself. In a smaller number of cases I have advanced the antagonist, omitting to divide the overacting muscle. Some of the results were gratifying. The chief difficulty encountered was that of maintaining the position of the advanced muscle until healing could take place. I devised a special needle that would neither tear nor cut the episcleral tissue through which the sutures must pass, and was thus enabled to secure a hold for them that did not give way readily. Several methods of advancement were tried. Still, the pull of the overacting muscle upon the sutures was always too great for security against failure. Finally, I tried to obviate that difficulty by stretching the overacting muscle, hoping to paralyze or weaken it tem-

porarily. Forcible stretching of the muscle and its fibrous envelope was practised by passing a strabismus hook beneath the tendon and making all the traction upon the tissues that seemed safe, and yet sufficient to attain the desired result. Then the antagonist was advanced. I confess that I have had but small opportunity to try this plan since the idea came to me, but I have tried it sufficiently to be convinced that stretching the tissues in this way will prove to be a very useful preliminary to advancement of the antagonist, and that it will materially aid our endeavors to eliminate tenotomy from the treatment of strabismus.

The treatment of squint should begin immediately upon its first manifestation. Operative treatment may be undertaken as soon as it is clear that other means of cure have failed. I am sure that operative treatment should consist in measures that increase the power of the motor apparatus, and that complete tenotomy should be eliminated as far as possible, for it diminishes the motor power, and itself causes a deformity and a weakness that will be permanent.

Stereoscopic, prismatic, and reading exercises, and careful supervision of the refraction should be continued until the cure is completely established. Efforts to revive vision in an amblyopic eye should be persisted in for several years, notwithstanding the seeming hopelessness of the task.

58 WEST FORTIETH STREET.

Correspondence.

LETTER FROM TORONTO.

St. Michael's Hospital.—*The Toronto Dispensary.*
—*The Matriculation Requirements.*—*A Case of Disciplining.*—*Honors for Toronto Practitioners.*
—*The Late Dr. Scott.*—*The National Sanatorium Association.*—*The Victoria Hospital for Sick Children.*

TORONTO, January 11, 1903.

St. Michael's Hospital, Toronto, is to have a new wing, which will be devoted to the purposes of a maternity ward. The number of patients in the institution at the present time is 150.

The Toronto Dispensary, which was established in 1854, has treated during the past year between 16,000 and 17,000 patients. The annual report for 1877 shows that at that time the dispensary was doing a good deal to relieve sickness among the poor of this city, the number treated then being about 4,000 per annum. Owing to the great increase in the work of the dispensary, the board of management is appealing to the public for funds to erect and equip a modern dispensary.

Students in medicine in Ontario have been much relieved regarding the interpretation of the regulations adopted at the last general meeting of the Ontario Medical Council, by the publication of a letter from the registrar of the council to the Honorable the Minister of Education. According to this letter, the matriculation standard for 1903 shall be the same as for 1902. For 1904 and subsequently the standard shall be (1) junior matriculation in arts, including physics and chemistry, with honor standing in any one subject of the course, or (2) senior matriculation in arts as now provided for by the regulations.

At the last meeting of the Ontario Medical Association two of the members thereof got themselves into disfavor through connections with a business venture which was established in Toronto for the purpose of treating cases of consumption by the "Ramage-ozonized" process. This savored so much of unprofessional conduct that the association investigated the connection of the two professional gentlemen therewith, who offered humble apologies and promised to do better. The "Ramage" hospital, however, did not prove a very great financial success to the capitalist who was supplying the wherewithal, and it is understood that the whole business has been abandoned. The profession in Toronto can now await the coming of the next exploiter.

The following Toronto practitioners have recently taken honors abroad: Dr. Charles B. Shuttleworth, who has been admitted by examination F. R. C. S., England (Dr. Shuttleworth has recently returned to Toronto and has been appointed associate professor of anatomy at Trinity Medical College); Dr. William A. Creswell; Dr. Robert J. Dwyer, who for many years was superintendent of St. Michael's Hospital; Dr. William A. Fish; Dr. Joseph F. McKee; Dr. Wallace A. Scott; and Dr. William E. Struthers.

The death of Dr. Alexander Young Scott, of Toronto, took place on the morning of the 3rd of January. Dr. Scott was a native of Ontario, and was born in 1861. He graduated from the science department of Toronto University in 1882. Entering on the study of medicine in Trinity Medical College, he received his degree in medicine from Trinity University in 1887, having been in 1885 in active service in the Northwest rebellion. In 1891 Dr. Scott was appointed professor of botany and chemistry at the Ontario College of Pharmacy, Toronto, a position which he held up to the time of his death. This was caused by myocarditis after an attack of typhoid fever a year ago. Dr. Scott was prominent in military circles and was major of No. 4 Bearer Company.

The annual meeting of the board of trustees of the National Sanatorium Association was held in Toronto a short time ago and was presided over by the vice-president, Sir William Meredith. The medical superintendent of the Muskoka Cottage Sanatorium at Gravenhurst, Dr. J. H. Elliott, read the report for the past official year, which ended on the 30th of September, 1902. During the five years that the sanatorium has been in existence it has cared for 612 patients, and of those treated during the past year 85 per cent. have apparently been cured or the disease arrested. During the five months that the Free Hospital for Consumptives at the same place has been receiving patients, ninety have been admitted; of this number, fifty came from Toronto and the remainder from Ontario and other parts of the Dominion. The association has purchased a fine site near Toronto for another establishment, and a citizen of Toronto has promised to give \$25,000 toward the erection of new buildings. The association also has in contemplation the establishing of another sanatorium on the Pacific coast.

Five thousand three hundred and seventy-three patients were treated at the Victoria Hospital for Sick Children, Toronto, during the past official hospital year. Of these, 749 were in-patients and 4,624 were out-patients. Of the in-patients, 520 were free patients. There were 128 patients at the beginning of last year; 621 were received during the year; 627 were discharged during the year, leaving in the hospital on the 30th of September, 1902, the end of the official year, 122 patients. Out of the in-patients, 447 were cured, and 209 improved or greatly benefited. There were 471 surgical operations performed during the year. The cost of each patient per diem was \$88.11. The hospital was closed during two months of the year, owing to an outbreak of diphtheria and scarlet fever.

LETTER FROM MONTREAL.

The Hospital Treatment of Contagious Diseases.—King Edward's London Hospital Fund.—The Medical Department of McGill University.—The Campaign against Tuberculous Disease.—The Consumption of Spirits and Tobacco.

MONTREAL, January 11, 1903.

For over three years the Montreal City Council has been struggling with the question of a new contagious diseases hospital for this city. It is probable now that the project is on the high road to realization. Recently the council offered \$15,000 a year each to the Notre Dame Hospital and an English hospital, the contract to continue for twenty-five years, if they would accept and treat cases of infec-

tious and contagious disease occurring in the city. So far as Notre Dame is concerned, the offer has been accepted, and it remains to be seen whether the General or the Royal Victoria will elect to care for the English patients. The trouble all along has been due to the fact that the French and Roman Catholics desired a separate and distinct hospital.

A short time before the coronation of King Edward the news came across the Atlantic that Lords Strathcona and Mount Stephen had made munificent donations to King Edward's London Hospital Fund. No amount was mentioned and there was much conjecture in this the home of the two noble lords as to what the amount really represented. The announcement has been made that the first quarter's interest on the securities set aside for the above mentioned purpose, has been paid, which amounts to something over £4,000. It will therefore be seen that the annual income to the fund from these eminent Canadians will amount to something like \$80,000.

The following appointments and changes have recently been made on the staff of the medical department of McGill University. Dr. G. A. Charlton has resigned his fellowship in pathology and has received the appointment of superintendent of the Isolation Hospital at Ottawa, where he will continue to prosecute his studies of scarlet fever. Dr. H. Wolferstan Thomas has been appointed to the fellowship in his stead. Dr. A. H. Gordon, gold medallist in 1900, has been appointed demonstrator in pathology. Dr. P. G. Woolley has resigned his governor's fellowship in pathology. Dr. Starkev, the recently appointed professor of hygiene, has been selected to deliver the annual university lecture in January.

Not long ago an important meeting was held in this city under the presidency of his Excellency, Lord Minto, to inaugurate an association looking toward the prevention of tuberculosis. Probably the most remarkable address at the meeting was that delivered by Dr. A. J. Richer, who has been studying the statistics of consumption and other manifestations of tuberculosis in Montreal; and his estimate of the number of cases present here might well be placed in the hands of all citizens, that the community interested in the health of the city might appreciate the grave dangers at our doors. As a result of the gathering a strong committee was organized with many well known Montreal practitioners named on it, and organization of the city to fight the dread plague is rapidly proceeding.

The annual report of the Department of Inland Revenue for the year ending June 30th last was issued in December and shows that the quantity of spirits produced during the year was 3,234,147 proof

gallons as compared with 2,652,708 proof gallons for the previous year. The people of Canada drank more spirits and beer last year than they did in 1901. The quantity of spirits consumed was .796 against .767 last year. Beer was 5.102 as compared with 1901, 4.737; and .090 wine as compared with .100 in 1901. The consumption of tobacco was the same as in 1901. The number of cigarettes consumed during the year was 134,236,034 as compared with 121,383,584 for the previous year.

Issues and Events of the Day.

THE FORMALIN TREATMENT OF BLOOD POISONING.

At a stated meeting of the New York County Medical Association, held on January 19th, at the Academy of Medicine, Dr. Alexander Lambert, president, in the chair, Dr. C. C. BARROWS presented a brief report of the case which has attracted so much attention from the daily press during the past week, viz., that of a patient successfully treated by intravenous injections of a solution of formalin. This patient was a negro woman, twenty-six years of age, who was in labor at the time of coming to the hospital. On admission she had a chill, the respirations were thirty a minute, and there was a fetid, bloody vaginal discharge. In due time she was delivered of a dead and macerated foetus of about the sixth month, and after the removal of the secundines she received a bichloride douche. This was followed in an hour by chill and increased fever. By seven o'clock the following morning the temperature had reached 108° F. An intrauterine irrigation of hydrogen peroxide solution was given, followed by two quarts of normal saline solution. This brought away blood clots and débris. On being transferred subsequently to Dr. Polk's service in Bellevue Hospital, she was curetted, and decomposed membranes and placental tissue were removed. The patient was very septic at this time. A blood culture made by Dr. Buxton, on December 30th, showed streptococci present in pure culture. Dr. Barrows saw the woman at this juncture, and found her with a temperature of 108° F., and a pulse of 160. She was thought to be almost moribund. It was at this time that she was given 500 c. c. of a 1 to 5000 aqueous solution of formalin. Three hours later her temperature had fallen to 102°, and at the end of another period of three hours the temperature was 101°, the pulse 104, and the respirations 28. In three hours the temperature was 103°, but in another three hours the rectal temperature was only 95° F. After two or three more rapid fluctuations of the temperature, she was given an intravenous injection of 750 c. c. of the same solution of formalin. This was followed by a chill and a rise of temperature, but after about twelve hours the temperature fell to normal, and since that time had remained practically at that point. The patient was now apparently well.

It was interesting to note that, at the time of admission, a blood examination showed a leucocytosis and the malarial plasmodia. Streptococci were not found in the blood after the first infusion of formalin solution, and numerous microscopical examinations of the blood failed to show any change in the blood corpuscles.

Dr. Barrows said that at the time of treating this case he only knew that formalin injections had been used to some extent in the Loomis Sanitarium in the treatment of pulmonary tuberculosis, but he did not know of the paper published in 1900, by Dr. R. McGuire, on the action of formalin. That investigator had found that formaldehyde, in a dilution of 1 to 200,000, was a very efficient germicide. Dr. Barrows said he had endeavored in the treatment of the case just reported, to eliminate as far as possible the personal equation, and the results of the treatment apparently showed that formalin solution was capable of destroying the streptococci in the blood without injury to the patient.

ANOTHER CASE REPORTED.

Dr. EDWARD WAITZFELDER reported the following case bearing upon the same subject: His patient was a woman, twenty-six years of age, who had been admitted to Gouverneur Hospital on December 28th in a decidedly septic condition. The history was that she had been confined with her first child three weeks previously, and had developed symptoms of sepsis within a few days after delivery. Two days before coming to the hospital she had been curetted with the blunt instrument and some blood clots and detritus removed. On admission, her temperature was 102.05° F., pulse 120, and respirations 26. Two days later the temperature had risen to 105.5°, and it had fluctuated between 104° and 105° up to January 2d, when she was first seen by the speaker. At that time her temperature was 104.7° and the pulse 120, and her general condition was very bad. With a sharp curette the uterus was scraped and the cavity was then swabbed out with pure carbolic acid for the purpose of sealing the lymph channels. She grew steadily worse, and on January 13th her condition was considered hopeless. At this time, on the advice of Dr. H. M. Silver, she received 750 c. c. of normal saline solution by hypodermoclysis. Within twelve hours her temperature fell from 105.5° to 96.25°, and on the following day rose again to 103.5°. She was then given 500 c. c. more of saline solution. On the seventeenth day of the disease, her condition continuing desperate, another hypodermoclysis of 750 c. c. of saline solution was given, which caused another fall of temperature, but in twenty-four hours the temperature had again reached 105.5°. On the evening of January 15th it was resolved to try Dr. Barrows's method. The woman was given, by intravenous injection, 750 c. c. of a 1 to 5,000 solution of formalin. In twelve hours the temperature had fallen from 104.5° to 96.75°, but in another twelve hours the temperature had reached its former height. On January 17th she was given an intravenous injection of what was supposed to be the same strength of formalin as had been used before, but which proved to be a 1 to 2,500. After she had received 100 c. c. of this

solution she became cold and blue, and seemed to be about to die. The injection was hastily discontinued and restoratives administered. Then, a normal saline infusion was given and, it should be noted, with exactly the same result as from the first formalin injection. Now, forty-eight hours after the last intravenous injection, her temperature was 101°, the pulse was 120, and the respirations 48. In summing up this case, the record of which was admittedly incomplete, the speaker said he felt convinced that the fall of temperature had not been due to the germicidal action of the formalin but to the entrance of a quantity of watery fluid into the general circulation. Examination of the blood showed that there was a reduction of the hæmoglobin after the injections, that the red blood corpuscles were shrunken and, in short, that the appearance was not at all like that observed from a simple saline infusion. Before the injections the blood had been proved to contain numerous streptococci.

A THIRD CASE.

Dr. W. L. BANER also contributed a case to the discussion. The case had occurred in the service of Dr. Biggs, at the St. Vincent's Hospital. The patient, a woman forty-two years of age, twelve days before admission had been struck on the head with a spittoon, sustaining a slight scalp wound, which healed kindly. A few days afterward she developed cough and fever, and, when admitted on December 12th, had a well marked bronchopneumonia and a slight abscess over the left patella. There was a leucocytosis of 11,600. The sputa contained pneumococci and streptococci. On December 26th her temperature rose to 104° F., and for the next five days fluctuated between 100 and 104°, with a pulse of 120 or 130. On the afternoon of January 3rd there was a chill, and since that time a hectic fever. Three days later, streptococci in pure culture were found in the blood. On January 10th, the leucocytosis reached a maximum of 22,000, but it averaged 17,000. The patient's condition growing steadily worse, on January 16th the formalin treatment was tried at the suggestion of Dr. Barrows. At the first injection only 250 c. c. of the solution were injected into the vein. It was followed by a rise of temperature from 104° to 105°, but the next day the patient's general condition seemed to be slightly improved. On January 18th she was worse, and an intravenous injection of 750 c. c. of a 1 to 5,000 solution of formalin was given. One hour after this the temperature had risen from 102° to 106°, and the pulse and respirations had become very rapid. Five hours after this the temperature was 101.5° and the pulse 150, but to-day her temperature had been between 103° and 104°, and the pulse between 140 and 180, and her condition was believed to be hopeless. Dr. Baner was of the opinion that in this case the formalin injections had exerted no special influence, either for good or evil.

[This patient died on January 21st. At the autopsy her death was declared due to blood poisoning.]

Dr. WILLIAM R. PRYOR pointed out that in only 33 per cent. of fatal cases of streptococcus puer-

peral infection were streptococci found in the blood, and that they occasionally disappeared, and even reappeared without regard to treatment. Streptococci were found in the blood in some cases of amygdalitis, rheumatism, bronchopneumonia and other conditions. Bacteriologists having experience in the investigation of puerperal infection had prescribed a certain technique by which one should determine the microorganisms responsible for the infection. If the discharges were collected according to this technique and streptococci were not in them, the case could not be properly called one of streptococcus infection. He was led to make these remarks, because those who had spoken this evening had adduced no scientific proof that the cases they reported were really instances of streptococcus infection having its origin in the uterus. In his opinion, the descriptions given tallied with those of putrid infection.

This method had been referred to as new, yet, as a matter of fact, it was quite old, having originated in the City Hospital in 1896. The injections of germicides used there, it was true, were not of formalin, but the principle was the same, and it had been demonstrated so clearly that the blood could be inoculated, so to speak, with iodine, that he had since successfully employed the method in twenty-seven cases, and a number of others had also adopted the same method.

Dr. J. WHITRIDGE WILLIAMS, of the Johns Hopkins Hospital, Baltimore, was invited to participate in the discussion. He declared that he was compelled to view this new and interesting subject with great reserve, because clinical experience had demonstrated to him that it was by no means an infrequent occurrence for cases of streptococcus infection to remain for a week or more apparently on the verge of dissolution, and then suddenly, and quite independently of treatment, to improve and go on to recovery. In one case, after curetting and the intrauterine injection of two litres of sterile salt solution, the temperature fell from 107° F. to 95°, and many streptococci were found in the blood. It would be interesting to imagine what conclusions might have been drawn if this remarkable improvement had been coincident with the trial of some new remedy or method of treatment. At one time, while serving on a committee with Dr. Pryor, they had thoroughly sifted the available evidence concerning the treatment with antistreptococcus serum. They had been struck by the fact that those reporting favorably on this treatment had seen only one or two cases so treated, while those who had had a much larger experience in this field had arrived at the conclusion that antistreptococcus serum was of but little value. Dr. Barrows had referred to Dr. McGuire's first paper, but his second communication, made to the British Congress of Tuberculosis, gave such a glowing account of the treatment of one hundred cases of pulmonary tuberculosis by formalin injections that the press everywhere took it up, and eighteen months later Dr. McGuire felt called upon to issue a statement, which showed the subject in a much less rosy hue. Moreover two other physicians, as a result of experiments upon animals, had come to the conclusion

that the formalin treatment not only did not cure the tuberculosis, but actually tended to make its progress more rapid. He had himself observed one or two cases in which the use of injections of a 1 to 5,000 aqueous solution of silver nitrate had apparently yielded happy results, but although many believed that its beneficial action was dependent on the setting up of a leucocytosis, these cases observed by him had been characterized by an absence of leucocytosis. Incidentally he wished to utter a note of warning against the use of the curette in streptococcus puerperal infection, for he firmly believed that this treatment in this particular class of cases had killed more women than it had cured. The less the uterus was meddled with in such cases the better the result.

Dr. WILLIAM M. POLK defended the position taken by Dr. Barrows. He was aware that at the present time a report of this kind was not considered scientifically complete that omitted to state whether or not streptococci were present in the discharges, yet he could not help feeling that those possessed of sufficient clinical experience could hardly make a mistake regarding the nature of the infection in a case like the one that had confronted Dr. Barrows. The present discussion reminded him of a similar one which occurred about a quarter of a century ago, when Déclat proclaimed to the world his treatment by hypodermic injections of phenic acid. Many cases were adduced at that time to show the good points of that method, yet in the course of time it was shown that the results were rather against than in favor of Déclat's method. Dr. Barrows was, of course, thoroughly familiar with the effects of saline infusions, and he had evidently been impelled to try this novel mode of treatment by the thought that in the desperate case, which he had reported, all the well recognized methods had proved of no avail. The advantage of the formalin treatment over saline infusion seemed to be the prolonged lowering of the temperature which it produced.

Dr. BARROWS once more emphasized the fact that the streptococci had rapidly disappeared from the blood after the formalin injection, and insisted that he had reported the case not as one of puerperal septicæmia, but as acute streptococcus infection.

Therapeutical Notes.

The Treatment of Residual Urine.—Reginald Harrison, F. R. C. S. (*Interstate Medical Journal*, December), in a lecture delivered at the London Polyclinic, says:

"The two reasons for the adoption of catheter life, namely, incontinence arising from the overflow of residual urine, and decomposition of the excretion, are rarely debatable; where one or other exists the catheter becomes a necessity. In advising patients with some residual urine, in those instances where the odor of the excretion is unnatural and offensive, I do not think this can always be correctly assumed as caused by decomposition. The most careful and regular catheterism combined with washing out the bladder with various things will

often fail to remove it. It is a sickly sort of odor and usually occurs in cases of enlarged prostate and differs entirely from ammoniacal decomposition. It is, I believe, best treated by that class of drugs which are supposed to exercise a sterilizing effect on the urine. Of these urotropin, benzoate of ammonium and salol are probably the most suitable, and may be administered in sufficient doses without disturbing the digestion. In this way the urinary organs may be flushed from the kidneys downwards, a form of washing out which may often be advantageously combined with drainage."

For Calculous Cystitis of Renal Origin.—The *Journal médical de Bruxelles* for November 20th, citing the *Journal des praticiens*, says that medical treatment is ordinarily insufficient to cure calculous cystitis of renal origin, but that recourse to lithotripsy is necessary. Spontaneous cure is however, possible: even prolonged remissions at times following on treatment exclusively medical. In the acute period, the pain is so violent that hypodermic morphine must be given without hesitation morning and evening; the dose may be carried up to $1\frac{1}{2}$ or even 2 centigrammes ($\frac{1}{4}$ to $\frac{1}{3}$ of a grain). In this malady morphine has a special efficacy. At the end of a few days the necessity of urinating, and the pain, are greatly reduced in frequency and intensity. At this point the following suppositories will be of service:

- R Thebaic extract.....0.05 gramme ($\frac{3}{4}$ grain);
 Extract of belladonna.....0.02 gramme ($\frac{1}{3}$ grain);
 Cocoa butter.....3.00 grammes (45 grains).
 M. For one suppository. One to be inserted every evening.

Hot applications at 45° C. (113° F.) or hot rectal irrigations with a double current catheter may be administered two or three times daily. A full bath at 36° C. (96.5° F.) of three quarters of an hour's duration will produce restfulness and relaxation. To aid in evacuation, abundant drinks—milk, infusion of *arenaria rubra*, and Evian water, are particularly useful. When, however, the bladder tolerates badly the presence of liquid and reacts by extremely painful contractions to the least tendency to distention, the quantity of drink allowed must be diminished. For two or three days the patient should take only one quart of milk and a pint of Evian water or of tisane. As soon as a crisis has been brought about, these quantities may be doubled or tripled. At the same time, solid alimentation (milk soups, eggs, and vegetables in milk) at first reduced to a minimum, may be increased little by little. It is well known that the ammoniacal transformation of the urine is very rare in calculi of renal origin; wherefore there is no need for vesical lavages.

Kept at absolute rest during the acute period, the patient may be permitted to take carriage exercise later, only with great caution. There is prescribed Evian water, from two to three glasses in the morning at twenty minutes' interval, and a glass at bedtime; and at 10 a. m. and 4 p. m. a bowl of infusion of *arenaria*. Neither undiluted wine nor liqueurs.

Before meals should be taken three of the following pills, to check the uricacidæmia:

- R Sodium benzoate.....6 grammes (90 grains);
 Extract of *stigmata maidis*..5 grammes (50 grains);
 Medicinal soap.....3 grammes (45 grains).
 M. make into 100 pills.

Or again, 25 centigrammes ($3\frac{3}{4}$ grains) of lithia before meals in a glass of aerated water. Piperazin or sidonal, recommended by M. A. Robin as a solvent of uric gravel, may be used.

- R Sidonal or piperazin hydrochloride.....3 grammes (45 grains);
 Distilled water.....300 grammes (10 ounces).
 M. A tablespoonful before meals.

Or this:

- R Sidonal or piperazin hydrochloride.....5 grammes (75 grains);
 Extract of *arenaria*.....15 grammes (221 grains).
 M. Make into 100 pills. Two to be taken before each of the three meals.

The action of these remedies being rapid, they should be taken for not more than four consecutive days, followed by four days of interruption. Lithium carbonate or sodium benzoate may be administered in the intervals.

Nocturnal Incontinence of Urine.—The *Journal des Praticiens* for November 8th recommends the addition of antipyrine to Trousseau's recommendation of belladonna. It gives the following formula:

- R Syrup of belladonna } of each 75 grammes ($2\frac{1}{4}$
 Syrup of tolu } ounces)
 Antipyrine 15 grammes (225 grains)
 M. A teaspoonful morning and evening. Increase to two teaspoonfuls if the incontinence persists.

Bromide of camphor, ammonium valerianate, and castoreum may be also associated with belladonna:

- R Extract of belladonna..0.01 gramme (15/100 of a grain)
 Camphor bromide....0.10 gramme ($1\frac{1}{2}$ grain)
 Ammonium valerianate) of each 0.05 gramme ($\frac{3}{4}$ grain)
 Castoreum)
 M. For one pill. To be taken at bedtime.

The author has used with great success the fluid extract of *rhhus aromatica*, 15 drops morning and evening, or a dessertspoonful of the following mixture:

- R Fluid extract of *rhhus aromatica*...2.50 grammes ($37\frac{1}{2}$ grains)
 Ammonium valerianate....0.75 grammes (11 grains)
 Syrup of mint 150 grammes (5 ounces)
 M.

Rousseau St. Philippe, of Bordeaux, prefers *rhhus radicans*. It may be prescribed as follows:

- R Tincture of *rhhus radicans*....8 grammes (2 drachms)
 Lime glycerophosphate. ..of each 1.50 grammes ($22\frac{1}{2}$ grains)
 Iron glycerophosphate)
 Syrup of cherries 300 grammes (10 ounces)
 M. A dessertspoonful on rising and at bedtime.

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THE WEEK'S CROP OF WONDERS.

Since our last issue went to press, the newspapers have announced no fewer than three astonishing discoveries in medicine. Of a truth, the restless spirit of modern investigation is compressing centuries into weeks, and it almost takes one's breath away to have to pass so rapidly from the consideration of one discovery to that of another. The first of those that have been promulgated during the last week is that of the feasibility of introducing into the circulation enough formic aldehyde to promptly check the deadly work of streptococci without injury to the patient. For this discovery the credit is to be awarded to Dr. Barrows, of New York. It appears that the first case in which the daring expedient was resorted to was one of puerperal septicæmia of such severity that the patient was almost *in articulo mortis*. The solution of formic aldehyde known as formalin (a forty per cent. solution of the gas) was diluted with 5,000 parts of water, so that the product was a very weak solution of the gas itself. About a pint of this diluted solution was injected into a vein. The result was a prompt and very decided reduction of the number of streptococci in the blood, together with a most gratifying mitigation of all the symptoms. The injection was repeated in two days, and then the woman was judged to be out of danger.

This is a result that decidedly exceeds the usual effects of the use of antistreptococcus serum. That it was really brought about by the formic aldehyde, and was not a mere beneficent freak of Nature, seems to be assured by the report of an equally good outcome in another case of septicæmia treated in

the same way. We feel warranted in calling Dr. Barrows's procedure a daring one in spite of Maguire's experiments. If Dr. Fortescue-Brickdale's observations, published in the *Lancet* for January 10th, had been known to Dr. Barrows at the time, it would have seemed to him still more hazardous. Much as we have justly come to rely upon anti-septic precautions, we can hardly expect that they will always be so thorough as to prevent septic infection; hence a remedy of such rapid and decided curative power as seems to be possessed by formic aldehyde must be hailed as an addition of the first magnitude to our therapeutic resources. It is by all means to be hoped—expected also, we think—that Dr. Barrows's experiment will speedily be confirmed.

The second of the somewhat startling discoveries in question has been made by Dr. Crile, of Cleveland, to the effect that adrenaline (commercially termed adrenalin) is vastly more powerful as a cardiac roborant than had been supposed. It is even reported to have restored to life a dog in which, as the result of an electric shock, all signs of life had disappeared. We presume that it was in conjunction with artificial respiration that the suprarenal product did its work, but this hardly detracts from the wonderful character of its action. Dr. Crile is known as a careful and experienced observer, and we expect his results, too, to meet with confirmation in clinical trials.

Finally we come to the proposal to treat hay fever with an antitoxic serum. This is put forward by Dr. Dunbar, of the Hamburg Hygienic Institute, said to be an American by birth. Dr. Dunbar would apparently restrict the pollen theory of the ætiology of the disease to the pollen of certain grasses, particularly rye, and perhaps it is to be inferred that he has discovered a microorganism that is parasitic on the pollen, for it is difficult to imagine how otherwise he could produce an antitoxine. Preparations of arnica, as is well known, sometimes produce great irritation of the skin to which they are applied, and this fact has been attributed to the plant's being infested with a parasite. It would not be very strange therefore to find other plants infested with pathogenic parasites. We shall look with interest for actual observations bearing on Dr. Dunbar's theory.

HEALTH AND THE SUNNY SIDE OF THE STREET.

There is a vague general impression among the community—more pronounced among the medical profession—that to occupy sunny rooms is favorable to health, but we are not aware that the point has before been investigated in any way quite comparable to that in which Dr. Thayer treats of it in an article published in this issue of the *Journal*. We are under the impression that, other things being equal, a house situated on the north side of a New York cross street is considered a little more valuable than one on the south side. We are speaking, of course, of private houses. This we have always heard attributed largely to the fact that after a snow storm the sidewalk in front of a north side house is more speedily cleared of ice and slush under the influence of sunshine. In a measure it may be due also to the preference for a sunny parlor, a room usually situated in the front of the house. But Dr. Thayer has shown quite clearly, we think, that a great compensation to dwellers on the south side lies in their greater freedom from serious sickness. The difference is not great, indeed, but it is certainly of importance.

It will hardly be questioned that sleeping rooms with a southern exposure are more wholesome than those that look to the north, both because the sunlight that enters them freely is a purifying and vivifying agent of the first magnitude and because the greater warmth of such rooms leads to more frequent opening of the windows belonging to them, whereby they and their inmates are more thoroughly subjected to the action of fresh air. Dr. Thayer infers that the lower death rate of south side houses, as compared with those on the north side of a street is due to the fact that in such houses as predominate in the district studied by him more people sleep in the back than in the front rooms. Such a preponderance of rear sleeping rooms probably exists, and we know of no reason to doubt its relation to the different mortality rates observed by Dr. Thayer for the respective sides of the cross-town streets. A point that may be of some importance turns on the fact that in general our summer night breeze comes from the south, entering the sleeping rooms that have a southern exposure and

enabling the occupants to sleep better than their neighbors on the north.

Out-of-the-way inquiries like Dr. Thayer's are apt to be interesting, even if they do not always lead directly to the establishment of facts having a manifest practical bearing; in this instance, we think, the facts noted may at least serve as the nucleus of a large enough collection to prove of indisputable weight in any consideration of the problems connected with sanitary living. Unless Dr. Thayer's interpretation of them is shown to be fallacious, they must in the mean time be accepted as tending to confirm the general impression that sunlight conduces powerfully to health.

OBSTRUCTIVE AMENORRHŒA.

So far as this country is concerned—and we fancy it holds good for the civilized world—women are prone to attribute all the importance that is its due to the absence of the menstrual flow, even going so far as to believe in cases of serious systemic disease that all would go well if only menstruation could be restored. Sometimes, however, too little significance is accorded to failure of the function, provided there is no suspicion of illegitimate pregnancy. This occasional disposition to think lightly of amenorrhœa doubtless leads to neglect of the actual condition of the genital tract. In conjunction with this neglect on the part of the mothers of young girls there is the praiseworthy aversion of physicians to meddling with the genitals of such young women save under the pressure of stringent and self-evident need. This, too, sometimes leads to very serious errors of omission, as is pointed out by Ludwig Pincus in the *Centralblatt für Gynäkologie* for December 27th.

A mechanical obstacle to the escape of menstrual blood, by reason of an imperforate state of the hymen or of atresia of the vagina, Pincus thinks, is a more frequent cause of amenorrhœa than is generally supposed, so that what passes for suppression of the menses is often their retention. The consequences may not be limited to hæmatometra or even include that condition at all, for hæmatosalpinx, according to his view, may really be owing to vicarious menstruation into the oviduct in consequence of obstruction. However, we think more observation

is needed before this idea can be accepted, for it is not easy to trace the relationship between vaginal obstruction and the occurrence of hæmorrhage into the Fallopian tube apart from previous distention of the vagina and uterus.

Though it is admitted that the menstrual mola may occur without any effusion of blood, PinCUS thinks that its occurrence twice on successive occasions when menstruation is due should be deemed sufficient to call for a vaginal examination. He thinks, too, that vicarious menstruation, especially by the rectum, should lead to such investigation. Here again it is not easy to perceive the connection between vaginal obstruction and loss of blood elsewhere than by the usual channels. Nevertheless, the advice is judicious, we believe, that when amenorrhœa persists without any ascertained systemic abnormality to account for it, an exploration of the vagina is desirable.

TWO WAYS OF DEALING WITH PLAGUE.

Mazatlan has set an example of self-devotion to public interests that may almost be denominated sanitary Quixotism. This city, in the south of the Lower California Peninsula, being infected with plague, in order to rid itself of rats has destroyed by fire the new wooden wharves that were only constructed a year or two ago. This seems to be an unnecessarily severe measure, but it at least shows a wideawakeness to the public interests that may well be an object lesson to San Francisco. This latter city has for two years been strenuously denying the existence of bubonic plague in its confines, though there is no doubt whatever of its presence there. San Francisco, for fear of a temporary check to its commerce, conceals, and so fosters, a plague focus. Mazatlan openly proclaims itself infected and sacrifices its wharves for the public good, that the evil may be the more quickly eradicated and commerce more speedily restored. Can there be any doubt as to which course is more worthy of the twentieth century?

THE INTRAVENOUS INJECTION OF FORMIC ALDEHYDE IN SEPTICÆMIA.

Of great and timely interest is an article on Intravascular Antisepsis, by Dr. J. M. Fortescue-Brickdale, in the *Lancet* for January 10, 1903. During the recent newspaper discussion of a case of puerperal septicæmia successfully treated by the

intravenous injection of large quantities of dilute formic aldehyde, it was stated that a series of experiments upon animals would be at once instituted in order to determine the amount which could safely be injected, and to what extent such injection would counteract artificially produced septicæmia. If Dr. Fortescue-Brickdale had undertaken his experiments with this celebrated case in view, they could hardly have been more apropos. Unfortunately his results fail to support all the wildly extravagant statements that have been made—not by the originator of the method, but by the daily press. He finds, indeed, that formic aldehyde can be injected intravenously into healthy animals in such amounts that, when the blood is withdrawn from the body, it distinctly inhibits the growth of bacteria *in vitro*. But when animals (rabbits) are artificially infected with anthrax bacilli or the pneumococcus, small doses of formic aldehyde have no effect, while large doses so depress the animals that they die sooner than the untreated animals. He concludes by saying that "it seems useless to continue trying to apply clinically a method which, while by no means free from special dangers and difficulties, is at present unsupported by any experimental evidence either as to its present advantages or future prospects."

THE WASHINGTON PLAGUE CONFERENCE.

The conference held in Washington on Monday manifested a gratifying state of concord between the various State boards of health and the United States Public Health and Marine Hospital Service in the firm stand taken to the effect that an outbreak of infectious disease ought never to be concealed or underrated. It is to be hoped that at last all classes of the people of California will acknowledge the need of stringent measures in dealing with the plague in San Francisco.

THE FOURTEENTH INTERNATIONAL MEDICAL CONGRESS.

It is timely to remind those of our readers to whom attendance at international medical congresses is both agreeable and possible that the Fourteenth International Medical Congress will be held in Madrid from April 23rd to April 30th, inclusive, this year. A list of promised communications will be given in our Miscellany columns at an early date. Meanwhile we may state that the National Committee for the United States consists of Dr. Abraham Jacobi, president, and Dr. John H. Huddleston, secretary, both of New York.

News Items.

Society Meetings for the Coming Week:

MONDAY, January 26th.—Medical Society of the County of New York; Lawrence, Mass., Medical Club (private); Cambridge, Mass., Society for Medical Improvement; Baltimore Medical Association.

TUESDAY, January 27th.—Metropolitan Medical Society, New York (private); Buffalo Academy of Medicine (Section in Obstetrics and Gynecology); Richmond, Va., Academy of Medicine and Surgery; New York Medical Union (private).

WEDNESDAY, January 28th.—New York Academy of Medicine (Section in Laryngology and Rhinology); New York Pathological Society; New York Surgical Society; American Microscopical Society of the City of New York; Philadelphia County Medical Society; New York Dermatological Society (private).

THURSDAY, January 29th.—New York Academy of Medicine (Section in Obstetrics and Gynecology); New York Orthopaedic Society; Brooklyn Pathological Society; Brooklyn Society for Neurology; Roxbury, Mass., Society for Medical Improvement (private); Pathological Society of Philadelphia; Church Hill Medical Society of Richmond, Va.; New York Celtic Medical Society.

FRIDAY, January 30th.—New York Clinical Society (private); New York Society of German Physicians; Yorkville Medical Association, New York (private); Philadelphia Clinical Society; Philadelphia Laryngological Society.

SATURDAY, January 31st.—New York Medical and Surgical Society (private), Annual Meeting; Harvard Medical Society, New York (private).

A Brooklyn Physician Injured.—Dr. Earl Woolworth, of Brooklyn, was thrown from his buggy on January 21st and sustained a fracture of the skull. His injuries are serious.

Sex Determination and Maternal Impressions.—Professor Gage, the well-known embryologist of Cornell University, delivered a lecture on the subject of Sex Determination and Maternal Impressions at the Cornell University Medical College Building, on Friday, January 23d, at five o'clock.

A Colony for Consumptives at Deming, N. M.—The National Colony and Sanitarium for Consumptives, which has been organized at St. Louis, has selected the town of Deming, N. M., for the location of their colony. The organization proposes to provide suitable quarters both for pay and free patients so far as their funds will permit.

To Succeed Professor Loeb.—Dr. G. N. Stewart, professor of physiology in the Medical School of the Western Reserve University, Cleveland, Ohio, has been appointed professor and head of the department of physiology at the University of Chicago, to fill the place vacated by Dr. Jacques Loeb, who has accepted an appointment in the University of California. Dr. Stewart will begin his work at Chicago with the opening of the spring quarter on April 1st.

The Baltimore Medical and Surgical Association.—At the annual meeting of this association held on January 12th, the following officers were elected for the ensuing year: President, Dr. E. L.

Whitney; first vice-president, Dr. W. P. E. Wyse; second vice-president, Dr. Charles O'Donovan; secretary, Dr. Eugene Lee Crutchfield; treasurer, Dr. J. M. Craighill; executive committee, Dr. J. B. Blake, Dr. Randolph Winslow, Dr. H. Richardson, and Dr. J. M. H. Rowland. Following the business session a dinner was served which was presided over by Dr. Charles G. Hill, as toastmaster.

Results of Professor Lorenz's Work.—At the Academy of Medicine, on January 16th, a number of patients were shown who had been operated on by Professor Lorenz during his recent visit to this city. The cases shown included both unilateral and bilateral dislocations. All appear to be doing quite well. One patient was shown who had been operated on by Dr. Royal Whitman about twelve months previously, this being the only one so far advanced as to permit of the removal of the plaster casts, thus giving complete demonstration of the success of the operation.

The Brooklyn Robber Arrested.—As has already been noted in these columns several physicians have been robbed recently in Brooklyn by a man who called during the physician's absence, and, stating that he was an old patient, said that he would await the return of the doctor. The robber would then make his escape with some portable articles of value prior to the return of the physician. On January 17th, Dr. William Ford, of 244 Clinton Street, a member of the Board of Police Surgeons, captured the burglar, having recognized him by the published descriptions.

Dr. Stewart to be Superintendent of the Hospitals for Contagious Diseases.—Dr. George T. Stewart, formerly superintendent of Bellevue and the allied hospitals, who resigned in November to take a European tour, has returned and has been appointed general superintendent of the four hospitals for contagious diseases which are under the charge of the Board of Health, namely, the Riverside Hospital, on North Brother Island, the Willard Parker and the Reception Hospitals at the foot of East Sixteenth Street, and the Kingston Avenue Hospital, in Brooklyn. The office is a new one, each of these hospitals having heretofore been under an independent superintendent.

Osteopaths in Virginia.—A bill has been drawn up and will shortly be presented in the Virginia Legislature under which osteopaths will be required to pass an examination before the State Board of Medical Examiners, upon those subjects upon which they profess knowledge, but not upon all the subjects covered by the examining board. A bill requiring the examination of osteopaths by the board of medical examiners which was defeated last winter required osteopaths to stand the regular medical examination. It is understood that the proposed measure is bitterly opposed by the osteopaths who claim that it will be so construed by the members of the examining board as to work a hardship to osteopaths.

Professor Adolf Lorenz has reached his home in Vienna after making a short stay in England. According to the reports cabled to the daily press, Dr. Lorenz is enthusiastic in his appreciation of American hospitals, American charities, and American physicians, whom he found much more appreciative of the advantages offered by his methods than were those of England, who adopted a very conservative tone in their comments on his work, and who displayed comparatively little interest in it during his stay there.

Trachoma in the Schools.—Since the opening of the special hospital for the treatment of trachoma on December 16th, by the board of health, in the Gouverneur Hospital building, 127 cases have been operated on, and several hundred treated without operation. Four operators are attached to the hospital, and operations are performed both morning and afternoon. The work of this hospital in connection with the improved methods of inspection in the public schools is showing good results in the decrease in number of new cases reported.

The Mount Sinai Alumni.—The sixth annual reunion and dinner of the Associated Alumni of Mount Sinai Hospital, was held at the Oxena, 41 West Thirty-first Street, on January 15th, Dr. Samuel M. Brickner, presiding. Interesting addresses were made by Mr. Isaac Stern, the vice-president of the hospital; Dr. Emil Gruening, Dr. F. P. Foster, Dr. Mark Blumenthal, Dr. William F. Fluher, Dr. B. Sachs, Dr. Nathan E. Brill, Dr. Percy Friedenberg, Dr. Walter M. Brickner. The following officers were elected for the ensuing year: President, Dr. Edward Friedenberg; vice-president, Dr. George L. Brodhead; secretary, Dr. Charles Goodman, and treasurer, Dr. Eugene H. Eising.

The State Commission in Lunacy.—The annual report of the New York State Commission in Lunacy to the Legislature contains several important recommendations. Among other things the commission recommends the establishment of reception hospitals for the insane in all the larger cities throughout the State and especially in New York. The commission also recommends that authority be given for the temporary commitment of emergency cases without the invocation of the legal authorities, and that the tuberculous insane be separated from other patients. The commission further recommends the extension of the system of admitting voluntary patients to the State hospitals, advocates the appointment of a higher grade of nurses and attendants, and criticizes the character of the care and treatment bestowed upon the patients in certain private institutions.

Charcot on the Applications of Hypnotism.—The London correspondent of the *Medical News*, in its issue for November 19th, quotes from a hitherto unpublished letter written by Charcot only a year or two before his death. Having been invited by the editor of a leading English medical journal to write something on the subject, the great neurologist replied: "I see absolutely nothing that I can say

about it. *In certain individuals hypnotism may be utilized for surgery by producing anæsthesia, and also sometimes for confinements.* But *special subjects* are required. Therefore there is nothing general, nothing very practical about it. I am not disposed at this time to say anything about hypnotism. Ten years ago, I opened, as Braid had done in 1841, the *box of Pandora*. But owing to want of method and of judicial temper, my successors are now going astray. I intend to keep quiet and to wait till the mental excitement of to-day has subsided." The italicized words are underlined in the manuscript.

The Brooklyn Medical Society at its recent annual meeting, elected the following officers for the ensuing year: President, Dr. A. T. Bristow, in the place of Dr. W. H. Haynes, deceased; vice-president, Dr. J. H. Droge; recording secretary, Dr. Hugh E. Rogers; corresponding secretary, Dr. H. E. Bell; treasurer, Dr. Peter Scott; librarian, Dr. Lewis E. Meeker. Dr. J. D. Sullivan, Dr. Albert H. Brundage, and Dr. E. St. Wright were elected trustees to serve until 1905, and Dr. F. H. Clark was elected to serve the term of Dr. Scott. The membership committee was reappointed as follows: Dr. A. E. Shipley, Dr. W. B. Brader, Dr. J. A. Lee, Dr. C. P. Peterman, and Dr. William Allen. Dr. Bell, Dr. Brundage, Dr. Kennedy, Dr. Shipley and Dr. Ingalls were appointed on a committee to provide an annual dinner. A committee of three was also appointed to take steps toward securing a permanent building as a home for the society.

Notification of Malarial Fever, Trachoma and Pertussis in New York.—The board of health desires to call the attention of physicians to the following resolutions which have been recently adopted. "That all *public institutions, hospitals, homes, asylums, etc., be required* to report all cases of malarial fever which come under their observation, giving the name, age, sex, occupation and present address of the patient, and also information as to whether the attack is a primary infection or relapse, and the address where the disease was probably contracted.

"That all *physicians* in the City of New York *be requested* to furnish similar information in regard to patients suffering from malarial fever under their care.

"That all *physicians* be required to report all cases of acute and chronic ophthalmia (trachoma) and pertussis (whooping cough) and to furnish such information regarding them as is required in other forms of contagious disease."

Proposed Legislation in Michigan.—In his message to the legislature the governor of Michigan refers to the proposed medical legislation in the following terms: "The State Board of Registration in Medicine favors amendments to the medical law having in view both the elevation of the standard and the uniformity of the act in connection with medical laws of States which have taken an advanced position, in order that worthy and well

qualified physicians and surgeons who have been legally authorized to practise under the laws of other States may be given the right to practise in this State without being forced to submit to a repetition of the examination which they have previously undergone. In order that Michigan may be able to take advantage of the proposed reciprocal relations, it will be necessary to raise the standard of medical requirements of this State to that of the States willing to enter into reciprocity. These suggestions should have your further careful consideration."

The Erie County Medical Society.—The eighty-second annual meeting of the Medical Society of the county of Erie was held in Buffalo, on January 12th, about sixty members being present. The report of the board of censors showed that that body had been active during the year and had undoubtedly been instrumental in preventing many infractions of the medical practice there. The annual report of the secretary showed that there are some eight hundred physicians engaged in practice in the county of Erie, six or seven hundred of whom are in the city of Buffalo. The great majority of these are members of the society. Hon. C. D. Davie, of Salamanca, read a paper on Expert Medical Testimony, in which he set forth the difficulties which confronted both the physician and the attorney in preparing and presenting expert testimony in a manner which would be convincing. The following officers were elected for the ensuing year: President, Dr. Ernest Wende; vice-president, Dr. John D. McPherson, of Akron; secretary, Dr. Franklin C. Gram; treasurer, Dr. Edward Clark; librarian, Dr. William C. Callanan; board of censors, Dr. Irving Potter, chairman; Dr. John B. Coakley, Dr. Henry R. Hopkins, Dr. Henry Lapp, and Dr. F. E. Fronczak.

A Conference on the Plague.—In response to the request of the health authorities of a number of States, Dr. Wyman, supervising surgeon general of the Public Health and Marine Hospital Service, called a conference of the health authorities of twenty States and Territories and the District of Columbia, at Washington, on January 19th. After discussing the information laid before the congress by the surgeon general and by the various members of the congress, a series of resolutions were adopted concerning the plague, which are to be sent to all the municipal and State health authorities of the United States. In these resolutions it was declared that the presence of the plague in the city of San Francisco had been established beyond a doubt, and that the present danger to California and to the United States lay primarily in the persistence during nearly three years of a definite nidus of plague infection in Chinatown. The resolutions further declare that "the gravity of this circumstance is greatly increased by the gross neglect of official duty by the State Board of Health of California and the obstructive influence of the recent Governor of California, by the failure of the city government of San Francisco to support the city Board of Health, and by the obstacles opposed to

the operations of the United States public health service. The conference will consider the safety of the country sufficiently assured as soon as satisfied that a competent city Board of Health of San Francisco and a competent State Board of Health, in co-operation with the United States public health service, will proceed under definite, harmonious and effective laws and ordinances; that they are provided with ample funds, and that they are jointly and severally in the free exercise of their lawful powers."

The conference also adopted a resolution expressing its conviction that it would go far toward the restoration of popular confidence if the United States public health officials were admitted to the same relations with the State Board of Health as have been steadily maintained with the city Board of Health of San Francisco, which body it warmly commended. The surgeon general read a letter from Dr. Glennan, of the Public Health and Marine Hospital Service, in which he stated that of twenty-two dead rats found in Chinatown within a given period, eleven were discovered to have been infected. Of 354 rats caught alive four were found to have been infected. For reaching its conclusion that bubonic plague exists in San Francisco, the conference gave six reasons based on the investigations of local and Federal authorities. It declared that there are now in possession of the United States and San Francisco authorities autopsy records of ninety cases of plague. The conference also declared its belief that the habitual publication of the actual facts relative to infectious diseases and their prevention is one of the best means to minimize the danger of an epidemic. There was a disposition on the part of some members of the conference to adopt radical measures. A resolution was offered proposing that the secretary of war be advised that there is danger in bringing troops through the city of San Francisco. Surgeon-general Wyman advised against the adoption of this resolution. Another resolution placed an embargo on railroads leading out of California unless certain steps were taken by the health authorities toward the suppression of the plague. Neither of these resolutions was adopted.

The Medical Society of the State of New York. society will be held at Albany, on Tuesday, Wednesday, and Thursday, January 27th, 28th, and 29th., commencing at 9.15 a. m., on the first named date. Members of the county medical societies and the profession of the State generally are invited to attend. The number of papers has been limited, in order to ensure time for more thorough discussion than often takes place. The following is the programme: Arguments for the Existence of a Separate Cortical Centre for Writing, by Dr. Herman C. Gordinier, of Troy; Paper (title to be announced), by Dr. Charles G. Wagner, of Binghams; Differential Diagnosis of the Familiar Forms of Spinal Disease, by Dr. Floyd S. Crego, of Buffalo; The U. S. Health and Marine-Hospital Service (the New Law), by Dr. Daniel Lewis, of New York; Erythrophlœum, a Clinical Study, by Dr. Reynold Webb Wilcox, of New York; Medical School Inspection in the City of New York,

by Dr. Henrietta P. Johnson, of New York; American Climates Suitable for Phthisical Patients, by Dr. James K. Crook, of New York; Memorial of Edwin M. Moore, by Dr. William S. Ely, of Rochester; Memorial of Abel Mix Phelps, by Dr. Frank Van Fleet, of New York; Retinoscopy, by Dr. D. H. Wiesner, of New York; The Physician and the Ophthalmoscope, by Dr. Francis Valk, of New York; Eye Strain and Headache, by Dr. Lucien Howe, of Buffalo; Treatment of Purulent Conjunctivitis, by Dr. Edgar S. Thomson, of New York; Transportation and the Ophthalmic Referee, by Dr. Justin L. Barnes, of New York; Incomplete Transverse Congenital Occlusion of the Vagina, by Dr. Samuel M. Brickner, of New York; Hydrops Tubæ Profluens, by Dr. Henry D. Ingraham, of Buffalo; Some Scientific and Practical Details Regarding Vaccine and Vaccination, by Dr. Peter H. Bryce, secretary of the Provincial Board of Health of Ontario; Sterilized Milk, Pasteurized Milk, or Clean Milk, by Dr. C. W. M. Brown, of Elmira; The Examination of Milk by the General Practitioner, by Dr. Henry L. K. Shaw, of Albany; *Symposium on Hæmatology*—(1) Blood Examination in General Practice, by Dr. Irving P. Lyon, of Buffalo; (2) The Eosinophiles, their Ætiology and Value in Diagnosis and Prognosis, by Dr. Thomas R. Brown, of Baltimore; (3) Degeneration of the Erythrocyte, by Dr. J. C. DaCosta, Jr., of Philadelphia; (4) The Iodine Reaction and its Diagnostic Significance, by Dr. Edwin Allen Locke, of Boston; The Surgeon's Enemy, the Skin, by Dr. Robert H. M. Dawbarn, of New York; A Contribution to the Surgery of the Bile Duct, by Dr. John J. McGarth, of New York; The Technique of Prostatectomy, by Dr. Ramon Guiteras, of New York; The Exploratory Rib Resection in old Pyothorax, by Dr. Carl Beck, of New York; Plasmodiophora Brassicæ, by Dr. Harvey R. Gaylord, of Buffalo; Operative Possibilities in Cases of Advanced Carcinoma of the Breast, by Dr. Lewis S. Pilcher, of Brooklyn; Primary Carcinoma of the Vermiform Appendix, by Dr. Arthur W. Elting, of Albany; Acute Osteomyelitis, by Dr. Arthur W. Booth, of Elmira; Paper (title to be announced), by Dr. Willis G. Macdonald, of Albany; Memorial Address on the Life and Work of Professor Rudolph Virchow, by Dr. Charles A. L. Reed, of Cincinnati; President's address, by Dr. Henry R. Hopkins, of Buffalo; Periduodenal Abscess Secondary to Perforative Ulcer of the Duodenum, by Dr. William S. Bainbridge, of New York; Paper (title to be announced), by Dr. D. John O. Roe, of Rochester; Improvements, Attained and Prospective, in the Care of the Insane, by Dr. Frederick Peterson, of New York; Some Points Regarding the Treatment of the Functional Disorders of the Sexual Organs in the Male, by Dr. Frederick R. Sturges, of New York; *Symposium on Arteriosclerosis*—(1) The Early Recognition and Symptoms of Arteriosclerosis, by Dr. De Lancey Rochester, of Buffalo; (2) Arteriosclerosis and the Heart, by Dr. Glentworth R. Butler, of Brooklyn; (3) Arteriosclerosis and the Kidney, by Dr. Irving P. Lyon, of Buffalo; (4) Arteriosclerosis and the Digestive System, by Dr. Charles G. Stockton, of Buffalo; (5) Arterio-

sclerosis and the Nervous System, by Dr. William Browning, of Brooklyn; (6) Arteriosclerosis and Mental Disease, by Dr. Adolf Meyer, of New York; Discussion Opened by Dr. E. Libman, of New York; The Management of the Uræmic State, by Dr. Heinrich Stern, of New York; The Pulse in Pregnancy, by Dr. Thomas E. Satterthwaite, of New York; Cancer of the Cervix—Treatment by X Ray—Report of Cases, by Dr. Thomas S. Scully, of Rome; An Operation for Cicatricial Contractures of Upper Extremities, by Dr. A. H. Traver, of Albany; Injuries and Infections of New-born Children, by Dr. Irving M. Snow, of Buffalo; Hepatic Ballotement of Bimanual Palpation, by Dr. Arthur L. Benedict, of Buffalo. The dinner will take place at the Hotel Ten Nyck, at 8.30 p. m., Wednesday, January 28th. The Secretary is Dr. Frederick C. Curtis, of Albany.

Official News.

Infectious Diseases in New York:

We are indebted to the Sanitary Bureau of the Health Department for the following statement of cases and deaths reported for the two weeks ending January 17, 1903:

DISEASES,	Weekend'g Jan. 10.		Week end'g Jan. 17	
	Cases.	Deaths.	Cases.	Deaths.
Typhoid fever.....	80	11	64	10
Scarlet fever.....	206	11	158	16
Cerebro-spinal meningitis.....	0	0	0	0
Measles.....	120	6	165	10
Diphtheria and Croup.....	344	46	395	47
Small-pox.....	1	0	2	1
Tuberculosis.....	246	164	248	183
Chicken-pox.....			64	10

Public Health and Marine-Hospital Service:

Official List of Changes of Station and Duties of Commissioned and Non-commissioned officers of the Public Health and Marine-Hospital Service for the Seven Days ended January 15, 1903:

- WHITE, J. H., Assistant Surgeon General. To proceed to Brunswick, Ga., for special temporary duty.
- CARTER, H. R., Surgeon. Leave of absence for three days under paragraph 179 of the regulations, amended so that it shall be for two days only.
- GUITERAS, G. M., Passed Assistant Surgeon. To report to chairman of board of examiners at Washington, D. C., January 15, 1903, for examination to determine his fitness for promotion to the grade of surgeon.
- OAKLEY, J. H., Passed Assistant Surgeon. Granted leave of absence for two days from January 21st.
- LAVINDER, C. H., Passed Assistant Surgeon. Granted leave of absence for one month from January 28th.
- DUKE, B. F., Acting Assistant Surgeon. Granted leave of absence for ten days from January 4th.
- WALKLEY, W. S., Acting Assistant Surgeon. Granted leave of absence for five days from January 13th.

Boards Convened.

Board convened to meet at Washington, D. C., January 15, 1903, for the examination of Passed Assistant Surgeon G. M. Guiteras, to determine his fitness for promotion to the grade of Surgeon. Detail for the board: Assistant Surgeon General L. L. WILLIAMS, chairman; Assistant Surgeon General W. J. PETTUS; Assistant Surgeon General G. T. VAUGHAN, recorder.

Board convened to meet at the Marine Hospital, Stapleton, N. Y., January 17, 1903, for the physical examination of Engineer D. F. Bowen, R. C. S. Detail for the board: Passed Assistant Surgeon A. C. SMITH, chairman; Assistant Surgeon A. J. McLAUGHLIN, recorder.

Board convened to meet at the Marine Hospital, San Francisco, Cal., January 19, 1903, for the physical examination of officers of the Revenue Cutter Service. Detail for the board: Passed Assistant Surgeon W. G. STIMPSON, chairman; Assistant Surgeon C. W. VOGEL, recorder.

Naval Intelligence:

Official List of Changes in the Medical Corps of the United States Navy for the Week ending January 17, 1903:

BENTON, F. L., Passed Assistant Surgeon. Detached from recruiting duty and ordered to Washington to accompany battalion of marines to the Philippine Islands, on January 24th.

BUCHER, W. H., Passed Assistant Surgeon. Detached from the Naval Hospital, Norfolk, Virginia, and ordered to the Naval Hospital, Pensacola, Florida.

CAMPBELL, DR. R. A. Appointed Acting Assistant Surgeon for three years' service.

CHAPMAN, DR. R. B. Appointed Acting Assistant Surgeon for three years' service.

CRAWFORD, C. A., Passed Assistant Surgeon. Resignation accepted to take effect on January 12th.

GORDON, F. T., Pharmacist. Ordered to the Naval Dispensary, Washington, D. C.

HAAS, H. H., Passed Assistant Surgeon. Ordered home via the *Prairie*.

JANNEY, DR. W. H. Appointed Acting Assistant. Surgeon for three years' service.

JUDD, DR. H. W. Appointed Acting Assistant Surgeon for three years' service.

KEENE, DR. W. P. Appointed Acting Assistant Surgeon for three years' service.

LEDBETTER, R. E., Assistant Surgeon. Detached from the *Illinois* and ordered to the *Newark*.

MCCORD, D. P., Acting Assistant Surgeon. Ordered to Lansing, Michigan, on duty with recruiting party.

MILLER, DR. J. T. Appointed Acting Assistant Surgeon for three years' service.

PAGE, J. E., Passed Assistant Surgeon. Detached from the *Newark* and ordered to the *Montgomery*.

TAYLOR, R. L., Acting Assistant Surgeon. Ordered to Ogden, Utah, for duty with recruiting party.

Army Intelligence:

Official List of Changes in the Station and Duties of Officers serving in the Medical Department of the United Army for the week ending January 17, 1903:

BLOOMBERGH, H. D., First Lieutenant and Assistant Surgeon. Granted leave of absence for one month.

LYSTER, THEODORE C., First Lieutenant and Assistant Surgeon. Relieved from duty at Fort Schuyler, N. Y., and ordered to proceed to West Point, N. Y., and report in person to the Commanding Officer of that post, for duty.

KIRKPATRICK, THOMAS J., Captain and Assistant Surgeon. Granted leave of absence for one month.

TURRELL, HENRY S., Lieutenant Colonel and Deputy Surgeon General. Assigned to permanent duty in charge of the Medical Supply Depot, New York City.

Births, Marriages, and Deaths.

Married.

BRYANT—TAYLOR.—In Chicago, Illinois, on Thursday, January 8th, Dr. William V. Bryant, of Madison, Wisconsin, and Miss Frances C. Taylor.

BURKE—CARROLL.—In Kansas City, Missouri, on Wednesday, January 7th, Dr. Thomas Jerome Burke, of De Witt, Iowa, and Miss Margaret Ella Carroll.

CAMPBELL—OXLEY.—In New York on Thursday, January 15th, Dr. Clarence Wellington Campbell and Miss Alice Mignon Oxley.

QUADE—RAY.—In Leavenworth, Kansas, on Thursday, January 1st, Mr. Walter S. Quade, of Kansas City, Missouri, and Miss Goldie Ray, daughter of Dr. Richard Ray.

Died.

ALLEN.—In Avon, N. Y., on Wednesday, January 14th, Dr. Cyrus Allen, in the sixty-fifth year of his age.

BANCROFT.—In San Diego, California, on Saturday, January 17th, Dr. Frederick J. Bancroft, of Denver, Colorado, in the sixty-ninth year of his age.

BUEREN.—In Louisville, Kentucky, on Wednesday, January 7th, Dr. A. F. Bueren, in the fifty-third year of his age.

DAY.—In Belleville, Ontario, on Saturday, January 10th, Dr. Henry W. Day, in the seventy-second year of his age.

FITZGERALD.—In Amherst, Nova Scotia, on Saturday, January 10th, Dr. Gerald Delacey Fitzgerald, in the thirty-second year of his age.

GOLDSMITH.—In New York, on Friday, January 16th, Dr. Marcus K. Goldsmith, in the fifty-fifth year of his age.

GOLDSMITH.—In Baltimore, Maryland, on Tuesday, January 13th, Dr. Robert Henry Goldsmith, in the seventy-first year of his age.

HARDING.—In Ahmednagar, India, on Wednesday, January 15th, Dr. George W. Harding.

HEDGES.—In Charlottesville, Virginia, on Wednesday, January 14th, Dr. Charles H. Hedges, in the ninetyeth year of his age.

JEANCON.—In Newport, Kentucky, on Tuesday, January 13th, Dr. John Allard Jeancon.

MCCULLOUGH.—In Watertown, N. Y., on Tuesday, January 13th, Dr. James McCullough, in the fortieth year of his age.

McKAY.—In Port Arthur, Ontario, on Wednesday, January 7th, Dr. W. S. McKay, in the thirty-fifth year of his age.

PRAY.—In Brooklyn, N. Y., on Wednesday, January 14th, Dr. Susan R. Pray, in the forty-fifth year of her age.

REED.—In Remsen, N. Y., on Friday, January 9th, Dr. David H. Reed, in the forty-eighth year of his age.

SIBLEY.—In Fairfield, Illinois, on Tuesday, January 13th, Dr. W. C. Sibley.

SHOEY.—In Medora, Indiana, on Thursday, January 8th, Dr. George F. Shoey.

TINGLEY.—In Rockaway Beach, L. I., on Wednesday, January 14th, Dr. Hilbert B. Tingley, in the thirty-seventh year of his age.

TITCOMB.—In St. Petersburg, Florida, on Tuesday, January 6th, Dr. B. S. Titcomb.

WATSON.—In Phoenix, Arizona, on Sunday, January 18th, Dr. C. Everett Watson, of Conneaut, Ohio.

OBITUARY NOTES.

DR. FREDERICK J. BANCROFT, of Denver, died from heart failure at San Diego, Cal., recently. He was born in Connecticut in 1834, and gained a national reputation through his writings on the effects of climate upon certain diseases.

DR. ROBERT H. GOLDSMITH, a well-known practitioner of Baltimore, Md., died at his house in that city on January 13th, at the age of seventy-one years. He was a graduate of the medical department of the University of Maryland. He served as a surgeon in the Confederate Army. He was visiting surgeon at the St. James Home, and was chief physician at Bayview Asylum for ten years.

Pith of Current Literature.

PRACTICE OF MEDICINE.

Typhoid Fever with Profuse Perspiration.—This unusual symptom was seen by J. M. Barrenche (*Revista Médica de Bogotá*, Year xxiii, 267) in three cases which began with a gradually increasing fever, and were accompanied by a more or less severe bronchial catarrh. Headache was slight and of short duration; and there were no abdominal symptoms. The presence of gripe and typhoid in the city rendered the diagnosis doubtful till the appearance of the eruption, which was seen upon the fifth or sixth day; and coincidental with its appearance the profuse perspiration subsided, though slight transpiration kept the skin moist throughout the disease; and defervescence was accompanied in all three cases by recurrence of profuse perspiration. Barrenche noted in these cases that the older patients presented a more abundant eruption than the younger; a fact which he had before observed in typhoid fever.

The Causes of Death in Diphtheria. By Bernard Kohn, M. D. (*American Medicine*, January 10th).—In a general way, death in diphtheria is due (1) to mechanical causes, (2) to the action of the toxine on the system, or (3) to one of the complications. (1) Death from mechanical cause may be due in the early stages to spasm of the glottis; in the later stages it is nearly always due to occlusion of the glottis, either by membrane, or by swelling and œdema of its lining mucous membrane. (2) Death from toxæmia, usually occurs at the height of the disease, that is between the fifth and tenth days. In certain cases of so called malignant diphtheria the fatal issue may be reached in twenty-four hours. In cases of mixed infection, notably when a streptococcus infection is superadded, the patient not infrequently succumbs to the secondary toxæmia. (3) Death from a complication is most frequently due, at least in institutions, to bronchopneumonia. This is a frequent termination of the so called "septic diphtheria." Bronchopneumonia occurs usually at the height of the diphtheritic attack, and is then most frequently fatal, but it may occur even during convalescence after the membrane has entirely disappeared. Nephritis, although a frequent complication in any case of diphtheria of moderate severity, is rarely fatal except in the septic cases. Heart failure is one of the most distressing forms of death, since it may occur so late in the convalescence that it may take both the family and physician by surprise. Post-diphtheritic neuritis may cause death by either cardiac or respiratory paralysis. The cardiac paralysis is probably due to a toxic neuritis of the vagus nerve, while the respiratory is due to involvement of either the phrenic or the intercostal nerves, most frequently the former. Finally, diphtheria may be complicated by other infectious diseases which greatly increase the severity of the primary disease. This is notably the case with measles, scarlet fever, and typhoid. In such cases death may be due to a bronchopneumonia or to general sepsis, or it may be due to the overwhelming effect of the combined toxines of the disease in question.

Thoracic Compression as a Means of Diagnosis.—Pneumonia may be difficult of diagnosis in those cases in which the physical signs are obscure or difficult of recognition, owing to the presence of chronic pulmonary disease, such as emphysema, etc., or excessive fat. The general symptoms are also deceptive in children, old people, and alcoholics, writes G. Moreno de la Torre (*Revista Médica Cubana*, December 1st). In such cases, if pain is present, even though slight in degree and abnormally located, the author finds that it may be utilized as an aid to diagnosis. His practice is to compress one side of the chest with both hands, in such a manner that the lung is immobilized. If the source of the pain is inflammation of the lung, it will cease or greatly lessen. If the inflammation is in the lung opposite to the one subjected to compression, the pain will continue, but its character and location may change; if, however, the inflammation is in one of the abdominal organs or in the surrounding tissues, the pain not only continues, but may even increase. By making compression first on one side and then on the other, one may determine which lung is affected; and the cessation of abdominal pain upon compression of the lungs may be taken as an indication that the thorax is the site of disease.

Note on Some Cases Mistaken for Small Pox During the Recent Epidemic. By C. Fraser, M. B. (*British Medical Journal*, December 20th).—During the last year, 1,400 cases of smallpox were treated at the Dagenham hospital. About sixty persons were admitted as cases of smallpox, who, on examination, were found to be the subjects of some other disease. Chickenpox alone accounted for one half of these. Four patients were suffering from acne. Other instances of mistaken diagnosis were one case of impetigo, one case of urticaria, and one case of scabies. Two cases of lobar pneumonia were taken to be smallpox because of the plentiful crop of herpes labialis. One case of scarlet fever, one case of German measles, and two cases of true measles were diagnosticated as smallpox.

Acute Circumscribed Œdema.—Dr. F. Mendel (*Berliner klinische Wochenschrift*, December 1st) gives the history of several members of a family, who have suffered from this disease for four generations. Nine out of twelve in the family were afflicted, and six died of acute œdema of the upper respiratory tract. In the case observed by the author, a girl of eighteen is described as having an œdema of the left arm from the elbow to the finger tips. The use of aspirin and diuretics appeared to be beneficial. The author has had a similar effect from aspirin in a case of hydrops of the knee. Mendel regards the symptom as arising from an intestinal selfintoxication.

SURGERY AND ANATOMY.

Strangulated Hernia in an Infant of One Month. Cœliotomy. Cure.—In the rarity of this condition in the early months of life lies the special interest of the case reported by E. Fortún

(*Revista Médica Cubana*, December 15th). The patient, an infant of one month, had been sent to him with a diagnosis of strangulated hernia; and examination revealed a tumor in the right inguino-scrotal region, about the size of a lemon. Upon percussion over it, a tympanitic note was obtained above, a flat note below. The abdomen was much distended and tympanitic; and the infant vomited incessantly. Coeliotomy demonstrated the presence of a congenital inguinal hernia, the sac containing much serous fluid, the cæcum and its appendix. The latter showing signs of inflammation, it was extirpated; and, after incision of the inguinal ring, the cæcum was reduced, and the radical operation of Champonnière was performed. Recovery was complete and uneventful.

Hepatic Abscesses.—In view of the fact that puncture, as a means of treatment in hepatic suppurations, has about fallen into disuse, its application being limited almost entirely to diagnostic purposes, the favorable influence of this measure in two cases of hepatic abscesses reported by J. M. Lombana Barreneche (*Revista Médica de Bogotá*, Year xxiii, No. 296) is noteworthy. In both instances, exploratory puncture was made with the view of a subsequent, radical operation. Improvement following the puncture, other operative procedures were abandoned, and resorption of the pus and complete recovery followed in both cases. The author advances the theory that the excitation of the hepatic cells by puncture awakened their dormant defensive powers; and that an active phagocytosis was also produced by this measure.

OBSTETRICS AND DISEASES OF WOMEN.

Vaginal Cæsarean Section with Cancer of the Cervix.—Dr. Kallmorgen (*Centralblatt für Gynäkologie*, November 29th) reports a case of a woman aged thirty-two years, in the eighth month of pregnancy, who had had atypical bleeding for six months. The cervix was found invaded by a cancer which was curetted and cauterized, and the uterus was then split anteriorly by way of the vagina and two living twins were removed. The uterus was then extirpated. The mother recovered but the children died. The author advises in similar operations to ligate the uterine arteries before the emptying of the uterus, so as not to jeopardize the life of the fœtus.

Cervicovaginal Fistulæ.—Dr. E. Wormser (*Centralblatt für Gynäkologie*, November 29th) reports such a case in a twenty-six year old primipara, who aborted in the fifth month. On the thirtieth day after the beginning of pains, the external os was still closed. Suddenly the abortion took place, probably from the sharply stretched posterior wall of the cervix. A fistula subsequently developed in this part of the cervix, which induced frequent menstruation, a discharge, and sterility. The fistula was cured by operation. The author regards its cause as a spontaneous rupture of the posterior cervical wall.

Laqueatic Cervicovaginal Fistula.—Dr. E. Dirmoser (*Centralblatt für Gynäkologie*, November 29) reports such a case in a thirty-three year old woman who had twice aborted. Operation was refused and the fistula was therefore cauterized. The patient later became pregnant and gave birth to a child at seven months, the fœtus escaping through the fistula with the external os closed.

NERVOUS AND MENTAL DISEASES.

Two Cases of So-called Landry's Paralysis: Autopsies. By E. W. Taylor, M. D., and G. A. Waterman, M. D. (*Boston Medical and Surgical Journal*, December 25th).—There is such a lack of definiteness in the use of the term Landry's paralysis that it is daily becoming a matter of greater importance to clear up some of the confusion that exists. What is now needed is carefully recorded case histories and autopsy findings. It is with this object in view that the authors have published their paper. Of the two cases given, the first clinically resembled a case of acute anterior poliomyelitis, while the autopsy showed essentially only the following lesions: congestion of blood vessels, in some places associated with hæmorrhage and alteration of relatively slight degree of the ventral horn cells. The second case clinically resembled only very imperfectly Landry's original description of the affection that bears his name. The actual explanation of the fatal outcome goes completely beyond the pathological findings. The case, however, is certainly one of that vague group which has been included under the clinical designation of Landry's paralysis. The authors hold that in the consideration of this disease we are far from an ætiological basis, and that we have gone decidedly beyond a mere clinical one. Our present duty, therefore, is to classify these diversified cases on pathological findings, provisionally reserving the clinical designation Landry's paralysis for the increasingly small number of instances in which, after adequate study, no anatomical changes are found *post mortem*.

Acute Poliomyelitis and Encephalitis. By Dr. F. E. Batten. (*Lancet*, December 20th).—The author holds that the flaccid paralysis of acute poliomyelitis, or "infantile paralysis," is but the most common symptom of a disease which may affect any part of the nervous system. In the term "acute poliomyelitis and encephalitis" may be included a group of cases due to the same morbid and pathological process, although they present varying clinical features according to the part of the nervous system affected. Such cases may be divided into three main groups: (1) Acute polioencephalitis superior: this includes those cases in which the frontal, motor and occipital regions of the cortex are involved—also the cerebellum. (2) Acute polioencephalitis inferior: this includes those cases in which the various nuclei of the cranial nerves are affected. (3) Acute poliomyelitis anterior—those cases in which the gray matter of the anterior cornua below the medulla is affected. The onset of the disease is acute, and attended by fever, vomiting, and muscular pains. Paralysis may not appear for two or three days. The disease is of more fre-

quent occurrence during the summer than during the winter months. The local symptoms vary according to the site of the lesion. In poliomyelitis anterior acute mental change occurs when the frontal lobes are involved, hemiplegia when the Rolandic area is affected, and taxia in the cerebellar cases. In poliomyelitis inferior paralysis of one or more of the cranial nerves occurs. In poliomyelitis anterior flaccid paralysis of muscles or groups of muscles occurs.

In the first stage of the disease the lesion is characterized by engorgement and thrombosis of small vessels circumvascular exudation, minute extravasation of blood, and small round cell infiltration of neighboring tissues. In the second stage there is necrosis of the tissues from which the blood is cut off, and in the third stage absorption of the necrosed products with contraction and cicatrization. The author holds that the disease is of direct bacterial origin. This view is supported by its prevalence during a certain period of the year, by its epidemicity, and by its occurrence in its various forms, either cerebral or spinal, in several members of one family.

The Parasyphilitic Affections. The Curability of Tabes and General Paralysis by Intense Mercurial Treatment. By Dr. Leredde, of Paris (*Philadelphia Medical Journal*, January 10th).—The chief object of this paper is to combat Fournier's "theory of the parasyphilitic affections," which teaches that the diseases contained in this category, while of syphilitic origin, are not syphilitic in nature, and are therefore not amenable to anti-syphilitic patients are true lesions of syphilis and tabes and general paralysis when they occur in syphilitic patients are true lesions of syphilis and can be cured by large doses of mercury. He admits, however, that both tabes and general paralysis are not diseases with a single ætiology, but asserts that when they occur in a syphilitic subject they are true syphilis. Statistics are quoted to show that syphilis is recognized as the cause of tabes in from 70 per cent. to 100 per cent. of all cases, and that it is held responsible for general paralysis in from 80 per cent. to 90 per cent. of all cases. It is probable, moreover, that these figures should be even greater than those ordinarily given. "At present microscopical examination may decide that a lesion is syphilitic in nature, but it is absolutely impossible to declare that a lesion, the nature of which is unknown, is not of syphilitic nature." "The day . . . will come when the histologists will simply have to describe the lesion of syphilis in a broader manner." It is not asserted that old tabetics can be cured. One cannot undo accomplished structural changes.

DISEASES OF CHILDREN.

Congenital Hypertrophic Stenosis of the Pylorus and its Treatment by Pyloroplasty. By Dr. E. Cautley and C. T. Dent, F. R. C. S. (*Lancet*, December 20th).—The main points put forward by the authors are: (1) That congenital hypertrophy of the pylorus is probably a far more frequent affection than is supposed; (2) that the condition

is still not generally recognized, for the symptoms may easily be misinterpreted or overlooked; and (3) that the affection may be successfully treated by pyloroplasty.

The subjects of the affection, if untreated, die at about the third or fourth month. The symptoms are those of intestinal obstruction: there is dilatation of the stomach and visible peristalsis, in addition to the vomiting and constipation. The pyloric tumor, even when of considerable size, may not be perceptible. The earlier the diagnosis is made, however, the greater is the chance of recovery by surgical measures. The essential abnormality consists in a marked excess of the muscular fibres encircling the pylorus. As regards operation the general opinion is in favor of gastroenterostomy, on the ground that recovery follows and that the operation meets the necessities of the case, and that pyloroplasty is not so much an unsuitable as an impracticable operation.

But the authors object to gastroenterostomy for the following reasons: (1) It necessitates a considerable exposure of the abdominal contents; (2) it is a more protracted operation than either dilatation of the pylorus or pyloroplasty; (3) there is increased risk of intestinal protrusion; and (4) the wound must be prolonged toward the umbilicus, with a liability to hernia in the resulting scar. The authors report two cases treated by pyloroplasty; in both the operation was successful, and the patients rapidly regained weight and strength. They prefer pyloroplasty to dilatation for the following reasons: (1) It can be done at least as quickly. (2) It is a more definite proceeding and allows more range, as the length of incision can be graduated. (3) The lumen of the tube can be examined, and, if desirable, the longitudinal fold of mucous membrane can be removed. (4) The exact amount of injury done to the parts is known.

MATERIA MEDICA, PHARMACY, AND THERAPEUTICS.

The Present Status of Serum Therapy. By Frederick A. Packard, M. D. and Robert N. Willson, M. D. (*American Journal of the Medical Sciences*, December).—Those who are not very familiar with the subject of serum therapy will find this paper very useful as a general guide to a more extended study of the question. The first half-dozen pages are devoted to a general consideration of the action of antitoxines, and a brief history of their development. The purpose of the paper, however, is not so much to review the field of serum experiment as to note the clinical evidence for or against the efficacy of such sera. There are two main kinds of sera: (a) Those having an antibacterial action, such as the antipneumococcic, antityphoid, and antiplague sera; and (b) those having a more purely antitoxic action, such as the antitetanus, antidiphtheritic, and perhaps the anticellular sera. In estimating the value of the different sera the authors have confined themselves almost exclusively to the studies reported and cases treated within the years 1900-1902, inclusive. Seven of the principal sera are studied with some fulness, and we take them up in succession. (1) *Antidiphtheritic Serum*. Little need be said of this serum

as its value is well understood. Welch states that by its use, the mortality in all forms of diphtheria has been reduced from 40 per cent. or more, to less than 15 per cent., and, exclusive of laryngeal and operative cases, to 5 per cent. and even less. French and German statistics showing practically the same results are given. During the last two years antidiphtheritic serum has been used in the treatment of other conditions than diphtheria (pneumonia and pertussis) and its applicability may be found to extend beyond the one condition. (2) *Antitetanus Serum*. The results with this serum have been distinctly disappointing, and the reports are in little agreement. In Italy tetanus must be a very much milder disease or much more amenable to treatment than it is either in Germany or in the United States, for we find the Italians reporting mortalities of from 0 to 30 per cent., while in Germany and in this country the mortality ranges from 40 to 70 per cent. and over, with practically the same treatment. In Italy, Baccelli's carbolic acid treatment seems to give as good results as either Tizzoni's or Behring's sera. There are three ways of giving the antitetanus serum: the subcutaneous, the intracerebral, and the subarachnoid or spinal methods. On animals the intracerebral method has given some brilliant results. The statistics of tetanus mortality are gone into quite extensively and the authors conclude "that we have in tetanus antitoxine not a specific, because it has failed too often to have merited such a name, but a valuable remedy in the treatment of the disease, and one that cannot be neglected till a better is supplied." Unfortunately tetanus antitoxine deteriorates rapidly, and often seems inefficient at the start. Larger doses should be used than is ordinarily done, and they should be frequently repeated if the best results are to be hoped for, and as the serum itself is harmless the only objection to this is the expense. (3) *Antityphoid Serum*. The development of a typhoid antitoxic serum has proved, up to quite recently, even more disappointing than that of antitetanus serum. We can, however, now say that we have at hand an active, though by no means perfect, prophylactic in the shape of sterile cultures of the bacillus, as well as the immune horse serum, and that there is the prospect, at least, of ultimately obtaining a positively curative serum. Bokenham and Chantemesse seem to have come the nearest to a correct solution of the problem. The latter has recently published some very encouraging results based on the treatment of one hundred cases. As a prophylactic, preventive inoculations with sterilized cultures of the typhoid bacillus have been given a trial by the English in their armies in India and South Africa, and the results on the whole may be considered to have been favorable. The outlook is encouraging. (4) *Antistreptococcus Serum*. Marmorek's antistreptococcus serum has been used quite extensively in certain directions within the past two years. Its proper use seems, however, to be a much more limited one than was at first supposed. Its action is a strictly specific one, and when other microorganisms are present its action is exerted, as always, on the streptococcus infection alone. To this has been due much of the disappointment in

its use, and many misunderstandings. Thus, the American Gynecological Association reported in 1898 that "the medical profession was not justified in proceeding further with the experimentation with the serum." Later reports seem to show that antistreptococcus serum will at least do no harm, and that in cases in which the streptococcus alone is involved it will eliminate that microorganism and control the symptoms caused by its toxins unless used too late for any remedy to be of avail. (5) *Antipneumococcus Serum*. The authors arrive at the following conclusions: ". . . our estimate must be a very conservative one, and in the nature of a hopeful expectancy rather than a satisfaction over anything accomplished. . . . A difficulty has seemed to consist in an inability to secure a highly immunized serum, and primarily in the difficulty of securing highly virulent cultures of the pneumococcus. . . . to-day no positive judgment can be registered with regard to the value of serum therapy in pneumonia." (5) *Antiplague Serum* seems to have accomplished valuable results. Following Haffkine's preventive inoculation with the vaccine, which reduced the percentage of cases to one-twentieth of the number that occurred in the unvaccinated, came the announcement of Yersin's serum. Calmette states with regard to this that, whereas the mortality before its use was 33 per cent. in 104 cases studied by him, it was 13 per cent. as the result of serum treatment. Numerous other reports show a considerable reduction in the mortality as a consequence of the serum treatment. The commissions sent out by England, Germany and Russia to study the question dissent, however, from this view. The reports from individual observers certainly indicate a positive value in the serum treatment when properly applied. The question of the extent of the value is as yet an unsettled one. (6) *Antitubercle Serum*. In tuberculosis the subject dies more often from the result of a mixed infection than from the tuberculous toxine. Against such mixed infection the serum has never had any effect either in laboratory animals or in the human subject; but where the case has seemed to be one of pure tuberculosis, especially in its early stages, certain observers have apparently obtained results that warrant our attention. Statistics based on clinical and experimental evidence appear to show that in the serum treatment we have an adjuvant in the treatment of tuberculosis which, if used early, may result in cure, and even when used late may retard the morbid process and promote healing. (7) *Antivenene*. "It seems settled that antivenene is of decided use in all cases of snake bite, but that its use is far less potent against the rattlesnake and similar viper poisons than against that of the cobra; in short, that its action is directed against the nervous, rather than the irritative and tissue-destroying, principle in the venom. Dyer, first, in 1897, and Woodson, again, in 1899, used Calmette's antivenene with remarkable results in undoubted cases of leprosy. (8) *Miscellaneous*. A brief account is also given of the antitoxines, and of the attempts that have been made at the cultivation of immune sera, that have not yet established themselves as curative measures deserving of confidence. The diseases

for which such cures have been sought are cholera, dysentery, yellow fever, scarlatina, anthrax, leprosy, glanders, erysipelas, whooping-cough and syphilis. In conclusion, a warning is necessary against a never failing error in the study of statistics, viz., the tendency to report the favorable cases and to withhold the unfavorable examples of a certain line of treatment. This unfortunately makes statistics a poor guide by which to arrive at correct conclusions, and yet they are our only available guide. A bibliography concludes the article.

The Diuretic Action of Rectal Irrigation. The Specific Action of Normal Saline Solution in the Production of Diuresis. By Robert Coleman Kemp, M. D. (*Medical News*, January 3rd).—The decinormal saline solution has a specific action on the kidney cells in producing diuresis, and this occurs whether the solution is administered by infusion, by hypodermoclysis, or by enteroclysis. It occurs even when the enema is so small that the arterial tension is not affected, and it will even take place after section of the renal nerves. The action of the enemata, if properly given, is twofold: (a) the quantity of the urine is increased, and (b) the renal congestion is diminished. Absorption from the colon will take place in twenty minutes. The enemata may be cold, tepid, or hot. Cold irrigations are only temporarily stimulant, then depressant, and if continued will, by producing an ultimate state of shock, decrease the quantity of urine. They are not to be commended. Tepid irrigations (99° to 100° F.) begin to be absorbed at the end of twenty minutes, and both increase the quantity of urine and reduce congestion. The hot irrigations (110° to 120° F.) are the kind that is specially recommended. They produce two stages of increased urine elimination. The first occurs at the time of increased circulation, that is, at the end of ten minutes; the second is due to the absorption of the fluid and takes place at the end of twenty minutes. Clinical experience shows that, even with high arterial tension, though there may be an evanescent increase due to the temperature of the fluid, yet the profuse diuresis, diaphoresis and bowel action are followed by a rapid fall of pulse tension and a marked improvement in the condition of the patient. The following method of giving the enemata is the best: A double flow tube should be used, the patient being placed in bed and the mattress protected by rubber sheeting, the bed-pan being discarded, and the out-flow tube carried to a pail. Use from three to twelve gallons at a sitting, from a pint to a quart being kept constantly in the bowels. If necessary the irrigation should be repeated every three hours, especially in severe cases, such as threatened suppression of urine. Patients will absorb by this method of irrigation as much, on an average, as one quart out of an irrigation of thirteen quarts. The author believes that "scientific irrigation" is of the greatest value as a diluent of the blood and as a prompt producer of diuresis, diaphoresis and bowel action. It is specially indicated in conditions like eclampsia.

A Comparative Study of the Routine Treatment of Certain Diseases in Four of the Large

New York Hospitals. By Henry P. Loomis, M. D. (*Medical Record*, January 10th).—Dr. Loomis writes on the routine method of treating typhoid fever, pneumonia, acute articular rheumatism, and pleurisy with effusion, in the following four New York hospitals—Presbyterian, New York, Roosevelt, and Bellevue. The mortality of typhoid was in all cases 10 per cent., but the number of cases treated is given only for the Presbyterian Hospital (152). The time covered was, for the Presbyterian, from October, 1900, to October, 1901, and for Roosevelt, the year 1901. For the New York and Bellevue hospitals neither the number of cases nor the period of time covered is stated. This ten-per-cent. mortality is compared with the following statistics; Murchison's report of 27,000 cases in England with a mortality of 17.45 per cent.; Jacquard's 80,000 French cases, with a mortality of 19.23 per cent.; Vienna 17,000 cases with a mortality of 22.5 per cent.; and finally, with some old statistics of Dr. Delafield's, based on 1,305 cases collected from New York City Hospital reports, extending over a period of five years, and giving a mortality of 20.1 per cent. He concludes: "To the present treatment of this disease must be given the credit of saving over 50 per cent. of the people who formerly died, for the disease certainly does not average any milder type now than it did ten or twenty years ago." The treatment is nearly the same in all the hospitals considered, and on only four questions is there much difference in opinion, viz., (1) Whether or not the diet must be exclusively milk. (2) When and how the diet shall be modified at the end of the disease. (3) What temperature of the patient shall call for the giving of the Brandt bath. (4) Shall the Brandt bath be given in every case. Each one of these questions is taken up in succession and the variations noted. We abstract the routine treatment of the four diseases under consideration.

The Routine Treatment of Typhoid Fever. (a) General management. The stools are disinfected with a 1-40 formaldehyde solution; the clothes are soaked in a 1-20 carbolic acid solution before being sent to the wash; the nurse uses a 1-1000 bichloride solution to wash her hands in after attending the patient. (b) The diet. (1) During the course of the disease, milk exclusively, either with lime water, peptonized, or prepared. (2) At the end, with the temperature normal or running under 100° F., soft-boiled eggs, chicken, and beef sandwiches are added, and, after the lapse of four more days, a chop. (c) Stimulation. When this is indicated by the condition of the heart, pulse, and general condition, whiskey in half ounce doses is used. If this fails to hold the patient, strychnine is added. If the right heart fails and there are blue extremities, with threatening oedema of the lungs, digitalis is added and preferably by hypodermic injection. (d) The Brandt bath. This should be given in all cases where the temperature reaches 103° F., and should be repeated every four hours. Half an ounce of whiskey, diluted, should precede the bath, and a glass of hot milk follow it. The tub should start with a temperature of 70° F., should be reduced to 65° F., by means of ice, and should last about fifteen minutes, the patient being well rubbed all the time and having his head kept cool by means of an ice

bag. The 4 a. m. bath can always be omitted with advantage and the 12 p. m. can often be. (e) Special symptoms. Their treatment is as follows: (1) Headache—Ice-cap, acetanilide and caffeine. (2) Sleeplessness—trional. (3) Constipation—no cathartics after the initial dose of calomel; is necessary use an enema daily. (4) Tympanites—Ice-coil, turpentine stupes, or turpentine, five drops every three hours. (5) Hæmorrhage—restrict the milk, stop the enemata, apply an ice-coil, and give Majendie hypodermically. (6) Perforation—operate at once. (d) Convalescence. Allow the patient to sit up after the temperature has been normal for one week; to get up after it has been normal for ten days; to leave the house at the end of two weeks; to return to normal diet at the end of three weeks, but to be careful up to the end of six weeks.

The Routine Treatment of Pneumonia.—(a) General management. On admission calomel in divided doses, followed by a saline next morning and repeated as often as is necessary during the course of the disease. (b) Diet. No mention is made of this. (c) Stimulation. Whiskey in doses of one half ounce from every four hours to every one hour. When whiskey fails to hold the patient then strychnine is resorted to; this is specially the case if there is cyanosis or indication of pulmonary œdema. If, in spite of alcohol and strychnine, the pulse remains feeble and rapid (130 or over), then digitalis is resorted to and either 5 minims of the tincture every three hours, or two minims of the fluid extract every four hours are given. Nitroglycerin is occasionally given, and cyanosis is the symptom that especially indicates its use. Oxygen is always given when cyanosis appears and pulmonary œdema develops. Atropine and caffeine are not given in a case of pneumonia at any of these hospitals, and the following drugs have been discarded as useless: potassium iodide, sodium salicylate, and creosote. Antipneumococcus serum has been used in a ward of one hospital with negative results. (d) Local treatment. Flaxseed poultices are still used more than any other local application, pneumonia jackets are also used; one hospital uses an electric poultice which can be kept at a uniform temperature. (e) Special symptoms. (1) Temperature. Some tub for a temperature of 103° F. and sponge every third hour when the temperature reaches 102°, but 103.5° is the ordinary sponging temperature; then again some wait for 104° and use a wet pack on the anterior half of the body. Temperature on the whole is not considered of very much importance. (2) Pain is relieved, either by poultices or by morphine hypodermically. (3) Insomnia is treated with codeine in quarter grain doses often combined with trional or potassium bromide. (4) Cough is controlled either with codeine or heroine.

The Routine Treatment of Acute Articular Rheumatism.—Practice differs somewhat in the different hospitals. While the attack is still acute, that is so long as there are high temperature and joint symptoms, the patient must be kept in bed on an exclusive milk diet. The joints may be treated either with ice bags, guaiacol, or wet compresses of

methyl salicylate. The specific medication consists in the combination of the old alkaline treatment together with the salicylate. A good alkaline mixture is the following: Potassium acetate, citrate, and bitartrate, of each from 15 to 30 grains at a dose, well diluted with water, every four hours. Of the salicylates the best is the freshly made sodium salicylate. This is prepared as follows: equal parts of salicylic acid and sodium bicarbonate are combined in any inert vehicle. Twenty grains every three hours or every four hours is the average dose, and as the patient improves, the frequency of the dose, but not the size, is diminished. Hyperpyrexia is usually treated by tubbing, and pericarditis by the ice bag and morphine if necessary.

The Routine Treatment of Pleurisy with Effusion.—At most hospitals aspiration is only used when one of the following conditions is present: (1) Large amount of fluid causing displacement of the heart and dyspnoea. (2) Filling of chest cavity with a large amount of fluid, even if there is no evidence of cardiac embarrassment. (3) Pain, embarrassed heart action, and marked prostration. (4) Fluid remaining at a fixed level for from five to ten days. The following conditions call for a suspension of the aspiration: (1) Any indication of cardiac embarrassment as indicated by the pulse, pallor and dyspnoea. (2) Severe pain. (3) Persistent cough. (4) Faintness.

HYGIENE AND SANITARY SCIENCE.

The Prevention of Typhoid Fever in Armies.

By Dr. H. E. L. Canney. (*Lancet*, December 27th).—The author's conclusions as to the main sources of infection in epidemics of typhoid fever, are as follows: (1) That unless all the water avenues to an army or camp have been protected, it cannot be assumed that the incidence of typhoid fever is due to air borne agencies. (2) That it is not possible to affirm that the water avenues to an army are closed unless the sterilization and distribution of the water are carried out by specially trained men. (3) That the evidence of air borne typhoid fever is not clearly established in recorded Indian military experience. (4) That in South Africa and Egypt the evidence is opposed to this theory. (5) That the weight of evidence from India, Egypt, and South Africa is immensely in favor of the paramount importance of the water avenues, especially in the onset of epidemics, and that the spread of the disease by the subsidiary avenues, flies, dust, and contact, only becomes a factor of importance, under conditions of the grossest neglect of sanitation. (6) The evidence from Egypt proves that if the water avenues are protected, all the other avenues are powerless to originate and to spread epidemics of typhoid fever in large bodies of men.

The author recommends the establishment of two bodies of trained men in every army: 1. "Water Section," to form two per cent. of the active (non-combatant) force; in reserve, two per cent. They are to be responsible for all fluids consumed by the army, including water, ice, mineral waters, milk, all uncooked vegetables and salads. All water used must be sterilized, the best method being

that of boiling. The author has devised a portable sterilizing apparatus, heated by petroleum, which will provide all drinks required by a battalion of five hundred men.

2. "Pioneer Section," to form two per cent. of the active (all combatants) force; in reserve, two per cent. These are trained men in charge of the excreta of the army and of the cleanliness of the soil.

The education, examination, and certification of men for both these sections would call for a special corps of trained instructors. Such work must be begun in time of peace; the sanitary officers' work practically ceases at the declaration of war.

OPHTHALMOLOGY.

The Close Analogy of Trachoma to Adenoids.
By Ralph Opdyke, M. D. (*Medical Record*, January 3rd).—The apparent connection between adenoids and trachoma was forced on the attention of Dr. Opdyke during the past winter, when, at the request of the commissioner of health, he examined a great number of the city's school children. In the lower East Side schools he found that, in the so-called cases of "operative" trachoma, there were pronounced adenoid vegetations in two out of every three cases. In the up-town West Side schools, notwithstanding their better facilities and healthier children, the average was even worse, and one out of every two subjects of trachoma had adenoid vegetations. Three points are worth noting. (1) The lymphoid tissue of the pharynx exists before the development of lymphoid tissue in the lids, so the abnormally developed adenoid tissue in the pharynx is probably antecedent to the overgrowth in the lids. (2) Both diseases have many of the same ætiological factors. But, while the cause of adenoids is clearly recognized, that of trachoma is still unknown. One thing is fairly well settled, and that is that the liability to an attack of trachoma depends most strongly on the state of the health at the time of exposure. Nothing, the author believes, will more surely undermine the health than adenoids of the pharynx, and he has noted the clinical fact that while a healthy child may sit near a trachomatous one and escape infection, one with adenoids will not. (3) The pathology of adenoids and that of trachoma bear a considerable analogy to each other, which deserves consideration. "To sum up, we have two distinct diseases in different parts of the body and adjacent to different organs, and with these ætiological and pathological factors very closely analogous. We have proved the adenoid vegetations to be the primary factor, and we should, I think, give the benefit of the doubt to the trachoma as being its true sequel. . . . The adenoids thus diagnosed are to be at once removed, and by this means, not only will cases of trachoma be less apt to recur after being once operated on, but, more important still, the prevention of new cases will be successfully combated."

PHYSIOLOGY AND PATHOLOGY.

The Histology of Infectious Granulomata: Leprous Granulomata.—Dr. Tomaso Secchi (*Riforma medica*, October 23, 24 and 25th) found that the fundamental substance of leprosy granulomata

is formed of connective tissue which takes on an epithelioid character, and in which lymphocytes and plasma cells are rarely seen, and concludes that leprosy granulomata belong to the type of epithelioid granulomata. The swelling and vacuolization of the cells of leprosy tumors are effects of the activity of the lepra bacillus, and must be considered as degenerative phenomena. The vacuoles present the appearances of mucin with mucin reagents, and are not, therefore, mere spaces filled with water. The production of mucin in these tumors is not to be regarded as an effect of intracellular digestion, but as a result of the action of the lepra bacillus. The bacillus acts first as an irritant, producing a growth of connective tissue, and secondly as a destroyer of tissue, producing vacuolization, cheesy degeneration, and tuberculous foci. The difference between the action of the tubercle bacillus and the bacillus of tuberculosis is therefore that while both have a necrobiotic action the bacillus of tuberculosis prefers caseous degeneration, while that of leprosy prefers vacuolization. Both cause hypertrophy of the connective tissue, but while giant cells are common in tuberculosis they are rare in leprosy. Both produce epithelioid cells, but the bacillus of tuberculosis has an inflammatory action which is expressed by the production of lymphoid tubercles, while this does not occur with the lepra bacillus. The pathogenesis of leprosy granuloma and of epithelioid tuberculous granuloma is almost identical. In both cases the bacilli are situated in the blood vessels at first, where they irritate the endothelial cells, producing a proliferation thereof, and then acting through the walls of the capillaries upon the connective tissues of the surrounding parts, penetrating into many cells, and altering their structure. From a focus thus formed in the tissues, the process spreads and invades the cells around the focus, the bacilli multiplying rapidly in the region, chiefly in the intercellular lacunæ, which they seem to prefer as a habitat. In this situation they exercise a proliferative action, followed by the degenerative effects already described.

The Pathogenic Action of the Bacterium Coli in Dogs.—Dr. Giuseppe Loy-Peluffo (*Riforma medica*, November 18th) has studied a variety of *Bacterium coli* which grows in colonies on gelatin that closely resemble the colonies of the germ described by Sanarelli as that of yellow fever. He inoculated twenty dogs with an emulsion of various types of *Bacillus coli*, injecting it into the jugular veins. Of these only three died, the rest survived. The first dog died after three days, the second after a month, and the third after three days. The first dog showed spastic paralysis, photophobia, keratitis, and general tremors before death. It was seized with convulsive attacks, vomited all the gastrointestinal contents, and died. On autopsy hyperæmia of the various organs and an enlargement of the lymphnodes were found. The bacillus was recovered from cultures of the blood and the liver. The second dog died after a month and there were no noteworthy lesions on autopsy. The third dog showed on autopsy intensely congested liver, spleen, kidneys, intestines, etc., and markedly enlarged mesenteric glands. The bacillus was also recovered in pure cultures

from this animal's blood. The author concludes from these experiments that but few of the varieties of the *Bacillus coli*, as found in the excrements of various animals, are pathogenic in dogs, and that these few varieties do not correspond to the germ described by Sanarelli as that of yellow fever, as inoculations with these bacilli did not produce the lesions of yellow fever obtained in dogs by Sanarelli after the injection of his yellow fever bacillus. The author's experiments, therefore, add to the testimony in favor of the specific character of Sanarelli's germ.

A Method of Staining Sputum for Bacteriological Examination. By William H. Smith, M. D., (*Boston Medical and Surgical Journal*, December 18th).—Dr. Smith, after studying the sputum of cases of pneumonia and bronchitis admitted to the Massachusetts General Hospital in the course of the past three years, has formulated a method for the routine examination of sputum with special regard to a study of the bacteria present. The method is fairly simple and entirely practical. The microorganisms he has especially studied by this method are the pneumococcus, the influenza bacillus, streptococci, staphylococci, the *Bacillus mucosus capsulatus* and the pseudo-pneumococcus. Since it is often necessary to isolate organisms in the sputum for the purpose of identifying them, his remarks on cultivation will prove useful to those not over familiar with laboratory methods. Five cases are given to illustrate the advantage gained by carefully examining the sputum, and the possibility of making a more accurate diagnosis in case of involvement of the lungs or bronchial tubes.

Nearly all suffer from insomnia. Attacks of the nature of angina pectoris occur in the late stages of aortic regurgitation. When the mitral valve fails and the cavities dilate, the case becomes one of uncompensated mitral disease. The "water-hammer" pulse cannot be relied on in diagnosis; it occurs in other conditions than aortic regurgitation, and may be absent in undoubted instances of that disease. The facies of aortic reflux markedly resembles that of phthisis—there are the same pallor and sharpening of the features, and the same anxious expression. Visible pulsation of arteries occurs in many other conditions besides aortic insufficiency. There is no connection between arterial pulsation of the retina and general arterial pulsation—the former condition is by no means common. On the other hand capillary pulsation is extremely common in aortic reflux. A diastolic thrill is but rarely observed, but when it does occur it may be a prominent feature and lead to a mistaken diagnosis of mitral stenosis. The association of aortic disease with other non-cardiac lesions is accidental except in two instances—locomotor ataxia and fibroid phthisis. A common syphilitic origin accounts for the relation between locomotor ataxia and aortic regurgitation. In fibroid phthisis the contraction of the new fibroid lesion drags the heart and aorta out of their natural relations; twisting results, which may lead to incompetence of the aortic valves. Aortic disease, pure and simple, has no harmful influence upon the changes incident to adolescence. This is very different in cases of mitral disease, when the changes incident to puberty are most im-

perfectly carried out and often remain in abeyance. The duration of life in aortic disease is much greater than is commonly supposed. The author cites one patient as existing for sixteen years. But eventually mitral changes appear and the cases terminate as those of mitral disease. Sudden death is usually due to degeneration of the heart muscle. Coincident with the decay of the myocardium there is also a tendency for atheroma of the aorta to arise. The aortic reflux murmur is either the easiest to hear and to time or it is the most difficult, there being the greatest variation in the character and intensity of the murmur. Where the ventricular contraction is weak the murmur is very faint, and vice versa. The author condemns the binaural stethoscope and ascribes the frequent overlooking of cardiac murmurs to its use. The maximum intensity of ninety-nine per cent. of aortic regurgitant murmurs is *not* in the second right interspace close to the sternum, but in the second left interspace. Change of position often produces marked changes in the loudness and character of the murmur, the intensity being always increased when the patient assumes the recumbent position. During the time that compensation is good no drug treatment is indicated beyond that which may be desirable to amend gastric symptoms and to remove constipation. When compensation begins to fail, drugs have their uses, and the treatment becomes the same as that of mitral disease.

The Transference of Bovine Tuberculosis to Man. By Dr. Robert Koch. (*British Medical Journal*, December 20th).—Professor Koch again states his belief that the bacillus of bovine tuberculosis (*perlsucht*) is innocuous or relatively so, to man. In this article he discusses the various arguments that have been advanced to combat his view, and disposes of them to his satisfaction. Local infections as occurring in butchers, veterinarians, etc., consist in wart-like formations—the so-called tuberculosis verrucosa cutis. The disease remains localized, does not lead to an infection of the internal organs, and runs its course as an insignificant skin malady. He discusses every instance of infection from tuberculous meat and milk that has been reported in the literature, and shows that in every case the possibility of the disease having originated from other sources has not been sufficiently rigorously excluded. Measures concerning meat and milk infected with tuberculosis, which are meant to combat human tuberculosis, cannot be well founded at the present time. The fight with tuberculosis must not be fought on wrong lines if it is to have a real result. It must aim at shutting off the chief, indeed we may almost say, the only, source of infection; that is to say, those consumptives who in consequence of the unfavorable conditions under which they live, or because they obstinately set aside the simplest rules for the prevention of infection, are a danger to their companions. In some way or other we must look after these sick people, either by procuring for them more favorable conditions, for example, as regards dwelling places, or by so sheltering them in suitable institutions that they cease to be a danger to their neighbors.

Proceedings of Societies.

AMERICAN ASSOCIATION OF OBSTETRICIANS AND GYNÆCOLOGISTS.

*Fourteenth Annual Meeting, held in Washington,
September 16, 17, and 18, 1902.*

The President, DR. EDWIN RICKETTS, of Cincinnati,
in the chair.

(Continued from Vol. lxxvi, page 833.)

Ruptured Suppurating Tubes.—Dr. CHARLES GREENE CUMSTON, of Boston, read a paper in which he said that there were two methods of dealing with suppurating tubes, one of which was posterior colpotomy, followed by incision and drainage of the sac, while the second was to remove the tube, and if the condition was bilateral, to do a total hysterectomy. Naturally the easiest and least dangerous method was by drainage of the perforated pyosalpinx through the vagina. The vagina was incised, and then the pyosalpinx and the walls of the tube might be united to the vaginal wall by means of forceps, which were allowed to remain in place for one or two days, until union had taken place. In doing this operation in two stages the vaginal walls were first incised, and the sac was united to the borders of the vaginal incision, and after union took place the tube was opened. In both instances the cavity should be thoroughly irrigated with salt solution and large drainage tubes employed. The proper treatment, however, for perforated suppurating tubes was by abdominal incision, whether perforation had taken place into the general peritoneal cavity or into the intestine, bladder, or vagina. The extirpation of perforated pyosalpinx was particularly urgent in those cases in which drainage by posterior colpotomy had been unsuccessful, and also when one was dealing with a tuberculous lesion of the tubes. He did not favor vaginal hysterectomy in cases of perforated tubes, although he believed that when the sac had burst into the bladder the vaginal route might be indicated under certain circumstances.

The Treatment of Pelvic Abscess.—Dr. HERMAN E. HAYD, of Buffalo, in a paper on this subject, said there was a class of cases where vaginal incision and drainage supplemented by curetting when indicated, should be first employed to get rid of the free pus, and then later an abdominal section should be done to relieve the patient of her suffering, when the danger and risks associated with such an undertaking were reduced to a minimum. A large collection of pus low down in the pelvis in a moribund woman should be evacuated through the vagina, and nothing more undertaken unless some grave complication set in. He had reference now to strong women who were suffering from acute active streptococcic infection, who had a high temperature with great pain and tenderness, who were in fine physical condition and under ordinary circumstances ready to submit to capital operations, in whom there could be felt an acutely tender mass low down in the pelvis on one or both sides, and even filling up the cul-de-sac, and in whose cases one

was positive that there existed pus, which was easily determined by an aspirating needle passed through the vault of the vagina. In this class he strongly recommended early vaginal incision for the purpose of draining off all the free pus, and, if necessary, extending the incision to one or both sides and evacuating tubal and ovarian abscesses if they were easily reached. This procedure was without danger and, instead of its increasing the difficulties of future operations, they were very much simplified. The size of the mass would diminish, the immediate dangers of rupture into the bowel, bladder, or peritoneum, were lessened, the pain and constitutional symptoms subsided, the pus organisms were lessened in their virulence, and the whole clinical picture of the case improved and changed. Several interesting cases were cited in which the author had practised this method with success.

The Importance of an Apprenticeship in Operative Gynæcology.—Dr. GURNEY WILLIAMS, of Philadelphia, read a paper with this title, in which he said that the modern apprenticeship differed materially from that of a quarter of a century or more ago, when the specialty was being developed by men with large and varied professional and surgical experience. Again, the nature of the work in those days differed greatly from the modern. Hospitals, now so common in every State and city, were not giving their resident physicians a practical education or using the vast amount of material at their command for that purpose. He spoke from experience in this matter, for after serving in two large hospitals thirty-six months, it was necessary for him to go elsewhere for practical instruction and the apprenticeship desired. All hospitals, he contended, should be practical schools for the residents and the visiting medical and surgical staffs.

In considering the treatment of suppurating tubes, he said that dilatation, curetting, and prolonged drainage of the uterine canal were unsurgical procedures. He urged more radical operative measures, and said that vaginal incision and drainage was a temporary makeshift—that sooner or later twenty-five per cent. of the patients would return for a more radical operation, namely, abdominal section. So much had been said about the simplicity of puncture methods and drainage by the vaginal route, with speedy relief and recovery, that he wished to state that, aside from the mortality, which was not small, the number of invalids leaving hospitals was very large. They returned to the same or other institutions for re-incision or for abdominal section, and when one who did such work was thoroughly familiar with the postoperative conditions of both classes of cases, he was convinced by his every day experience of the results and recoveries following the suprapubic method of clean extirpation. The mortality from this operative procedure was smaller and the recoveries were more pleasing than from any other measure, ancient or modern, now practised.

The Technics of Biinguinal Cœliotomy for Complicated Aseptic Retroversions of the Uterus.—Dr. A. GOLDSPOHN, of Chicago, gave a résumé of the rationale and technics of biinguinal

coeliotomy for complicated aseptic retroversions of the uterus, and made a further report of its remote results. The argument he advanced was that: 1. Surgical treatment could be consistently recommended for this disorder only if it was not merely innocent of harmful effects to subsequent gestation and labor, but if its good results were also not frustrated by subsequent childbirth. 2. Most of the operations in vogue did not meet this more ideal requirement, nor had most of their sponsors aimed so high. 3. The round ligaments of the uterus were the only truly serviceable structures to deal with to get such results, because they alone, as a part of the uterus, underwent both evolution and involution with it during and after gestation. 4. The route by which to gain their serviceability best was by the inguinal canals. 5. With a proper technique the lateral inguinal rings provided ample access for the intrapelvic work in complicated but aseptic cases, without cutting and without hernia following. 6. A table giving later results of about thirty-five newly examined cases in addition to seventy-two cases previously reported, showed no hernia in any of them. 7. In all known cases of subsequent childbirth, the women retained their uteri, etc., in pronounced anteversion and with good involution.

The Irrational Starvation Treatment of Appendicitis.—Dr. JOHN B. DEEVER, of Philadelphia, discussed this subject. The author's experience of ninety-eight cases in the past two months and a half had furnished a lesson from which objections to the rest, or starvation, treatment were drawn. The particulars of these cases were detailed. The lessons drawn were that an early operation, preferably in the stage of appendicular colic, was the only rational procedure, and was the only treatment which would reduce the mortality in acute inflammation to insignificant figures; that the so called rest treatment failed to check peritoneal inflammation, and would, in the majority of cases, harm the patient. The statistics presented in the paper bore out these statements to the letter. Cases brought to the operating table several days after the onset of the disease, where the starvation treatment had been carried out, and a local abscess or a mass of exudate and adhesions was found, had by no means convinced him that those patients would not have been better off for an early operation. To attempt to foretell what the intraperitoneal condition was, or what it would be a few days or weeks later, was assuming a graver responsibility than was justifiable. Such a prediction was never made by those whose experience with the disease would justify such a confidence. He was willing to grant that an operation in the presence of an acute general peritonitis was attended by great risk to life, and therefore it was often wise to defer the operation in the hope that the inflammatory process would become localized. This was often his practice; but he denied that the starvation plan of treatment promised more in such cases than the mere common practice of abstaining absolutely from giving opium, keeping the bowels freely open by solid cathartics, or, as some physicians preferred, a hydragogue cathartic, which was both antiseptic and germicidal, giving nourishment by the rectum,

when the stomach was tolerant, and using ice or heat locally in the shape of poultices or hot turpentine stupes.

Dr. JOSEPH PRICE, of Philadelphia, discussed the surgical relations which the appendix region bore to pelvic suppuration and operative complications.

Some Cases of Appendicitis and the Lessons they Teach.—Dr. MILES F. PORTER, of Fort Wayne, Indiana, reported eleven cases and gave the deductions to be drawn from them.

Four Cases Illustrating the Difficulties of Diagnosing Appendicitis were reported by Dr. WILLIAM WOTKINS SEYMOUR, of Troy, N. Y. One patient had previously been operated upon for appendicular abscess. He found a suppurating solid tumor of the ovary. The temperature at the time of the operation was 107°, pulse 180. Recovery followed. The second case was that of a woman with contracted pelvis delivered of a dead child. Twelve days later there were symptoms of inflammation in the right iliac fossa, appendicular or tubal, the result of infection. An operation revealed a suppurating gangrenous fibroid of the right anterior uterine wall, which was enucleated, and this was followed by recovery of the patient. Later he did Cæsarean section on this patient, and the mother and child were well seven weeks after the operation. In the third case he was summoned to a patient supposed to have appendicitis. His diagnosis was ovarian cyst with twisted pedicle. The mass had increased twofold since a previous visit to the attendant. Removal of the cyst was followed by recovery. The fourth case was that of a single woman, aged about twenty-two. There were pains and intense tenderness in the appendicular region, but the attack began with joint pains. Examination of the lungs showed bronchial breathing at the left base; the next day there was diffuse bronchial breathing over both lungs. The appendicular symptoms were less marked. There was toxæmia of some sort, but no appendicitis.

Intrauterine Fibroids Complicating Pregnancy, and Retained Placenta Associated with Intrauterine Fibroids Complicating Pregnancy.—Dr. M. A. TATE, of Cincinnati, had collected thirty-nine cases from literature, and reported two which had occurred in his own practice. Analyzing these forty-one cases, the histories of which were not complete, he noted that in nine cases only were the names of reporters given without any mention of the history of the cases. In six cases the tumor became gangrenous. Hemorrhage was a prominent symptom, in that it occurred in eighteen cases; three polypi were expelled spontaneously; seven polypi were removed; in three cases the polypus was not removed; in ten cases the labor was normal; in four cases labor was difficult; in two cases the child had to be destroyed; one was a case of turning, and the other a breech; in four cases the tumor was discovered before, in all of the rest after, labor; four cases were reported where labor set in before term; two were at the fifth and two at the seventh month.

The following were the complications reported: Septicæmia, eight; measles, one; puerperal mania, one; retained placenta, four cases.

Abdominal Section During Pregnancy.—In a paper on this subject Dr. J. HENRY CARSTENS, of Detroit, said he had had the following cases complicating pregnancy: Appendicular inflammation, five cases; fibroids, four cases; hernia, one case; abdominal hysterectomy, one case; ovariectomy, three cases; vaginal hysterectomy, three cases; and miscellaneous, three cases—or altogether twenty cases and five deaths—so that the mortality was twenty-five per cent. This included all his cases. He thought that to-day the mortality would be far less.

In all acute diseases requiring prompt operation the patient could be operated upon just as well as if pregnancy did not exist. Tumors that would interfere with labor should in all cases be operated upon, as there was far less danger attached to their removal during pregnancy than there was to non-intervention and letting the woman go to full term. He had seen most lamentable cases of the latter kind. Tumors above the brim of the pelvis, or which could be shoved above the brim of the pelvis, need not be interfered with; still, as a rule, all tumors took on a very rapid growth during pregnancy and the increase in size might interfere with the various functions of life, and then surgical intervention was required.

Deciduoma Malignum.—Dr. LEWIS S. McMURTRY, of Louisville, read a paper on this subject and reported a case. Since Säger, in 1888, and again in 1893, called attention to this form of malignant disease of the uterus, numerous cases had been reported in Europe and America. The diagnosis was not especially difficult, but great difficulty had been found in establishing the exact pathogenesis and making a definite pathological classification of the disease.

Säger believed that the growth originated in decidua cells, and accordingly gave it the name ever since in general use, deciduoma malignum. Gottschalk reported a case in 1894 and proposed the name sarcoma choriocellulare, believing the disease to be sarcoma springing from the stroma of the chorionic villi. In 1895 Marchand first published the result of his investigations of the disease, and supplemented this by additional researches published in 1898. His investigations were most thorough and had done more to establish the true origin and pathology of the disease than those of any other investigator. He demonstrated the epithelial character of the growth, and asserted that it had its origin in the tissues composing the epithelial covering of the villi. According to Marchand's interpretation of the pathology, the tumor arose from the syncytium and Langerhans's cells. Fränkel and Gebhard had confirmed Marchand's observations, and his views had found general acceptance among German investigators. This view of the pathology had also received general approval in Great Britain and America. It remained somewhat unsettled yet as to whether the tissues in which the growth originated were derived from foetal or maternal structures or from both.

Clinically, the disease presented a well defined history. It appeared after abortion or labor, the tumor being situated upon the endometrium of the body of the uterus. Of 128 recorded cases, in forty

per cent. the disease had appeared after mole pregnancy. Hæmorrhage was the first and most conspicuous symptom, and was not controlled by curetting. The discharge was usually offensive, especially in the advanced stage. The disease had a marked tendency to early metastasis; the lungs and vagina were the most common sites for metastatic deposits. The disease was so rapid in its course that the period from the first symptoms until the death of the patient was only a few weeks or months. The only successful treatment was by the early and complete extirpation of the uterus.

In the author's case the disease appeared in a woman of thirty-five, immediately after abortion. Persistent hæmorrhage and foetid discharge from the uterus prompted operative intervention. The uterus and its appendages were removed by the abdominal route, and the patient made a prompt recovery.

(To be concluded.)

Letters to the Editor.

SCIENTIFIC BOOKS WITHOUT INDEXES.

NEW YORK, January 13, 1903.

To the Editor of the NEW YORK MEDICAL JOURNAL:

Sir: The review in your issue of January 3rd on Dr. Mercier's *Textbook of Insanity* aroused in me the desire to peruse it. As regards what the reviewer does say, I am not disappointed, but I must own to very grievous disappointment as to one thing that he does not say, viz., that the book under notice has not even the pretence of an index. I regret to say that English books are very frequently far behind those published on this side, in regard to the completeness of their indexes; but to me it seems an imposition on an unsuspecting purchaser, to offer for sale a scientific work which has absolutely no index at all.

AN ENGLISH PHYSICIAN IN AMERICA.

Book Notices.

Gynæcology, Obstetrics, Menopause. Being a Revised and Enlarged Reissue of Three Serial Articles appearing in the *Medical Council*. By A. H. P. LEUF, M. D. Philadelphia: The *Medical Council*, 1902. Pp. xii-18 to 326. (Price, \$2.50.)

The aim of the author in writing this book has been to enlarge the field of the general practitioner by instructing him in the diagnosis and treatment of cases which ordinarily find their way into the hands of the specialist. To the reviewer, who has carefully and conscientiously perused its pages, it would appear that a practitioner who needs instruction in the primal elements which the author imposes upon his readers, would be a much wiser man if he refrained from attempting the diagnosis and treatment of cases of whose nature it is impossible that he can have the remotest notion. We are far from asserting or believing that every route by which physicians can gain even an iota of knowledge should be kept closed; but in these days it is a little too much to expect that they can learn the use of the obstetric forceps, that of the instruments

for embryotomy, and a method of Cæsarean section from a few well chosen paragraphs. The recognition of obstetric complications and of gynecological disease is often difficult enough in the hands of skilled and experienced men who devote their lives to the recognition and treatment of such conditions. Does the author really believe that his little book of 315 pages can make an obstetrician or gynecologist of a man totally untrained by clinical experience?

Turning now for a moment to the contents of the book proper, we find that by far the greater part of it is in consonance with modern teaching. Here and there some pathological curiosity creeps in, such as "rheumatism of the uterus" and the description of endometritis as "simply an inflammation of the lining membrane of the uterus." And in his therapeutics the author is not always entirely correct. Electricity is commended, but no directions are given for its use or its indications; electrolysis of a gravid tube is endorsed before rupture, "say within the first two months"; the use of *veratrum viride* is the treatment of eclampsia, and a bolus of tobacco is recommended to be "put into the mouth of the unconscious woman." We believe that we have cited characteristic examples and that further quotation is unnecessary.

Our entire impression of the book is this: that if Dr. Leuf had confined himself to a discussion of principles and had omitted directions for the treatment and for the diagnosis of conditions difficult enough to recognize by the expert, his book would have a real and definite value for the practitioner whose education and facilities have been faulty. But the attempt to substitute a small book for a clinical experience which should extend over years is, to our mind, a reprehensible thing. In some parts of our country medical education is sufficiently deplorable without any further efforts to put words in the place of patients; and when these efforts include "the counterpane which covers the mother and her child," they are the more to be condemned.

Textbook of Medical Jurisprudence and Toxicology. By JOHN J. REESE, M. D., Late Professor of Medical Jurisprudence and Toxicology in the University of Pennsylvania, etc. Sixth Edition, Revised by HENRY LEFFMANN, A. M., M. D., Professor of Chemistry and Toxicology in the Woman's Medical College of Pennsylvania, etc. Philadelphia: P. Blakiston's Son & Company, 1902. Pp. xvi-17 to 660. (Price, \$3.)

The sixth edition of Dr. Reese's well known work on forensic medicine and toxicology has brought it well up to date. The toxicology of phenol especially has been well rendered, and the introduction of its derivatives into household use renders this one of the most important subjects to the practitioner as well as to him who pays special attention to the legal side of medicine. Dr. Leffmann calls special attention to gastric lavage and the use of alcohol in poisoning by carbolic acid. He also notes the fact that atropine is no longer regarded as an antidote to morphine. The whole work has been submitted to similar revision, and is now, as it always has been, a standard on the subjects of which it treats.

A Treatise on Massage; its History, Mode of Application, and Effects. Indications and Contra-indications. By DOUGLAS GRAHAM, M. D., Boston. Third Edition. Revised, Enlarged and Illustrated. Philadelphia and London: J. B. Lippincott Company, 1902. Pp. 9 to 462. (Price, \$4.)

In this edition the author has added several new chapters, and as now presented the book is, in our opinion, the best work on the subject which has come to our notice. The articles on the history and physiological effects of massage, also that on muscular rheumatism and neuritis, are especially to be recommended.

In many instances, it seems as though the author were slightly over-enthusiastic about results obtained; again, he jumps to unsubstantiated conclusions, while in one or two instances a slightly iconoclastic tendency is manifested.

The article on Massage in Chronic Constipation is, in our opinion, insufficient, in view of the fact that this particular line of treatment has recently received so much attention. In several instances rather out of date methods of treatment are still recommended, such, for example, as the use of massage in cases of biliary calculus, which treatment is now almost universally considered as positively dangerous.

The book contains many valuable suggestions and points on diagnosis. It is well worthy of perusal, and will, we hope, tend to give to massage its deserved place as a therapeutic agent.

Practical Dietetics. With Special Reference to Diet in Disease. By W. GILMAN THOMPSON, M. D., Professor of Medicine in the Cornell University Medical College in New York City, etc. Second Edition, Enlarged and thoroughly Revised. New York: D. Appleton & Company, 1902. Pp. xxiii-828. (Price, \$5.)

In the seven years which have elapsed since the first appearance of this standard textbook, there have not been the many and important changes in dietetics that other departments of our therapeutics have undergone. Nevertheless, Dr. Thompson has revised much that was published in the first edition, and has introduced into this one the results of more recent studies in the economic values of various dietaries. The general arrangement of the work is unchanged.

Transactions of the Obstetrical Society of London. Volume XLIV. For the Year 1902. Part ii, for March, April, and May.

The present volume of the *Transactions of the Obstetrical Society of London* contains some notable articles. A paper by Mr. Stannus on a Teratoma of the Fœtal Head, one by Dr. McKerron on Suppression of Urine after Labor, and one by Dr. Lewers on Primary Tuberculosis of the Cervix Simulating Cancer are very suggestive and give evidence of thorough research work combined with good clinical observation. The discussions and illustrations are on a plane with those usually found in this periodical.

BOOKS, ETC., RECEIVED.

Twentieth Century Practice. An International Encyclopedia of Modern Medical Science. By Leading Authorities of Europe and America. Edited by Thomas L. Stedman, M. D. In Twenty-one Volumes. Volume XXI. Supplement. New York: William Wood & Company, 1903. Pp. xiv-845. (Price, \$5.)

Diseases of the Eye. A Handbook of Ophthalmic Practice for Students and Practitioners. By G. E. de Schweinitz, A. M., M. D., Professor of Ophthalmology in the University of Pennsylvania, etc. With 280 Illustrations and Six Chromo-lithographic Plates. Fourth Edition, thoroughly Revised. Philadelphia and London: W. B. Saunders & Company, 1903. Pp. 5 to 773. (Price, \$5.)

A Manual of Materia Medica and Pharmacology, comprising all Organic and Inorganic Drugs which are or have been Official in the United States Pharmacopoeia, together with Important Allied Species and Useful Synthetics, especially Designed for Students of Pharmacy and Medicine, as well as for Druggists, Pharmacists, and Physicians. By David M. R. Culbreth, Ph. G., M. D., Professor of Botany, Materia Medica, and Pharmacognosy in the Maryland College of Pharmacy, etc. Third Edition, Enlarged and thoroughly Revised. With Four Hundred and Seventy-three Illustrations. Philadelphia and New York: Lea Brothers & Company, 1903. Pp. 7 to 916.

Anatomy. A Manual for Students and Practitioners. By William H. Rockwell, Jr., M. D., Formerly Assistant Demonstrator of Anatomy in the College of Physicians and Surgeons, Columbia University. Edited by Bern B. Galaudet, M. D., Demonstrator of Anatomy and Instructor in Surgery, College of Physicians and Surgeons, Columbia University, etc. Illustrated with Seventy Engravings. Philadelphia and New York: Lea Brothers & Company, 1903. Pp. 3 to 620. (Price, \$2.25.)

The Practical Medicine Series of Year Books, comprising Ten Volumes on the Year's Progress in Medicine and Surgery. Under the General Editorial Charge of Gustavus P. Head, M. D., Professor of Laryngology and Rhinology, Chicago Post-Graduate Medical School. Volume II. General Surgery. Edited by John B. Murphy, M. D., Professor of Surgery, Northwestern University Medical School. November, 1902. Chicago: The Year Book Publishers. Pp. 3 to 553. (Price, \$2.)

Malarial Fever: Its Cause, Prevention and Treatment. Containing Full Details for the Use of Travellers, Sportsmen, Soldiers, and Residents in Malarious Places. By Ronald Ross, D. P. H., F. R. S., Walter Myers Lecturer, Liverpool School of Tropical Medicine. Ninth Edition, Revised and Enlarged. New York, London, and Bombay: Longmans, Green & Company, 1903. Pp. viii-68. (Price, 75 cents.)

The Earth in Relation to the Preservation and Destruction of Contagia. Being the Milroy Lectures delivered at the Royal College of Physicians in 1899, together with other Papers on Sanitation. By George Vivian Poore, M. D. (Lond.), F. R. C. P., Professor of the Principles and Practice of Medicine, University College, London, etc. New York, London, and Bombay: Longmans, Green & Company, 1903. Pp. 257.

Report of the Commissioner of Education. For the Year 1900 to 1901. Volume I.

Report of the Government Hospital for the Insane to the Secretary of the Interior. 1902.

A Plan for the Study of Man, with reference to Bills to Establish a Laboratory for the Study of the Criminal, Pauper, and Defective Classes, with a Bibliography of Child Study. By Arthur MacDonald, Specialist in the United States Bureau of Education, etc.

La fièvre quarte. Étiologie—évolution—traitement—formes dissociées de l'accès quarte. Par le Docteur Émile Legrain. Paris: A. Maloine, 1903. Pp. 74.

Handbuch der Geschichte der Medizin. Begründet von Dr. med. Th. Puschmann, Weiland Professor an der Universität in Wien. Herausgegeben von Dr. med. Max Neuburger, Docent an der Universität in Wien; und Dr. med. Julius Pagel, Professor an der Universität in Berlin. Fünfte Lieferung. I. band Bog. 45-48 (Schluss) und II. Band Bog. 1-7. Jena: Gustav Fischer, 1903. Pp. 705 to 756. Erster Band. Pp. xi-112.

Miscellany.

The Nature and Extent of Skill required of Physicians.—According to the *New York Times* for December 19th, the Court of Appeals of Kentucky has decided, in the case of *Burk vs. Foster*, that the skill required of a physician in treating a patient is to be measured not by that exercised by "ordinary skillful and prudent physicians in that (particular) vicinity in treating a like injury," but by such as is exercised generally by physicians of ordinary care and skill in similar communities. The court further held that the mere fact that the result of a patient's treatment "is as good as is usually obtained in like cases similarly situated" will not preclude a recovery by the patient against the physician for negligence and lack of skill, the patient being entitled to the chance for the better results which might come from proper treatment.

What the Modern Military Medical Service has Effected.—According to the London correspondent of the *Medical Record* for November 22d, Lord Roberts, in distributing the prizes recently at St. George's Hospital Medical School, London, referred to the fact that in all campaigns the victims of disease far exceeded those of shot and shell. In proof of this Lord Roberts quoted some figures from Kinglake's *Crimca*. In twenty months the French had 23,250 cases of scurvy, over 1,100 a month, and in the British army, on the last of February, 1855, out of a force of 30,919, there were 13,608 in hospital. Kinglake also said that of 48,742 cases admitted to hospital in a certain period, nearly three quarters were zymotic, and, in a sense, preventable. Comparing these figures with those of the late war in South Africa, Lord Roberts said that in two years and a half Great Britain had sent out 400,000 men, and for some time there was an average of 250,000 in the field. The total deaths from sickness up to May 31st were 13,750, and during the war 66,500 were invalided, of whom 500 died, they being included in the 13,750 mentioned; 5,879 were discharged from service as unfit, and 959 were still in hospital, the rest having returned to duty. Those striking figures, his lordship continued, showed the great improvement that had taken place, and that was due to the march of medical science and the personal devotion of the medical officers and the nurses under them. In expressing gratitude for these achievements, he voiced the opinion of the army, and the appreciation of their work by soldiers might be an incentive to their efforts.

Alexandre Dumas and the Doctor.—The *Lancet* for November 29th tells the following story of Dumas: The author of the *Three Musketeers* was breakfasting at Marseilles with Dr. Gistal, a physician of that city. The doctor asked his distinguished guest to adorn his album with a specimen of his power of improvisation. Dumas thereupon wrote under the eyes of the doctor:

Depuis que le docteur Gistal
Soigne des familles entières
On à démolì l'hôpital

"Flatterer!" interjected the doctor. But he was a trifle premature, for Dumas finished his quatrain with a line the reverse of flattering:

Et l'on a fait deux cimetières!

Environment as the Principal Factor in Tuberculosis.—Dr. Henry McHatton (*Sanitarian*, October; from advance sheets of the *Bulletin*), vice-president of the third American Congress of Tuberculosis, in a paper read before that congress calls attention to the fact that prior to 1860, tuberculosis was very rare among the negroes of the South. The author speaks from practical experience, having himself been born and lived on plantations in the South, and in Cuba, and states that until he was twenty-three years of age, he never saw a tuberculous negro. This state of things he attributes to the hygienic environment of the negroes in those days. The plantations "were to all intents and purposes isolated communities of from one hundred to five hundred inhabitants. The negro quarters were invariably placed in the healthiest available spot, the houses usually consisted of two rooms and were never overcrowded, each room had its open fireplace, and fuel was abundant—thus the best ventilation was secured all the year around. There was ample air space between the houses, and the quarters always had an abundance of shade trees. On account of the climate, most of the idle time was spent out of doors. Absolute cleanliness was enforced in and around the quarters. Each house, whether of wood or brick, had its coat of whitewash inside and out, three or four times a year, and oftener if any disease threatened. Communication between plantations was not encouraged, and when any disease became prevalent, absolutely prohibited. The water supply was always a source of solicitude, and the best obtainable secured. All innocent amusements, so dear to the heart of the African, were not only permitted but encouraged. Dissipation of all types was prohibited, and under the existing conditions this prohibition could be easily enforced. There was no mental solicitude, no competition in the ordinary sense, and no care for the future. Work was never excessive, always in the best hygienic surroundings and of the healthiest type, also in proportion to the age, strength and sex of the individual. Food was cooked in the plantation kitchen, abundant, nutritious and well prepared. Clothing was always sufficient and in accordance with the season. As soon as a woman was over her lying-in period, the infant was transferred to the nursery, where it was only nursed at regular intervals, and fed according to its age. Each negro reported in the morning, sick or well; if sick, he went to the infirmary. The doctor visited each plantation once or twice a week, and was called in any emergency. Thus each negro was under constant medical supervision."

With the reversed conditions of to-day, hard work, inadequate clothing, poor food, poor houses, overcrowding in insalubrious localities, scant wages, dissipation, etc., the negroes are among the most tuberculous of people. It is nothing unusual to see entire families wiped out by the disease.

Another instance quoted is that of the members of ten families of the Spanish nobility who migrated from Spain to Trujillo, on the Caribbean Sea, about 1700, to escape extinction by tuberculosis, working their way to the Pacific slope, where they have since lived purely pastoral lives. The physique and endurance of the men and the beauty and virtue of the women struck the author especially. Yet they

have kept themselves the purest Spanish strain in America, never marrying with their neighbors but intermarrying among themselves. In contrast to this he gives the following history of a family of five children, ranging from fifteen up, all tuberculous. Father and mother physically perfect. Paternal grandfather, eighty-two years of age, goes to his work daily at 4 a. m. Grandmother, eighty years of age, does her own housework and keeps no servant. Two aunts over forty-five years, healthy. Maternal grandfather, eighty-three years, farmer. Maternal grandmother died young of an acute disease. No other children on the maternal side; a remarkably good family history. All of these people, excepting the children in question, have led and are leading healthy and active lives. The father in early married life was placed in easy financial circumstances, built himself a modern house and brought up his children in the usual modern manner: Balls, parties, most assiduous avoidance of all vicissitudes of the weather, late to bed, late to rise, nervous system overcultivated at the expense of the physical, no rational exercise, no duties to perform; in fact, the complete history of such children so familiar to us; no known source of infection, excepting such as all city dwellers are exposed to daily. From these data, the author, "Is [not] tuberculosis a disease of environment then considers that the question forces itself upon only?"

Nugæ Medicæ Veterum.—The verse published in our issue for November 29th, p. 968, resembles in sentiment one attributed to Cordus, in the sixteenth century, of which the following are versions:

- (1) Three faces the Physician hath;
First as an Angel he,
When he is sought; next when he helps
A God he seems to be;
And best of all, when he had made
The Sicke, diseased well
And asks his guerdon, then he seems
An oughly Fiend of Hell.
- (2) The Physician like an angel seems
When he in the sick-room brightly beams,
And like unto a god is he
When he's removed the malady.
But in a different light we view
The doctor when his bill is due;
Our alter'd eyes we at him level
As though he were the very devil.
- (3) Three faces wears the doctor; when first
sought.
An angel's—and a god's, the cure half
wrought;
But when, that cure complete, he seeks his
fee
The devil looks less terrible than he.

The Antiquity of Yeast Therapeutics.—*Janus* for December 15th, in view of the recent reintroduction of yeast into the therapeutics of leucorrhœa, diabetes, etc., calls attention to the fact that Hippocrates speaks on three occasions of its use as an irrigation in gynæcology when mixed with water; and Dioscorides also states that yeast is an astringent, and that applied to the genitalia it prevents leucorrhœa.

The New York Medical Journal

A Weekly Review of Medicine

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SATURDAY, JANUARY 31, 1903.

WHOLE. No. 1261.

Special Articles.

THE TREATMENT OF ACUTE SEPTICÆMIA BY THE INTRAVENOUS INFUSION OF A SOLUTION OF FORMALDEHYDE WITH REPORT OF A CASE.

By CHARLES CLIFFORD BARROWS, M. D.,
NEW YORK.

Intravascular antiseptis naturally appeals to the mind of every scientific observer of septic conditions of the blood. The attempts to make use of some germicide that, when introduced into the blood, would successfully destroy the tubercle bacillus in the lung are doubtless familiar to most physicians. In such cases, however, the basis of the experimentation has been the destruction of the bacillus in the pulmonary tissue. How much more strongly, then, does this idea appeal to one, *i. e.*, in cases of acute septicæmia dependent, as certainly a large proportion of them do depend, upon the presence of streptococci in the blood, to introduce directly into the circulation a germicide that will remove the exciting cause of the conditions present, either by destroying the germs or by neutralizing the disastrous results of the toxins which they are believed to produce, or by both! In the application of any such plan of treatment as this, the first and absolutely essential problem to successful scientific investigation is the determination of the presence of the microorganisms in the blood. This can only be done by careful blood cultures carried on under proper scientific conditions.

It is a well established fact that the presence of streptococci in the blood is indicative of general septic infection, acute or chronic. After the presence of these microorganisms in the blood has been satisfactorily established, the selection of some agent that will destroy them and not injure the patient is next to be considered. That such conditions as these can be satisfied by the introduction into the general circulation of a solution of formaldehyde of a proper strength for the destruction of the pathogenic germs without injury to the patient, the writer of this paper is prepared to believe. This

belief is based upon deductions derived from experiments upon animals in his own hands and in those of others, as well as experiments upon human beings in the hands of other investigators, and also upon its successful application in at least one case, which is reported below. The induction of acute septicæmia in the lower animals (such as can be procured and used for scientific purposes) by streptococcal infection is so difficult and uncertain, and when produced fatal results follow so very promptly, that investigation in this line requires much time and patience. Such experiments are being carried on in the laboratory of the Cornell University Medical College, and the writer hopes at a later date to be able to give their course and results in full. Certain experiments on horses said to be the victims of general streptococcal infection have been reported to the writer, but are not quoted because of lack of scientific detail. It would seem that if the reports of the blood examinations are correct, there is to be found here a fine field for investigation. The experiments for the determination of the safety of the patients into whom infusions are made and the harmlessness of the infusions are absolutely satisfactory.

It is a well established fact that solutions of formaldehyde in dilutions of even so little strength as 1 to 250,000 are satisfactory germicides, and in the application of the remedy in the one successful case quoted, the writer attempted to bring about a condition which would represent in the blood of the patient a proportion of say 1 to 50,000. Professor Ewing, of Cornell University, has reproduced for him these conditions in rabbits, the results of which are as follows:

Rabbit No. 1, weight four pounds, injection of 15 c. c., 1 to 5,000 salt solution of formalin, making proportion of 1 to 50,000 formalin in whole amount of blood. No harmful effect was produced on the rabbit and no morphological changes took place in the red blood cells.

Rabbit No. 2, weight three pounds, seven ounces, injection of 20 c. c. salt solution of formalin, making proportion of formalin in whole blood 1 to 40,000. No deleterious effects on rabbit and no morphological changes in red blood cells.

Rabbit No. 3, 20 c. c. of formalin, 1 to 2,500 in distilled water, proportion of formalin in whole blood 1 to 20,000. The animal appeared drowsy for two hours, but no other symptoms appeared. No morphological changes in red blood cells. It

must be noticed that distilled water was used in this solution, instead of normal saline solution.

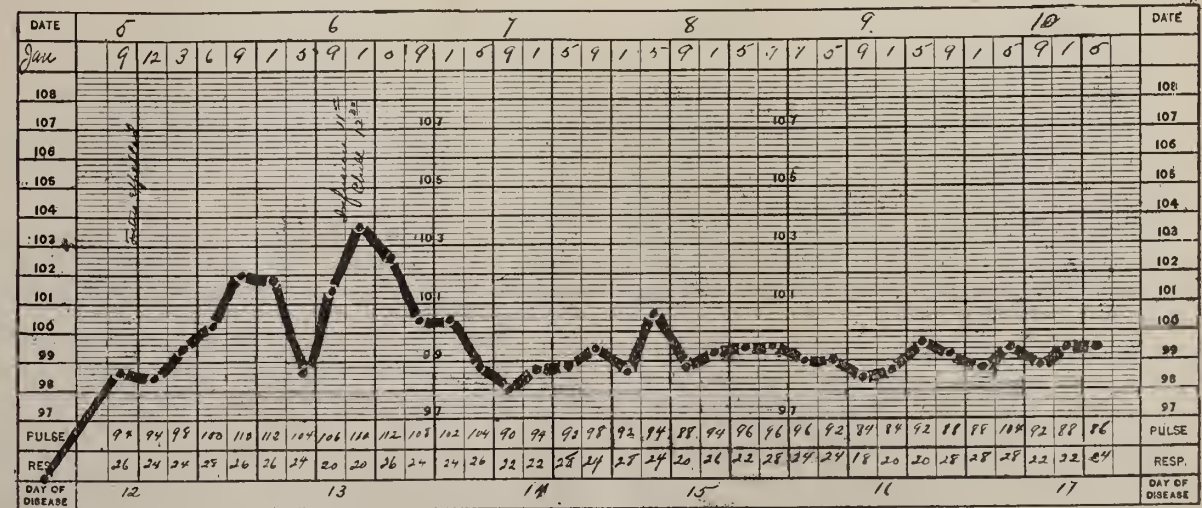
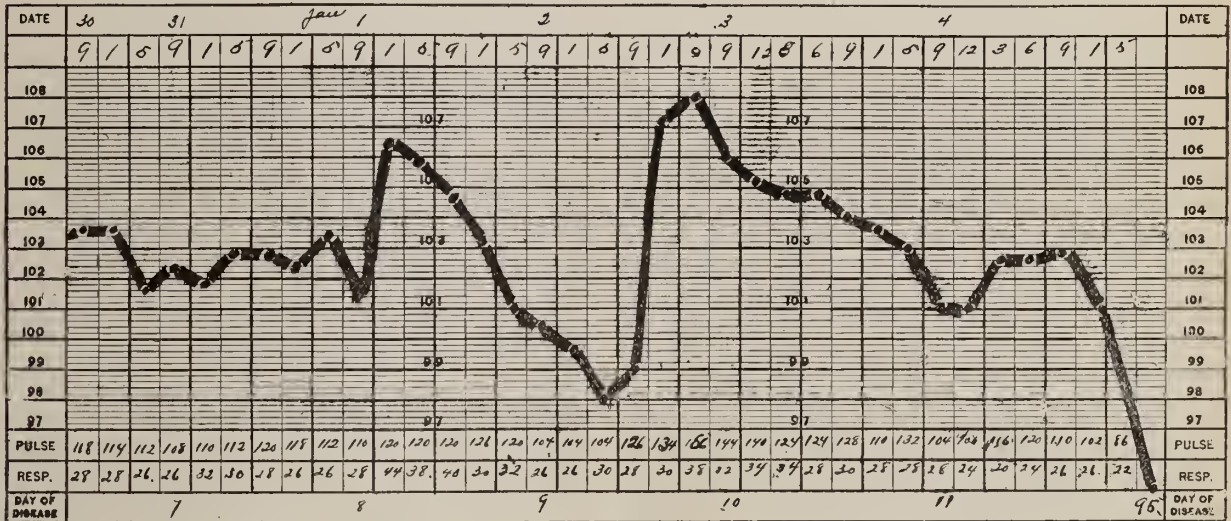
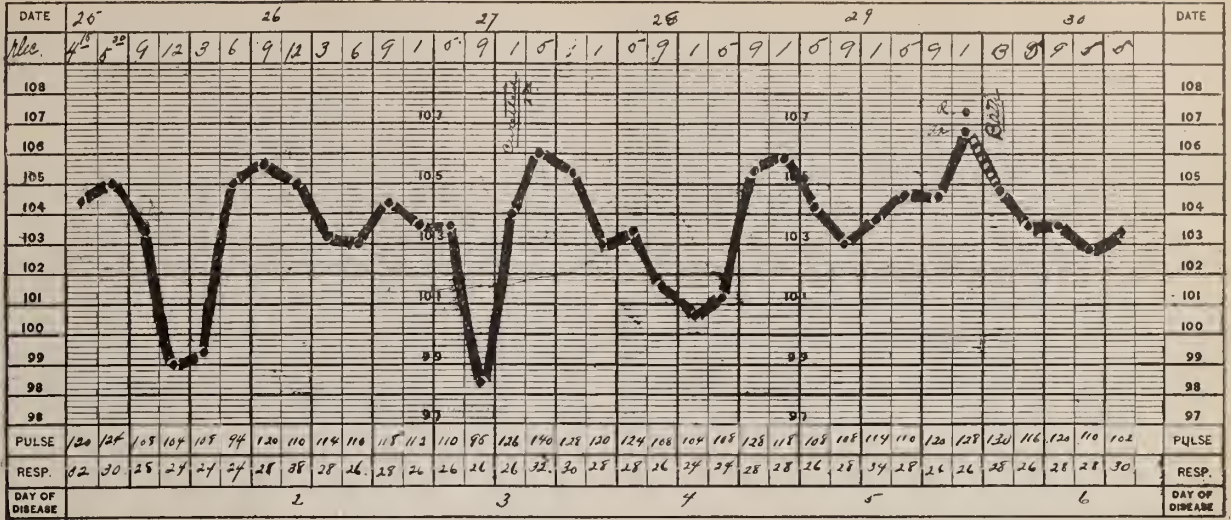
Other experiments of the same character have been made, and in no instance has any damage been done to the animal or have any morphological changes taken place in the blood cells. But even of greater interest and more positive proof of the possibility of injecting into the blood solutions of formaldehyde of very much greater strength are the experiments made by Dr. R. Maguire, of London, England, on animals and patients and on himself, and described in a paper read as the Harveian Lecture for 1900, on The Prognosis and Treatment of Pulmonary Tuberculosis. These lectures were contained in the London *Lancet* for December, 1900. In this paper Dr. Maguire relates in detail a series of experiments upon animals and also upon himself, from which he concluded that it was perfectly safe to put into the general circulation 50 c. c. of a 1 to 2,000 solution of formaldehyde gas; or, if we reduce this to a basis of formalin, 50 c. c. of a 1 to 800 solution. This in a normal adult gave no evidence of blood changes as shown by the blood or urine.

The liberty of quoting from Dr. Maguire's paper is taken, and it can readily be seen by reference to the article that his experiments were made with a view to the determination as to whether the febrile reaction which occurred after the infusion of solutions of nuclein or diastase was due to these substances or to the formaldehyde which was used to sterilize the solutions. He injected in rabbits and afterward in patients a 1 to 250,000, and then a 1 to 100,000, solution of formaldehyde. He then says: "Let it suffice to say that I at last reached a solution of 1 to 2,000 of pure formaldehyde gas. One morning at 11 o'clock, I asked my house physician, Dr. Van Praagh, to inject 100 c. c. of a 1 to 2,000 solution of formaldehyde in a vein of my arm. I wished to ascertain whether the aldehyde passed out of the kidneys as such, and in about an hour it was detected in the urine by the rosaniline test. Incidentally, however, it appeared that albumin was present, but no blood coloring matter, and that the urine was very acid. In about another hour all these conditions had disappeared. A few days later Dr. Van Praagh injected into my arm, and at rather a quick rate, 263 c. c. of a 1 to 2,000 solution (= 1 to 800 formalin). We only stopped the injection because our stock of solution was exhausted, though I certainly experienced a great deal of cramplike pain in the arm and a curious nervous uneasiness in the thorax, and especially in the cardiac area. Immediately I passed urine which was copiously loaded with blood. Many red blood corpuscles were found in the urine, but not so many

as would be expected from the amount of blood-coloring matter present. On the next day all urinary changes had disappeared. It was here a question as to whether the bad results were due to the formaldehyde or to the volume of fluid injected, so four days later I determined to have a solution of 1 to 1,000 (= 1 to 400 formalin) injected. This is really, as I found afterward, a caustic solution, and I could not bear the injection of more than 63 c. c. The injection was stopped because of the severe cramplike pains and faintness." From these experiments, he concluded that the maximum strength of formaldehyde to be injected was 1 to 2,000 (= 1 to 800 formalin) and the maximum quantity 50 c. c. for an adult.

From other experiments Dr. Maguire concluded that formaldehyde in the dilution of 1 to 200,000 was a very efficient germicide. So that it seems quite beyond controversy that such solutions as were used by the writer in the treatment of his case can be employed with perfect safety to the patient. It is also a well established fact that a saline solution resembling the blood serum in its percentage of salt can be introduced safely in almost unlimited quantity into the veins, provided, of course, the infusion into the vein be made carefully and slowly so as not to embarrass the right heart. With these facts so clearly established and with the absolute failure of serum therapy in such cases, it would seem that intravenous infusion of formalin in acute streptococcic infection of the blood holds out a fair hope of success. The case in question was as follows:

The patient, a negress, of slight frame, twenty-six years old and married, was admitted to Ward 22, Bellevue Hospital, on December 25, 1902. She was in labor and at the time of her admission was having a chill. Her temperature was 104.2° F., her pulse was 124, and she was breathing at the rate of 30 per minute. There was a fetid, bloody discharge from the vagina. She was delivered at six o'clock on the following morning of a macerated, decomposed female foetus of about six months' growth. After delivery of the secundines the patient was given an intrauterine injection of a 1 to 10,000 solution of bichloride of mercury. One hour after delivery, at 7 a. m., she had a severe chill accompanied by a rise of temperature from 99.4° at 3 a. m. to 105° at 7 a. m. At 2 p. m. the same afternoon her uterus was irrigated with hydrogen peroxide followed by two quarts of normal saline solution. A considerable quantity of clots and shreds of tissue was obtained as a result of the douche. She was then transferred to the Gynecological Service, Ward 23, where she was curetted on December 27th, and a large amount of decomposed membranes and placental tissue removed. She then showed signs and symptoms of pronounced general sepsis. On December 25th, the day of her admission, a microscopi-



Temperature Charts Covering Dr. Barrows's Case of Septicæmia Treated with Formaldehyde.

cal examination of the blood was made, which showed the absence of malarial organisms and a leucocytosis of 18,000. On December 30th, a blood culture was taken by Dr. Buxton in four flasks of bouillon, which gave a pure culture of streptococcus. At this time her urine showed albumin to a considerable extent, but no casts. The patient was seen by the writer then for the first time. Her temperature was 108° , her pulse 150 to 160, small and thready, and her respiration 38. She was in a low muttering delirium. There were present absolutely no local signs or symptoms, and from all external appearances the patient was rapidly approaching death from a profound general sepsis. She was at once given an intravenous infusion of 500 c. c. of a 1 to 5,000 aqueous solution of formalin. In three hours her temperature had fallen to 105° , and in six hours it had fallen to 101° , her pulse being 104 and her respiration 28. For three hours the temperature remained at 101° , when it gradually began to rise until it reached 103° , her pulse having risen to 120. It remained at 103° for three hours, when it plunged downward, until in three hours the thermometer registered by the rectum only 95° . The pulse had then fallen to 86 and the respiration to 22. In twelve hours the temperature had reached 102° , and the pulse 110. It then dropped to normal, but rapidly rose to 103° , although the pulse did not go higher than 112. Although a second blood culture had been taken, there had not been time for a report, so it was decided to give her a second infusion, 750 c. c. of the same solution being then given her. There was a slight chill without a further rise of temperature, which in the course of twelve hours fell to normal, where it has practically been since. The woman is up and about the ward, and from all appearances is entirely well. Several blood cultures have been made, and none taken since the first infusion have shown any streptococci. Frequent microscopical examinations of the blood have been made, and no changes have been found in the red corpuscles. The albumin in the urine has cleared up, and no blood has appeared in this secretion.

In suggesting this treatment for acute general streptococcus infection, the writer wishes to impress upon his readers that the value of the procedure depends, as one may readily see, on its being correctly and scientifically applied. He wishes to warn the profession against its indiscriminate use where proper blood cultures have not been made. Of course, this suggestion presupposes the proper adoption of all surgical measures which may be indicated in each individual case.

It is also suggested that normal salt solution be used for the formalin solution, as it has been found that no change takes place in the formaldehyde in this solution. Although no harm has been done to the blood cells by the infusion of formalin in distilled water, theoretically the normal salt solution is to be preferred.

Original Communications.

RECTAL FISTULA CURABLE WITHOUT OPERATION.

By A. ROSE, M. D.,
NEW YORK.

For reasons which will appear later, I wish to report the following case, early though it be.

CASE.—I. A., thirty-four years of age. Dancing master. Married; father of three children. Family history good. General condition fair. Active, industrious man; has, in spite of great suffering, worked very hard to support his family and aged and infirm relatives. He came to my office December 29, 1902, to be treated for fistula in ano. Had been suffering from constipation as long as he could remember. When twenty-two years of age he became afflicted with hæmorrhoids and these have given him trouble ever since. When the piles protruded he used to reduce them by means of a damp, hot cloth. In June, 1902, he noticed a discharge in the anal region. Before this discharge was noticed, and ever since, defecation was exceedingly painful, and there was always considerable straining. A bearing down pain would sometimes last for from six to seven hours, no matter what position he assumed—sitting, standing, or even lying down. There was also experienced a peculiar trouble on urinating; as soon as the desire to urinate made itself felt, the patient had to seek quickly a place of security, because with the desire to micturate ended all control over the sphincter vesicæ.

The patient was so nervous that he dreaded examination, and I had to promise not to cause any pain. I found a fistulous opening posteriorly and within an inch from the anal margin near the median line, from which there was some discharge. As the opening was very small, I inserted a probe with great care, so as to cause as little pain as possible, but did not pass it through the whole length of the sinus, because I had promised to cause no pain. The history and the appearance, however, convinced me that I had to deal with a complete rectal, or if you prefer it, anal fistula. I advised operation, as colleagues, who had seen the patient before me, had also done.

After the patient had left my office it came to my mind to try the application of carbonic acid gas, first, to make sure that there was communication with the rectum; and secondly, to see what effect the gas would produce when passed through the sinus.

Twenty years ago I had demonstrated *urbi et orbi* that carbonic acid gas applied to inflamed mucous surfaces of the rectum, vagina, or nose, was an ideal remedy, and all my experience during the two decades since passed has confirmed my observation more and more. Although I have published all I have noticed in regard to this method of treatment from time to time in different journals, in different countries, and in different languages, and although I have asked many professional friends personally to give the method a trial, I have as yet heard neither a single affirmation nor a single contradiction of my experience. I may, perhaps, be excused

for this digression; it may serve to illustrate how difficult it is to introduce a novel idea, unless it comes in the shape of a new operation, *e. g.*, for floating kidney.

What suggested to my mind the trial of carbonic acid gas was the fact that in this case of fistula was repeated one special condition observed exactly three years ago: A lady suffering from a complication of diseases had resorted to morphine injections, some days as much as sixteen grains being administered in this way. Carbonic acid gas inflation of the rectum was practised, and this put an end to the administration of morphine in any shape, except on one occasion a few hours after a capital operation; at least for months while I had charge of the case, no morphine was taken. The case was published in the *New York Medical Journal* for February 24, 1900. I refer to it only on account of one special feature in the treatment: there were many abscesses on the surface of the body where the needle had been used, and they healed only reluctantly under antiseptic treatment. At the patient's own suggestion (she was a highly refined lady who had herself read the treatise of Demarquay on the effect of carbonic acid on ulcers) the gas current was turned on these abscesses and into these cavities, and it was remarkable how promptly they healed. All this having crossed my mind, I called back my patient.

On December 30, 1902, I passed a current of gas through the external opening. There was no other pain but that caused by the insertion of the nozzle of a common dropper which I had attached to the rubber tube conducting the gas. The irritation of the external orifice caused by the insertion of the dropper caused a slight hæmorrhage—perhaps one drop of blood. Except for this, the application of the gas gave rather a pleasant sensation. It passed through the sinus into the rectum, filling the bowel up to its full capacity and causing thereby the agreeable sensation of warmth that is noticed when the gas is introduced directly into the rectum.

December 31st. The patient spoke in most enthusiastic terms of the relief experienced. He felt like a new man. There was no discharge; the parts around the fistulous opening were, indeed, perfectly dry, which they had never been since June. The bowels had moved freely and there had been no pain on defecation. From that time to the present there has never been any abnormal condition on micturition. The soreness of the tissues around the fistula had disappeared. Only a little blood from the granulations on inserting the nozzle.

January 1, 1903. Gas applied. There had been no pain or straining with defecation.

January 2nd. Gas applied. He had passed hard fecal matter, straining at the beginning of defecation; but by no means to be compared in severity with what he had experienced formerly. Before the gas treatment he had been unable to clean himself after stool except by dashing water over the anus, the parts were so sensitive; now he could use toilet paper. No blood on inserting the nozzle. From the first application the sinus began to close, and with the third, very little, if any, gas passed into the rectum.

January 3rd. No discharge from fistula. Pa-

tient had had difficulty with piles. Fæces had been hard. Piles protruding. Rectal cone, to reduce the hæmorrhoids; compound licorice powder to soften fæces.

January 5th. The application of the gas current into what was left of the sinus brought away a plug of thick, yellow pus the size of half a pea, or less. It was demonstrated to-day that no gas entered the rectum.

January 6th. Had had considerable pain on defecation. Bowels had been very loose, diarrhœa-like, the result of the licorice powder. The pain was felt at the outlet of the former fistula. There was some thin matter and some thick, from the rest of the sinus. Absolutely no pain any more, except during defecation.

January 7th. No evacuation of bowels. Fistula closed.

January 8th. Hard stools; great straining, but without pain.

January 9th and 10th. Gas has been applied daily to the fistula since January 1st, up to the present date, when it will no longer enter. The rectum is now to be inflated daily, with carbonic acid gas, to heal the internal ulceration, if such is present. Regulation of stool by means of compound licorice powder. Rectal cone to reduce the hæmorrhoids.

I confess I have not had the opportunity to make a thorough examination of the rectum, either digitally, or by means of the speculum or proctoscope, but for practical purposes I may arrive at the exact diagnosis *ex juvantibus*. It appears to be a case in which hæmorrhoids became ulcerated; this ulceration caused abscess and the abscess caused the fistula.

January 12th. I have to-day seen this patient who describes his present condition as one of Elysium compared with the past. Formerly, he was unable to sit down long enough for his meals; his agony was very great, and he had suffered thus for years. Now he has no pain whatever, on defecation or otherwise. His bowels move painlessly once or twice a day. He is still taking the licorice powder, and inflating the rectum, but the rectal cone has not been since applied, as the hæmorrhoids have given him no further trouble. I advised him, however, to continue its use to reduce the hæmorrhoids. *The fistula is completely and entirely closed and healed.*

January 22nd. All these days patient has been free from pain, bowels have moved regularly. Digital examination revealed considerably enlarged but soft, almost fluctuating prostate. Upon inquiry I learned of a gonorrhœa that the patient had had twelve years ago. Ordered introduction of rectal cone with warm water passing through it several times a day.

January 27th. No more trace of fistula but cicatrix. The introduction of the rectal cone had been difficult, on account of a resistance (by the prostate), the bowels had been inclined to constipation, and defecation was sometimes painful. Urine passed into two glasses furnishes conclusive evidence of prostatitis; the one in the first glass being turbid to a high degree, the one in the second perfectly clear.

I present this case to the profession at large at this early time, because it demonstrates that we can heal a fistula by means of the application of carbonic acid gas, and I believe, judging from what we know about its physiological action, that the fistula will be closed, that is, healed permanently, when the causes which produced it are removed; in this case, in all probability, the cause was ulceration of the rectum.

I also publish this case at this early date for another reason. I am loath to go any more before societies and demonstrate my experiences and methods, for fear that the experience of the last twenty years should be repeated. One specialist whom I begged to try carbonic acid gas in cases of ulceration of the rectum, said to me, "It causes pain." Another said, "I do not believe in it." In a certain medical society, one colleague depreciated my repeated references to carbonic acid gas treatment as a "fad." I hope that this publication will effect a change so far as to induce some to try carbonic acid gas in the treatment of fistula. I am by no means alone in my experience as to the apathy and indifference with which new methods in therapeutics, freely and openly communicated, are received. Better men than I, with more important observations, have had an experience similar to my own.

126 EAST TWENTY-NINTH STREET.

REPORT OF A CASE OF INTESTINAL OBSTRUCTION DUE TO MECKEL'S DIVERTICULUM.*

By J. S. PRICE, M. D.,
BEAUMONT, TEXAS.

Not unlike its analogue, the vermiform appendix, we find quite a number of conditions dependent upon Meckel's diverticulum, calling for surgical relief—in fact, this organ is responsible for twenty-two per cent. of all cases of acute intestinal obstruction resulting from bands and adhesions.

A. E. Halstead states in the *Medical Record* that persistent omphalomesenteric remains may produce symptoms in a number of ways, depending upon their degrees of completeness. Of the pathological conditions arising from these remains, the most important are:

- (1) Intestinal obstruction, either acute or chronic.
- (2) A free diverticulum—that is, one attached to the intestine alone—may descend into a hernial sac, and then, by its presence, complicate this condition.
- (3) The intestine above an attached patent diverticulum may become invaginated into the diverticulum, or its mucous membrane may become prolapsed, forming a tumor at the umbilicus.

(4) When, as in the most complete form of this defect, the diverticulum forms a tube opening freely at the umbilicus, we have a fæcal umbilical fistula.

(5) Cysts of a diverticulum origin are at times formed in the abdominal wall in the vicinity of the umbilicus or intraperitoneally, either connected or disconnected with the intestine. Those that develop in the abdominal wall are usually præperitoneal or subcutaneous within or near the umbilical scar.

(6) In addition to these cystic tumors, solid adenoid growths are occasionally found about the umbilicus, which are no doubt related in their origin to remains of the vitelline duct. These have been termed by Lannelongue "diverticular adenoid tumors."

(7) A Meckel's diverticulum may become the seat of an acute or chronic inflammation. Acute inflammation may lead to perforation with local or general septic peritonitis. When the inflammatory process is chronic, thickening of the diverticular walls, with circumscribed peritonitis, as in chronic inflammation of the appendix and gall bladder, may result.

CASE.—The case that I shall mention presented the usual symptom of acute intestinal obstruction—the vomiting and pain being accounted for by indiscretion in eating. The patient, a negro woman, aged about forty years, was seen by Dr. J. Gober, of this city about twelve hours before operation. Prior to his visit some medical man had been in attendance for three days, thus making four days from initial symptoms, during which time she was vomiting more or less stercoraceous matter—no movement from the bowels.

We decided upon operative procedure as soon as the case was reported, and, with the usual surroundings in a negro cabin we did the work. The abdomen was opened near the outer border of the right rectus, where we immediately came upon the trouble, consisting of a loop of ileum about fifteen inches in length; this was caught by the diverticulum, which was about three inches in length and extended up to the umbilicus. The gut was gangrenous in three or four places, and as soon as it was liberated an attempt was made at repair.

The usual technique of guarding the abdominal cavity from infection, by gauze packing, was observed during our manipulations. The knuckle of strangulated gut was very much distended and our efforts to repair it were unavailing, in consequence of the contents of the upper bowel rushing through the acute angle in which it was held in the abdominal wound, rendering it impossible for our sutures to hold. Hoping to relieve the pressure, a hypodermic needle was thrust through an area around which a purse-string suture was thrown, but we were compelled to enlarge the opening with a bistoury, allowing about a quart of liquid fæces to escape into a basin, thus rendering the further steps in repair a matter of ease.

The gangrenous areas were inverted under a

* Read at a recent meeting of the South Texas Medical Association.

double tier of running Lembert sutures, followed by a thorough flushing with hot water, under which the gut resumed its normal color from the returning circulation. After replacing the intestine, we carefully surrounded it with iodoform gauze, the ends of which were allowed to escape from the belly wound, which was left entirely open. The patient was returned to bed with a pulse of 130, temperature 100° F., respiration not recorded. Ten hours after operation, a high enema of a quart of water, containing half an ounce of spirit of turpentine, induced a very fair action, and thenceforward her bowels moved regularly. Temperature and pulse became normal after the third day and the further course was uneventful.

The points of interest are the recovery under such liberties as were taken in opening the gut, the exposure of the field of operation to the intestinal contents, the length of time allowed to elapse before surgical intervention, which was accomplished under the difficulties encountered in the effort to observe ordinary cleanliness in a negro cabin.

The favorable outcome was undoubtedly due to the open method of treatment.

Finally, the outcome of the case teaches us that we should have the courage to operate on such cases, let the surroundings for cleanliness be never so mean, for by so doing we may save a life.

FOURTEEN CASES OF SMALLPOX FROM THE BUFFALO EPIDEMIC OF

1901-1902.*

By D. E. WHEELER, M. D.,
BUFFALO.

The type of smallpox prevalent in Buffalo during the years 1901-1902 has been very mild. Of 409 cases reported up to the time of writing, only six have ended fatally. One of the patients, an infant, died before the appearance of the rash, and the diagnosis was therefore doubtful.

Secondary fever has usually been absent. The patients as a rule have suffered very little from malaise or muscular prostration. With the primary fever there has been considerable pain, and most of the patients have been confined to bed. However, with the appearance of the rash the constitutional symptoms generally disappeared, and one might often see a patient exhibiting a profuse variola rash and yet suffering from no subjective symptoms except pruritus and photophobia. In the severer confluent and semiconfluent cases this was not so, although even then muscular prostration was not so severe as the condition of the patient would seem to demand.

Most of the cases have been among the Poles, especially those under five years of age—the school age. These children form the only large class of

unvaccinated people in Buffalo. Their parents had for the most part been small farmers in the old country, where vaccination is compulsory, and are a rugged, hardy race. The unwillingness of the Poles to have small children vaccinated was carried to preposterous lengths. It was no uncommon thing to have people living next door to a case of smallpox refuse vaccination for their children, and these unvaccinated children as often as not escaped the disease. If, however, smallpox affected one member of a family, all the unvaccinated members of it usually became infected.

The bulk of the cases came from the Polish quarter, a district less than a mile square, but two small Polish colonies widely separated from this district furnished each a number of cases, not only from among the Poles forming these colonies, but from among their non-Polish neighbors. There were also of course a few scattered cases which could not be traced to infection from the Poles. No cases developed in the neighborhood of the smallpox hospital, although there are quite a number of houses near it.

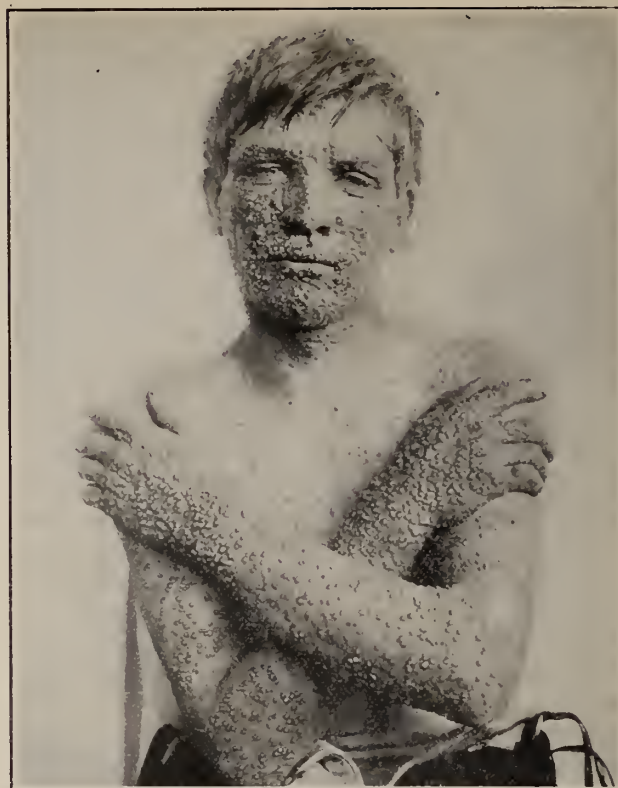
Of the 409 cases reported, a vaccination history has been recorded in 374. Of the subjects of these, 295 were never vaccinated. Sixty-nine, or 18.4 per cent., profess to have been vaccinated, by no means all of them successfully or within seven years. Eighteen are stated not to have been successfully vaccinated; two are stated to have been successfully vaccinated. Of the remaining 49, there is no statement as to whether their vaccination was successful or unsuccessful. Of the 49 of whom no statement is made as to the success of their vaccination, the time of vaccination is given in all but five. Fourteen were vaccinated more than seven years before infection and fourteen after infection, during the period of incubation. Eighteen, or 4.8 per cent., of the patients with a vaccination history professed to have been vaccinated during the protective period, some of them presumably unsuccessfully. There is only one case reported in this epidemic of smallpox in a person successfully vaccinated more than once. This was a very mild case of varioloid with no constitutional symptoms and no permanent pits.

The lymph preferred by the board of health vaccinators was that supplied by the National Vaccine Co. This was first tried on account of the convenient way in which it is put up. Its action was closely watched, to see if it gave as good results as the lymphs previously used. Its action was found to be uniform and under its use the number of bad arms was very materially diminished. The percentage of "takes" was fully as large as with any preparation used, and the pocks formed regularly desiccated and healing took place under the scabs, thus saving the time devoted, before the use of this prep-

* Read before the Buffalo Academy of Medicine, May 20, 1902.



Smallpox Eruption. Case I. Fig. 1.



Smallpox Eruption. Case I. Fig. 2.



Smallpox Eruption. Case I. Fig. 3.



Smallpox Eruption. Case I. Fig. 4.



Smallpox Eruption. Case I. Fig. 5.



Smallpox Eruption. Case II. Fig. 2.

aration, to dressing those ulcers occasionally left after vaccination. The test of this lymph was a severe one, not only on account of the large number of vaccinations done, but also because in house to house work proper cleanliness in vaccination was usually found to be impossible. In spite of its lesser reaction, the protection afforded by this preparation seems fully as great as that afforded by any lymph.

The fourteen patients whose pictures illustrate this paper were photographed at the Buffalo Quarantine Hospital during the spring of 1902.

CASE I.—F. R., a man, twenty-one years old, single, Pole. Residence, in infected district, never vaccinated. On February 5, 1902, there were two patients with smallpox removed from the house in which he lived. They had been ill about two weeks. On February 13th this patient was taken sick. The photographs were made on the seventh day of the disease, during the pustular stage. He had no secondary fever. The patient made a good recovery, although his convalescence was prolonged by an abscess of the calf of the leg.



Smallpox Eruption. Case II. Fig. 1.



Smallpox Eruption. Case III.



Smallpox Eruption. Case IV. Fig. 1.

This case illustrated the typical distribution of smallpox lesions. They are thick on the face, on the extremities, and on and about the mucous membranes. As in chicken pox, the mouth is usually affected, but, unlike chicken pox, the eruption is usually sparse or absent on the hairy scalp. The eruption is scanty on the trunk, especially in front.



Smallpox Eruption. Case IV. Fig. 2-b.



Smallpox Eruption, Case IV. Fig. 2-a.



Smallpox Eruption. Case IV. Fig. 3.



Smallpox Eruption. Case V.

CASE II.—W. J., a boy, two years and a half old, a Pole. Residence, in infected district. Never vaccinated. This patient's was the fourth of seven cases developing almost simultaneously in the same house.



Smallpox Eruption. Case VI. Fig. 1.

The photographs were taken during the pustular stage, on the eighth day of the disease. The patient made a good and uncomplicated recovery and was scarcely at all pitted.

CASE III.—M. E., a man, twenty-four years old, single, a German, factory hand; residence, outside the smallpox district. Never vaccinated. No history of exposure to smallpox. Photographed on the eighth day of his illness, in the pustular stage. This patient made an uninterrupted and rapid recovery.

The day following the discovery of the case, which was promptly reported, all his fellow-workmen, 250 in number, were vaccinated, and no other case developed in the factory or in the neighborhood of his residence.

CASE IV.—L. D., a man, twenty-five years old, Irish; residence, outside the smallpox district.

Past History: Professes to have been vaccinated in childhood, but shows no scar. Typical history of



Smallpox Eruption. Case VI. Fig. 2.

syphilis contracted one year before infection with smallpox. He had been under specific treatment and had had no eruption for some months.

Habits: Alcoholic. Patient somewhat cachectic, either from alcohol or syphilis, and shows decided alcoholic tremor.

Present Illness: On February 10th he saw a child with smallpox at a saloon where he was drinking. He was much frightened, but not sufficiently so to be revaccinated. On February 19th he was taken sick with symptoms indicating a febrile movement. On February 22d went to a hospital. At this time he had a papular eruption. It was at once diagnosticated as that of smallpox, and he was isolated. Very shortly after this he presented the sudaminal variety of eruption, a rare type sometimes found in the vesicular stage of smallpox.

The first photographs of this patient (Figs. 1 and 2) were taken on February 25th, in the vesiculopus-

tular stage, six days after the onset of the disease. At this time the lesions were small, but did not present the pinhead size of their earlier sudaminal type. The photograph shown in Fig. 3 was taken on March 7th, on the seventeenth day of the disease, when desiccation was well advanced except for the bullæ on the hands.

The patient's recovery was delayed by a large number of abscesses on his back. His general condition during convalescence was improved by the use of potassium iodide.

Fig. 2 illustrates the lesions on the palms of the hands, a characteristic position. In typical cases the soles of the feet are also affected.

CASE V.—L. O., a lad, seventeen years old, of



Smallpox Eruption. Case VII. Fig. 1.

Irish-Italian parentage; residence, outside the smallpox district. Professes to have been vaccinated in childhood, but shows no scar.

This patient and the preceding one slept in the same bed on February 18th, the day before the preceding patient was taken ill. They were close friends and often borrowed each other's clothing. This patient was taken sick on March 2nd, twelve days after sleeping with his chum and eight days after the latter went to the hospital.

He was photographed in the pustular stage, on the ninth day of the disease. He had secondary fever, but made an uncomplicated recovery. His two brothers caught smallpox from him.

An ointment applied to his face just before he was photographed partly obscures the lesions.

CASE VI.—J. O., a boy, fourteen years old, single, Irish-Italian; residence, outside the smallpox district.

This patient is the brother of the preceding one and the third in the family to contract smallpox. He was taken ill on March 21st, nineteen days after the occurrence of the first case in this family.

He was photographed on March 29th, on the ninth day of his illness. The eruption was very plentiful in the mouth, causing profuse salivation. The constant dribble of saliva accounts for the attitude assumed in Fig. 2. Although he had considerable secondary fever, he made an uninterrupted recovery.

CASE VII.—S. H., a girl, eleven years old, Eng-



Smallpox Eruption. Case VII. Fig. 2.

lish; residence, on a short street in the centre of a Polish colony which yielded about thirty cases of smallpox. Next door was a house containing five cases of variola. She was never vaccinated. These photographs were taken on March 7th, on what was said to be the ninth day of the disease. Desiccation was well advanced except on the hands and feet, where, as usual, the lesions were most persistent. On March 29th, when the patient was discharged from the hospital, there were only three pits which looked as if they would leave permanent scars.

Fig. 1 shows the characteristic distribution of smallpox—thick on the face and extremities, especially the hands and feet, but sparse on the trunk.



Smallpox Eruption. Case VIII.

The eyelashes were gummed together with scabs, so that the child had to tip up her head to see horizontally.

CASE VIII.—J. H., a boy, English, brother of the preceding patient. Never vaccinated until March 3d, at least four days after exposure.

On March 11th he had a chill; pulse 120; vaccination vesicular with no local inflammation severe enough to account for the marked constitutional reaction.

On March 13th he was free from constitutional

symptoms. There were a few scattered papules on the arms and macules on the feet.

On March 18th he escaped from quarantine and attended a sensational play then being produced at a local theatre. I have not been able to learn of anyone in the audience contracting smallpox.

On March 19th he walked three miles to the quarantine hospital. He was photographed the same day. The four or five pustules on the arms show but poorly in the photograph, but to palpation and inspection they were characteristic, and there is no doubt the case was one of variola complicated by vaccinia. I have seen several such cases. In most of them the variola eruption was more plentiful than in the present case.

This patient was discharged, cured, on March 30th, after an illness of nineteen days. There were no depressed scars, although there were pigmented spots



Smallpox Eruption, Case X.

where the pustules had been, as is always the case in smallpox.

CASE IX.—F. K., a lad, nineteen years old, single, Pole, barkeeper; residence, just opposite that of the preceding patient and on the same street. Never vaccinated.

Photographed on March 7th, on the eighth day of the disease, in the pustular stage. The case was complicated by delirium tremens.

Discharged April 1st, cured. The face and hands were marked with depressed scars, apparently permanent.

The brother of this patient, a boy sixteen years old, escaped smallpox, although he professed never to have been vaccinated, and showed no scar on March 29th, four weeks after exposure, when he was examined and vaccinated. His father was re-vaccinated at the same time. Both vaccinations took and with unusual severity.

CASE X.—L. T., a girl, eleven years old, Pole; residence, in the same block as the preceding patient. Never vaccinated. This patient made an uninter-



Smallpox Eruption, Case IX.



Smallpox Eruption, Case XI.



Smallpox Eruption, Case XIV, Fig. 1.



Fig. 1. Fig. 2.
Smallpox Eruption. Case XII.



Smallpox Eruption. Case XIII.



Smallpox Eruption, Case XIV, Fig. 2.

rupted recovery and was not permanently marked.

The photograph was taken in the pustular stage, on March 19th, when the child had been sick six days.

CASE XI.—C. S., a man, thirty years old, married, Pole; never vaccinated; residence, in the smallpox district. There were five cases of smallpox in the house from which this patient was removed. For eleven days prior to his illness he had lived in the same room with a smallpox patient.

The photograph was taken on March 10th, in the



Smallpox Eruption, Case XIV, Fig. 3.

pustular stage, on the seventh day of the disease. He had secondary fever at the time. The patient made an uninterrupted recovery.

CASE XII.—H. B., a girl, aged one year, Pole; residence, in the infected district. Never vaccinated.

This child was a cousin of the preceding patient, and the families saw much of each other. This was the second and last case in the house, following the first by five days.

The photographs were taken on March 26th, in the pustular stage, on the sixth day of the disease.



Smallpox Eruption, Case XIV, Fig. 4.

The child made a good recovery.

CASE XIII.—H. E., a man, single, German, steel worker; residence, outside the infected district. Never vaccinated. No history of exposure to variola.

The photograph was taken five days after the first appearance of the rash, in the pustular stage.

Over the metacarpophalangeal joint of the left forefinger the patient has an old crescentic scar. Along this scar the pustules were grouped thick and the scar tissue was swollen and reddened. The patient made a good recovery.

CASE XIV.—Mrs. H., eighteen years old, English; residence, outside the infected district. Never vaccinated. No history of exposure to smallpox.

On March 1st the patient was taken ill. On March 2d she aborted at the second month. At the time she ascribed her constitutional symptoms to this cause. An eruption came out soon afterward, and the case was diagnosed as smallpox.

The photographs were taken on the seventh day of the disease, in the pustular stage. The patient made a good recovery.

In closing, I wish to thank Dr. O'Hara, of the Quarantine Hospital, in whose care these patients were and through whose courtesy I obtained access to them. I also wish to thank Dr. Greene and Dr. Clark, of the board of health, under whom I was working as public vaccinator when the material for this paper was collected.

Correspondence.

LETTER FROM CAIRO.

The Egyptian Medical Congress (continued).

CAIRO, December 27, 1902.

The work of the first Egyptian Medical Congress was divided into three sections, *viz.*, the Section in Internal Pathology, the Section in Surgery, and the Section in Ophthalmology.

The diseases around which the greatest interest centred were, bilharziasis, pellagra, malarial disease, stone in the bladder, ankylostomiasis, and dysentery. There were several papers on yellow fever, but apparently no interest was taken in this subject, probably because yellow fever does not occur here. The disease which was most talked and written about was bilharziasis. Considering the great importance of this disease to Egypt and the frequency with which it occurs here, a brief résumé of this disease may not be out of place here.

It is caused by the *Bilharzia hamatobia*, discovered by Professor Bilharz. Its principal habitat is the portal vein. The organism is unisexual. The male measures from 5 to 12 mm. in length. The sexual organs of the male and female are distinct. Fecundation takes place in the capillaries of the portal vein. The eggs are then carried to the kid-

neys, uterus, bladder, etc., also to other portions of the body, but the disease is much more common in the genitourinary organs. It is most common among the inhabitants of lower Egypt. The duration of life of the organism in the human body is unknown. Change of residence to another country usually causes the symptoms to disappear, but on one's return to Egypt the disease again manifests itself. Ninety per cent. of the cases occur in men, ten per cent. in women. The parasite is introduced into the human body in different ways. It may enter either by the gastrointestinal route, owing to eggs often being present in the drinking water, or it may pass directly through the skin. In the vesical form of the disease the eggs are generally found in the few drops of blood that are passed at the end of urination. Usually described as occurring in two forms, the light and the severe. The first form does not require surgical treatment. The second form gives rise to abscesses, tumors, fistulæ, etc., which require surgical interference. The symptoms are those of abscess, fistula, tumor, etc., in various portions and organs of the body. It is a very common cause of vesical calculi in Egypt, because the débris from the broken down tissue which occurs in the bladder serves as a nucleus around which the stone forms. The diagnosis rests upon finding the organism. No specific medical treatment has yet been found. The treatment is symptomatic and consists in the administration of the extract of male fern, salol, santal, and alkaline mineral water in abundance. In cases of severe hæmorrhage it is sometimes necessary to use the tincture of the chloride of iron.

Considering the manner in which the cholera has been raging in Egypt, it would seem natural that there should have been considerable matter on this subject brought before the congress. That such was not the case is probably due to the fact that the medical men are practically united on the manner in which the disease should be managed. The recent epidemic showed that the disease was practically conveyed only by water. An order was issued prohibiting the use of well water. This order was made effective by supplying the people with water that was known to be free from cholera germs. In the villages artesian wells were sunk in order to get pure water. There are numerous instances to show that the cholera disappeared in many places where the water supply was changed. In such houses as the cholera appeared in the patients were immediately taken to isolation hospitals. The floors and the walls of the infected houses to a height of about five feet were washed with lime water. Where steam disinfection was not available, all fabrics were boiled. All containers of liquids, which consist

among the natives almost entirely of pottery, were broken and new ones issued in their stead. The patients themselves were treated symptomatically. Nothing new was tried which gave better results than remedies used in previous epidemics. Citric and hydrochloric acids were found to give as good results as anything else.

One of the most important facts, presented for the first time at this congress, was the demonstration by Professor Loos, of the Cairo School of Medicine, that the organism of ankylostomiasis actually could enter the body through the skin. Another contribution, considered important by Egyptian medical men, was the paper by Dr. Stiles, of the United States Public Health and Marine Hospital Service, which showed that the disease was much more common in the United States than was generally known. He also showed the unsoundness of Bentley's theory that ground itch was the initial symptom of ankylostomiasis.

There were a number of papers on malarial disease. The subject was a favorite one with the Italian delegates especially. Although the discussions were long and frequent, nothing especially new was brought out.

Below follows a brief résumé of the more important papers read before the congress.

Section in Internal Pathology.—

1. Recent Experiences of the United States Army with regard to Sanitation of Yellow Fever in the Tropics, by Major W. G. Gorgas. This paper was read by title only, but will be published in the general report of the congress.

2. The Presence of the Typhoid Bacilli in the Blood; New Method of Detecting them, by Dr. J. Courmont, of Lyons. Courmont maintains that the typhoid bacilli may be found in from twenty-four to forty-eight hours after their entrance into the body. This test, he says, is much superior to Widal's because the diagnosis can be made so much earlier.

3. The Cholera Epidemic in Egypt; Prophylaxis and Means to Combat it, by Dr. Bitter, of Cairo. Comparison between the last two epidemics showed, he said, that in the recent epidemic the mortality was lessened. The improvement was credited to the fact that the country generally was in a much better condition hygienically speaking, than in previous epidemics. The epidemic was fought from a scientific standpoint, *viz.*, from the standpoint of infected water. The greatest obstacle in combating an epidemic lay in the fact that so many cases were unreported. It was almost impossible to enforce an order requiring the registration of deaths, because in numerous villages many of the men who rendered medical aid were only barbers. Also there was

great difficulty in not having proper means in the smaller towns for disinfecting.

4. Ankylostomiasis Duodenalis; Life History, with Microscopical Preparations, by Professor Loos. The principal object of this paper was to show that the organism of this disease could enter the body through the skin. One author proved this in two ways: 1. A culture of the ankylostoma was mixed with charcoal, and this mixture was placed on the skin of a dog. No scarification or friction was employed. In a definite period of time the dog showed the symptoms of the disease, and on post mortem the typical lesions were found as well as the organism. 2. Professor Loos contracted the disease himself, the organism gaining entrance through the skin on the back of his hand. He also showed numerous microscopical specimens in which the organisms had penetrated to various depths of the skin.

5. Uncinariasis (ankylostomiasis) in the United States, by Dr. Stiles, of the Public Health and Marine Hospital Service, read by Assistant Surgeon V. G. Heiser. The great amount of anæmia found in the southern portion of the United States, especially in Georgia and Florida, suggested the idea that it might be due to ankylostomiasis. Surgeon-general Wyman sent Dr. Stiles to make an investigation, which resulted in his discovering that the disease was very prevalent. The cause was found to be a distinct and previously unrecognized hook worm which he named the *Uncinaria Americana*. The localities in which the people were found who suffered from the anæmia were always those of the sand districts, while the malarial anæmias were found almost exclusively in the clay or mixed clay and sand districts. This was attributed to the fact that the anopheles found few breeding places in the sand, because it took a firmer soil to retain water, particularly in the depressions constituted by hoof prints, etc. On the whole it was found that where the drainage was good very little or no malaria might be found, but very often many cases of uncinariasis would be found in such localities. As for Bentley's view that ground itch was the initial symptom of the disease, it did not seem to be borne out by the observed facts, at any rate, in America. In the hundreds of cases of uncinariasis the author had seen in cattle, he did not remember ever having seen any symptoms of ground itch. The observer admitted that he did not look particularly for this symptom, but if it was as common as Bentley stated, he did not see how he could have overlooked it. Then, again, it had been alleged that ground itch was confined entirely to the lower extremities. Physicians in Georgia and Florida maintained that ground itch often occurred in other

portions of the body. In uncinariasis it was also shown that whenever an injury or solution of continuity took place in the skin which was produced mechanically, it was very slow to heal.

6. Dysentery, by Dr. Kartoulis, of Alexandria. It was the general opinion expressed on all sides that this was the most important paper recently written on this subject. The striking statements were that hepatic abscess took place only in the tropical form of the disease, and that whenever abscesses formed in the liver the attending physician was to blame. The author stated that all cases properly treated should show no grave secondary symptoms. He treated his cases with rectal injections of tannin. He stated that other reliable observers got good results with injections of quinine, chloral hydrate or carbolic acid. He also used sodium salicylate internally. He maintained that he could prove uniform good results by hundreds of cases he had treated.

7. Researches on the Influence of Vegetable Albumin in the Elimination of Sugar in Cases of Grave Diabetes, by Dr. Schuman Leclercq, of Carlsbad. Eight patients of the Strangers' Hospital, in Carlsbad, suffering with the grave form of diabetes were placed on a strict diet containing 105 grammes of albumin, 100 grammes of fat, and 500 grammes of green vegetables. These patients were kept under observation for periods amounting to three or four weeks, making a total of 165 days. Alternating in periods of four days, animal albumin was given, then vegetable albumin. The total urine for twenty-four hours was collected. The nitrogen was determined by Kjeldahl's method, the acetone by double distillation, the glucose by polarization and titration, and in one case in a series the method of Magnus Levy (oxybutyric acid) was used. A ratio was then established between the sugar eliminated and the absorbed albumin, *viz.*, N: D. Thus among thirty-six periods of comparison, twenty-eight proved absolutely the superiority of vegetable albumin over animal albumin so far as the elimination of sugar was concerned. In addition the patients who followed a diet for three or four weeks which gave them only twenty-nine to thirty-two centigrammes of nitrogen and only thirty to thirty-two calories to the kilogramme of weight, all gained from one to seven pounds in weight, with one exception, notwithstanding that this diet was equivalent to underfeeding, according to the theory of calories. Vegetable albumin was therefore useful in cases of grave diabetes. The vegetable régime had also the advantage of offering the utmost amount of carbohydrates admissible, and at the same time the least possible amount of albumins and calories, which was, according to Kolisch, the result to be

striven for. Kolisch had said that diabetes was an exaggerated splitting up of sugar in the tissues, which ought not to be aggravated by alimentary excitation.

Section in Surgery.—The most important work done in this section was that on the surgery of bilharziasis. The subject is perhaps best summed up in the paper entitled *The Infection of Bilharzia from a Surgical Standpoint*, by Dr. H. Wild, of Cairo. He said that persons not practising among the natives had no idea of the great frequency of the disease. It was found most frequently in the genito-urinary system, particularly in the bladder and urethra. The next seats of election were the anus and rectum. It was very rare in females. It occurred in two forms: 1. the light, or mild, form, characterized in the majority of cases by a burning sensation during micturition, and the presence of blood in the urine, the last drops being usually pure blood in which the eggs were found. The latter were irrefutable proof of the presence of the disease. The symptoms generally disappeared on a change of climate, but recurred on the patient's return. 2. The grave form invaded the lower part of the intestines. It was often mistaken for hæmorrhoids or chronic dysentery. *Fistulæ* were common. In some cases there was ulceration of the skin of various portions of the body. Tumors were sometimes seen in the leg, but were very rare. The treatment in the slight form should be the same as for ordinary cystitis, with salol, urotropin, mineral waters, etc., in connection with general tonic and symptomatic treatment. It was the general opinion that the light form even could not be cured permanently or completely. The treatment for the grave form must be surgical, the indications for interference being the same as in other affections which produced like results. Rectal cases were often temporarily relieved by suppositories of iodoform, ichthyol, or narcotics. The prognosis was always bad. Prophylaxis should be rigorously practised and should consist of signs in street cars, restaurants, churches and other public places, which should explain the danger of drinking or bathing in infected water.

In bilharziasis of the liver it was the generally accepted opinion that puncture was a safe procedure, but it should not be attempted unless recourse could be had at once to hospital facilities. Otherwise the surgery was the same as for other abscesses of that region.

At a meeting held at the Continental Hotel on December 23d it was decided that the Second Egyptian Medical Congress should be held in 1907. The congress was officially closed at the meeting held at the Khedival Opera House, on the morning of December 24th. The president of the congress

thanked the delegates for the interest manifested in the work, etc. A delegate from each country represented made an appropriate reply. Professor Nothnagel then delivered an address on prophylaxis. Among other things, a resolution was also read expressing sorrow over the death of Major Reed, of the United States Army. The resolution was as follows:

The members of the First Congress of Medicine in Egypt learn with the most profound regret of the premature death of Walter Reed, of the Medical Corps of the United States Army.

The brilliant and important part which he took in the discovery that the *stegomyia* mosquito was the only agent which transmitted the organism of yellow fever, thus putting this terrible disease under the control of hygiene, makes his death a cruel loss to humanity.

The Congress consequently decides to express on this occasion its sympathy to the Medical Corps of the United States Army and also to the family of Major Reed.

The Congress decides further to beg the secretary of the Congress to send officially through the proper channels a copy of the resolution to the Surgeon-general of the United States Army and one copy to Mrs. Reed.

After the transaction of some routine business the congress then adjourned *sine die*.

Therapeutical Notes.

Veratrum Viride as an Antitoxic. By A. B. Isham, M. D. (*Medical News*, January 10th).—Dr. Isham believes *veratrum viride* to be an antidote to many poisons. He is in the habit of giving from 15 to 30 drops of Norwood's tincture by hypodermic injection, and considers that, so given, the drug is practically free from danger. Such injections will usually produce very copious perspiration and salivation, retching, and vomiting of bile and mucus. In addition to this, high temperature and pain, if present, will disappear. Nine cases are reported to show the antitoxic virtues claimed for the drug. The first case is one of eclampsia. The woman got 35 drops of *veratrum viride* in the course of one hour: the convulsions soon ceased and a normal labor was followed by a normal puerperium. The second case reported is one of "pneumococcus infection," in which 25 drops of the tincture did away with the infection in about three hours. The fourth case is one of carbolic acid poisoning. This patient got 20 drops of Norwood's tincture, but, there being no response to the drug in half an hour, 15 more drops were given. Some hours later it was shown that the patient had probably swallowed about two ounces of pure carbolic acid. "During the time she was under the influence of the poison the *veratrum viride* procured the evacuation of more than two quarts of bile and

mucus. Without its aid there would unquestionably have been a fatal result." These are the three most brilliant cases. The remainder of the paper is devoted to a discussion of the cases, and to an exposition of the physiological action of veratrum viride.

Rubidium and Ammonium Bromide in Epilepsy.—According to *Merck's Archives* for December the double bromide of rubidium and ammonium has been tried by Dr. Laufenauer (*Revue de thérapeutique*, cxliv, No. 16) in all the clinical varieties of epilepsy; its effect corresponds in general with that of potassium bromide, but in about one third of the cases its sedative action is superior to that of the other bromides. The daily dose varies from 4 to 7 grammes (60 to 105 grains); and the author has found from 4 to 5 grammes (60 to 75 grains) administered at night to have a satisfactory hypnotic and sedative effect. The following formula is recommended:

℞ Rubidium and ammonium bromide....6 grammes (90 grains)

Distilled water 100 grammes (3½ ounces)

Syrup of lemon.....20 grammes (4 drachms)

Every tablespoonful of this mixture contains 0.75 gramme (11¼ grains) of the bromide.

The Morbid Effects of Cold.—The *Journal des Praticiens* for November 29th says that, at the beginning of winter, even before the cold becomes severe, accidents occur. Fatigue, exhaustion, and alcoholism are the principal causes of the small resisting power possessed by the subjects. Death supervenes from pulmonary congestion or syncope. Sometimes another factor comes into play, perhaps in one in five cases, viz., partial congelations, venous thromboses, capillary embolisms in the lungs, or simply the resorption of gangrenous materials. Anasarca is also observed in subjects who recover, an anasarca *a frigore*, without albuminuria, connected with vasomotor paralysis.

The treatment consists in slow and gradual warming, so as to avoid too abrupt reactions and consequent circulatory troubles (overloading of the right heart, congestions, etc.). Frictions with snow or dry rubbings, may be gently practised to the extremities, the patient being placed in a dry but not heated bed (Manquat). A little later, recourse may be had to aromatic frictions:

℞ Balsam of Fioraventi) of each 50 grammes
Camphorated alcohol) (12½ drachms)
Tincture of nux vomica....25 grammes (.375 minims)
M.

Rum grog, scarcely warm, may be administered as soon as the patient can swallow. Sinapisms and dry cupping will combat the pulmonary congestion. The patient should be urged to movement.

In grave cases rhythmical tractions of the tongue, wet cupping, even to free bleeding, 150 grammes (about four or five ounces), will prove useful. Dilatation of the heart may be met with subcutaneous injections of caffeine:

℞ Caffeine.....2.50 grammes (37½ grains)
Sodium benzoate 3 grammes (45 grains)
Distilled water, enough to make 10 c. c. (160 minims).
Three injections daily.

In conditions connected with partial gangrene,

the treatment must be symptomatic. Anasarca *a frigore* is not a grave complication. A milk regimen and rest in bed will set it right. At night the patient must be made to perspire by pilocarpine frictions over the chest:

℞ Pilocarpine nitrate 0.50 grammes (¾ grain)
Petrolatum 50 grammes (1½ ounce)
M. ft. ung.

Cover with cotton and oiled silk. At the end of some hours, when the cotton is impregnated with perspiration, it must be replaced by dry cotton. The next morning give a purgative:

℞ Scammony 0.25 gramme (3¾ grains)
Calomel 0.10 gramme (1½ grain)

M. For one powder. Send two such. To be given with twenty minutes' interval.

On the following day a diuretic:

℞ Oxymel of squill..... 30 grammes (1 ounce)
Spirit of nitrous ether..... 10 grammes (150 minims)
Infusion of juniper berries..100 grammes (3 ounces)
Syrup of five roots..... 50 grammes (1½ ounce)

M. One tablespoonful every hour.

The Treatment of Wounds.—According to the *Journal des praticiens* for December 20th, Schleich considers the bactericidal action of antiseptics offset by their corrosive action on the living tissues of the wound. To obviate this inconvenience he has devised several topical applications that are nutrient to the tissues and but slightly irritating. Here is his method:

1. Peptonized paste:

℞ Dry peptone..... }
Starch..... } of each 15 grammes (½ ounce);
Finely powdered }
zinc oxide..... }
Gum arabic.....30 grammes (1 ounce);
Distilled water.....enough to make a paste;
Lysol.....5 drops.

M.

This is said to be an excellent paste for topical application, nutrient, unirritating, soft at ordinary temperatures, and but little brittle even when dry.

2. Serum paste:

℞ Serum of ox blood.....1,000 parts;
Zinc oxide.....500 parts.

M.

This mixture is dried and reduced to powder, and is used as follows:

℞ Powder of serum and zinc oxide.....100 parts;
Water.....50 parts;
Emulsion of camphor 0.2..... } of each 20 parts.
Peptonic paste..... }

M.

This mixture is the topical application *par excellence*, according to the author, for varicose ulcers. The lysol may be replaced by gomenol.

3. A mercurial paste to replace the Neapolitan ointment in the treatment of syphilis:

℞ Mercurý.....50 parts;
Peptonic paste.....100 parts;
Cacao butter.....15 parts;
Distilled water.....20 parts.

M.

This paste may be applied with an applicator; it can be removed by simple washing with water.

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PROPOSED LEGISLATION CONCERNING NURSES IN THE STATE OF NEW YORK.

The slipshod phraseology of bills drawn for submission to legislative bodies in the United States is getting to be notorious. A flagrant example is one that seems to have been devised by the New York States Nurses' Association, apparently designed with the praiseworthy object of regulating the practice of nursing in the State, but, as is shown by Sylveen V. Nye, in the January number of the *Trained Nurse and Hospital Review*, one that is open to a good deal of adverse criticism, although we cannot agree that the critic in this instance is justified in implying that the bill says: "First, any resident of New York shall be a misdemeanor." The only copy of the bill that we have seen is the one incorporated by the critic in her article, and in that copy we can find no statement of the sort.

However, the critic points out so many faults in the bill that, no matter how good the intentions of its sponsors may have been, we have no hesitation in saying that it ought to be radically revised before being presented to the legislature; otherwise, if it should happen to pass that body and receive the governor's approval, the courts may be sorely puzzled to construe its provisions. But, besides laxity of diction, the bill, as we read it, presents two features that ought to secure its defeat. One of them, mentioned by the critic, is a provision that the Board of Regents of the University of the State of New York shall appoint an examining board consisting of three persons selected from those nominated by the association, although, says the critic,

"the laws of the New York State Nurses' Association provide that the 'number present constitute a quorum for the transaction of business.'" "Therefore," she adds, "three members of the New [York State?] Nurses' Association can meet, nominate themselves and no others, and the board of regents have no power to appoint any other persons. They, therefore, virtually appoint themselves a board of examiners with power almost unlimited." The other feature is that no penalty is prescribed for an infraction of the intent of the bill.

It may or may not be that there is a crying need for the licensing of nurses in the State of New York. In view of their diplomas, their uniforms, their medals, and their careful registration under medical discrimination, we do not think there is, but if the legislature thinks differently, let it at least see to it that legislation on the subject is rational and effective.

THE UNIFICATION PROBLEM IN THE STATE OF NEW YORK.

As we have before intimated, the prospect of a reconciliation between the Medical Society of the State of New York and the New York State Medical Association, as the result of the labors of the conference committees of those two bodies, has not of late seemed bright, so far, at least, as its speedy consummation is concerned. At the annual meeting of the first mentioned organization, held in Albany this week, its conference committee, consisting of Dr. Henry L. Elsner (chairman), Dr. Abraham Jacobi, Dr. Albert Vander Veer, Dr. George Ryerson Fowler, and Dr. Frank Van Fleet, reported progress, recounting its failure, thus far, to come to an agreement with the representatives of the other organization, and giving in detail the correspondence between the two committees and the gist of the proceedings in conference.

It seems that at the outset of the negotiations the association's committee thought it best to limit them to correspondence between the two chairmen. The society's committee, on the other hand, favored actual conference in joint meetings, and they carried their point. But this appears to be the only particular in which they have met with agreement on the part of the other committee. During the whole course of the conference proceedings, both parties

have professed—and doubtless in all sincerity—that they were above all things desirous of unification, but on certain points they have thus far been unable to agree, though each has made notable concessions. On the main question of the union of the two organizations there has been no divergence of view, and the representatives of the association went so far as to offer to amalgamate under the society's corporate title, but with the stipulation that a new charter should be obtained from the legislature for the conjoined body. To consent to this, however, would, in the opinion of the society's committee, terminate its existence of ninety-seven years in order to call a new organization into being. It is quite natural that the society should cling to its past, especially as no sufficient reason for giving it up appears to have been put forward, and as so sound a constitutional lawyer as Judge Andrews gives it as his unqualified opinion that no new legislative action is necessary to accomplish the avowed object of the conference.

The purpose of the proposed amalgamation, is, as everybody knows, the unification of the medical profession of the State, and particularly the cessation of the unnatural estrangement that has existed for the last twenty years between the American Medical Association and the Medical Society of the State of New York. True, this estrangement was brought about by an act of the State society's that bore the semblance of rebellion, but time has essentially changed the national association's attitude toward the point involved, and a spirit of generous indulgence toward the State society has been manifested, but the representatives of the society do not think that this indulgent disposition has yet been definitely enough set forth in official action to justify the society in reversing the action it took twenty years ago. It is quite probable, we think, that sufficiently definite action will be taken at the New Orleans meeting of the American Medical Association, to be held in May, for men prominent in that body have promised to exert their best efforts in that direction. Although the State association has taken action which virtually has discharged its committee and declared the negotiations to be ended, it is still to be hoped that in New Orleans action will be taken that will brighten the present outlook for unification in the State of New York, es-

pecially as the society's committee declare their willingness to be governed by further developments.

MEDICAL RESEARCH AND THE NEWSPAPERS.

The question of medical communications to the lay press is a vexed one, and much can be said on either side. Undoubtedly there are many subjects, particularly personal hygiene and public sanitary measures, on which the public imperatively need enlightenment, and such enlightenment can be afforded them only at the hands of medical men. Shall such communications be signed with the name of the writer or with a pseudonym? If in the former way, the writer is exposed to the inuendo that he is only seeking self-advertisement—a charge which is only too likely to find an echo in the minds of an unthinking laity, even while it reproaches the members of the profession with holding aloof and not taking the public into its confidence as do members of other scientific professions; also an echo with critical members of the medical profession itself. There is, moreover, the further danger that it affords encouragement to a misuse of the privilege by those members of the profession, not an altogether negligible minority, by whom notoriety is mistaken for fame, and to whom anything that will tend to the increase of cash receipts is legitimate enough for their purposes. On the other hand, unless in such press communications some indication is forthcoming as to the standing and reputation of the writer, the statements of men who, if their identity were known, would carry little or no weight, are likely to receive the same credence at the hands of the lay public as those of men of light and leading; while, in matters of opinion and not of ascertained fact, even the profession itself has no means of discriminating as to how much weight may reasonably be attached to the views advanced. While crude authority has no place in science, it is nevertheless true that the opinions of a writer of known skill, learning, and accuracy of statement will carry a weight, and properly so, that is not accorded to those emanating from men more obscure. The views of the latter may be the result of just as great care and information as those of the other, but in the absence of a knowledge of their personality we have no guarantee of the fact.

There can, however, be no doubt that such lucid and easily intelligible communications as that of "Quæstor" in the *New York Times* for Sunday, January 18th, on the subject of animal experimentation, must carry great weight with every thinking man. His description of the various steps of the discovery of diphtheria antitoxine is such that the most ordinarily intelligent mind can scarcely fail to see the absolutely essential dependence thereof on animal experimentation, so unfortunately misnamed vivisection. To make a mere assertion is one thing, to explain in detail and at the same time in "language understood of the people" the how and the why of it, is quite another. One passage is of pregnant importance: "It must be known to you that there is hardly a topic in the world upon which you cannot find eminent men differing. But I do assure you that I know of none where greater unanimity prevails, among those who have from force of knowledge a right to an opinion, than this one. It is admitted that the late Mr. Lawson Tait, an expert surgeon, but in sundry ways recognized as eccentric to the last degree, objected to vivisection. So have various other medical men, quoted by Senator Gallinger. But their aggregate number and weight is, I assure you, trifling as compared with the number and weight recognizing in vivisection a blessing to humanity. When a proportion of ninety-nine men of brains think alike, and a single additional man of brains differs—maybe the latter is right, but the chances are that the latter is just simply a crank." To the opinion of Lawson Tait we have had recently added that of the late Dr. Bigelow, a man in his own sphere undoubtedly of as great weight as Mr. Tait; but the fact remains that, allowing for these and the very few others of approximately equal weight who could be cited on the antivivisection side, and neglecting on both sides the views of the great mass whose knowledge is only secondhand and ordinary, the entire centre of gravity of scientific opinion is immeasurably outside the mass of antivivisection thought.

In the same issue of the *Times* is an editorial note deprecatory in anticipation of the criticism of the medical journals on the lay press for the recent heralding of a new and sure cure for blood poisoning in the intravenous injection of formic aldehyde.

The writer maintains that "not a word would have been printed if the few doctors who knew about the fortunate colored lady's experience had chosen to keep their information to themselves. . . . In other words, the newspapers gave out what the doctors told them, and if any mistake has been made the responsibility should be placed where it belongs." As to this particular case, we are not in a position to know whether this assertion is in accord with facts or not; but we do know that very often the most garbled reports are obtained and published, not only without the knowledge, but in direct defiance of the expressed wishes, of those most concerned. Instances are too numerous to cite, but we may refer to the totally unauthorized and entirely inaccurate reports of Professor Welch's recent Huxley lecture that were cabled across from London to America, and the misrepresentation of Dr. Wyeth's remarks thereon; also to a recent case that came under our own observation in the matter of Professor Lorenz.

To sum up, it is charged against the lay press that by its indiscriminate, premature, and unauthorized publication of medical matters, particularly in the field of research, it does infinite harm to the public at large, to many individuals, to those engaged in earnest research, and to science itself. To the public at large it does an injury because it fills it with a mass of false information, which is easier to inculcate than to eradicate. Public misstatement of all kinds sticks in the minds of many who never catch sight of its subsequent rectification. Better ignorance on ten points, *ceteris paribus*, than false information on one. To the individual it does harm because it raises prematurely unfounded hopes by the publication in glowing colors of merely preliminary results, the verification and actual acceptance of which must stand the test of time. The disappointment thus engendered furnishes a rich field for the charlatan to the injury of both the individual and the community. To the workers at research it does incalculable mischief, because by raising them to an exalted pinnacle of popular estimation on account of results which they themselves do not allege, it makes them suffer unjust depreciation when the ill-founded and unwarranted allegations made on their behalf are discredited. And to science most of all does it do harm, creating an un-

restful attitude and a lack of confidence, the inevitable result of a series of exploded bubbles.

The old way was the true way. The only "public" for scientific investigations is the body of scientists in the respective departments. A knowledge of the results attained step by step by their co-workers is presented to them by their technical journals and properly appraised by them. When final results are attained and accepted, it is time enough to convey the results to the wider public. Premature publicity can serve no public end, because it cannot help the progress of the research one iota; whereas, in the ways indicated, by creating individual disappointment and public distrust and by depreciating and disheartening honest investigators it can and does materially injure and retard such progress.

AN ABSURD MEASURE.

The first fruit of the legislative session at Albany is a bill introduced into the Assembly by Mr. Wemple under the title of "An Act relating to the treatment and care of female patients in hospitals and elsewhere, and for the protection of the honor and morality of such patients." The bill provides that it shall be unlawful for any one to expose the person or body of a female patient, for any purpose other than the performing of an operation necessary for the recovery, or relief from pain, of said female patient. The act further requires that the parents, guardians, or next friends of the patient be notified at least twenty-four hours prior to the operation, and that at least three of such persons be permitted to be present during the operation. In a case of accident the notification may be dispensed with, in which case no person other than immediate relatives or guardians shall be permitted to witness the operation. Lastly, the transgression of the act is made a felony.

The measure belongs to that large class of bills which are introduced "by request," and it will no doubt die quietly of inanition as do the hundreds of similarly silly bills with which the various State legislatures are annually flooded. The absurdity and impracticability of the measure will be self-evident to any one familiar with the practice of medicine.

THE GENERAL NEED OF SIMPLE FIRST AID INSTRUCTION.

According to press reports, a waitress in a restaurant recently bled to death through the bursting of a varicose vein, and died from hæmorrhage, although surrounded by her associates, not one of

whom seems to have had any idea what to do. What could more clearly emphasize the need of general first aid instruction than this death, which could certainly have been prevented by the simplest measures possible? Sound first aid instruction, to replace the unsound and often untrue teaching of so called physiology in the public schools, so far as it relates to the propagation of fads anent alcohol, tobacco, etc., would be a very commendable innovation.

THE BRISTOL BACTERIUM.

How trifling a circumstance may serve to give a name to a newly discovered microorganism is shown by the fact that the name of *Bacterium bristolense* has been bestowed by Klein (*Centralblatt für Bakteriologie, Parasitenkunde und Infektionskrankheiten*, xxxii, 10: *Münchener medicinische Wochenschrift*, November 25th) upon an organism discovered in some rats found dead on a steamer that had arrived at Bristol from Asia Minor. Its characteristics are said to be midway between those of the *Bacterium coli* and those of the *Bacterium lactis aerogenes*.

THE ANTIQUITY OF CASTOR OIL IN MEDICINE.

This household remedy—matchless as a laxative under many circumstances—seems not to have been overlooked in remote antiquity. Victor Loret, of Lyons (*Revue de médecine*, August, 1902; *Münchener medicinische Wochenschrift*, November 25th), reminds us that in the time of Herodotus, 500 years before the Christian era, the plant was industriously cultivated in Egypt, and that Strabo mentions the use of the oil by inunction as common among the lower classes of the Egyptians.

NOMA AND HOSPITAL GANGRENE.

The title of noma to stand as an entity *sui generis* has always seemed to us rather questionable. We are glad to observe, therefore, that Matzenauer (*Archiv für Dermatologie und Syphilis*, lx; *Zentralblatt für Chirurgie*, January 10th), on the strength of histological and bacteriological examinations, regards it as only a variety of hospital gangrene.

THE ARCHIVES OF PÆDIATRICS.

With the January issue this esteemed publication entered upon the twentieth year of its existence. It has always been a strong journal and one calculated to aid the family practitioner materially in his daily work. There are indications that it will not cease to possess this character, and we predict for it the increasing success which it abundantly deserves.

News Items.

Society Meetings for the Coming Week:

MONDAY, February 2nd.—New York Academy of Sciences (Section in Biology); German Medical Society of the City of New York; Morrisania Medical Society, New York (private); Brooklyn Anatomical and Surgical Society (private); Corning, N. Y., Academy of Medicine; Utica, N. Y., Medical Library Association; Boston Society for Medical Observation; St. Alban's, Vt., Medical Association; Providence, R. I., Medical Association; Hartford, Conn., Medical Society; South Pittsburgh, Pa., Medical Society; Chicago Medical Society.

TUESDAY, February 3rd.—New York Neurological Society; Buffalo Academy of Medicine (Section in Surgery); Elmira, N. Y., Academy of Medicine; Ogdensburgh, N. Y., Medical Association; Syracuse, N. Y., Academy of Medicine; Hudson, N. J., County Medical Society (Jersey City); Androscoggin, Me., County Medical Association (Lewiston); Baltimore Academy of Medicine; Medical Society of the University of Maryland (Baltimore).

WEDNESDAY, February 4th.—New York Academy of Medicine (Section in Public Health); Society of Alumni of Bellevue Hospital; Harlem Medical Association of the City of New York; Medical Microscopical Society of Brooklyn; Medical Society of the County of Richmond, N. Y. (New Brighton); Penobscot, Me., County Medical Society (Bangor); Bridgeport, Conn., Medical Association; New York Genitourinary Society.

THURSDAY, February 5th.—New York Academy of Medicine; Brooklyn Surgical Society; Society of Physicians of the Village of Canandaigua, N. Y.; Boston Medico-psychological Association; Obstetrical Society of Philadelphia; United States Naval Medical Society (Washington); Medical Society of City Hospital Alumni, St. Louis; Atlanta Society of Medicine.

FRIDAY, February 6th.—Practitioner's Society of New York (private); Clinical Society of the New York Post-graduate Medical School and Hospital; Manhattan Clinical Society, New York; Baltimore Clinical Society.

SATURDAY, February 7th.—Manhattan Medical and Surgical Society, New York (private); Miller's River, Mass., Medical Society.

A New Serum for Pneumonia.—A new serum for the treatment of pneumonia has been announced to the Royal Academy of Sciences at Rome, by Professor Tizzoni, of the University of Bologna.

A Private Sanitarium Destroyed by Fire.—The River Lawn Sanitarium, Paterson, N. J., was destroyed by fire on the evening of January 23rd. Fortunately all the inmates escaped, though several firemen were injured, one seriously.

The Richmond Academy of Medicine and Surgery held its regular monthly meeting on January 27th. The Mechanics of Mercury in Syphilis was discussed, Dr. Thomas W. Merrell leading the discussion.

In Memory of Dr. Bancroft and Dr. Lemen.—The Denver and Gross College of Medicine and the Denver and Arapahoe Medical societies have each acted upon the deaths of Dr. F. J. Bancroft and Dr. H. A. Lemen in separate resolutions of tribute.

Pencils as Carriers of Infection.—At the instance of the president of the board of health, Mr. Maxwell, superintendent of the schools of the city of New York, has issued instructions that all writ-

ing material, particularly pens and pencils, shall be kept separately, preferably in a manila envelope, so that each child shall handle only its own pens and pencils.

Kansas City Doctors Dine.—Some eighty members of the Alumni Association of the Kansas City Medical College held their annual banquet at the Midland Hotel, Kansas City, on January 20th. Dr. E. M. Allen, of South McAlester, I. T., acting as toast master.

An Unusual Accident.—According to press despatches the revolving glass plate of an electrical apparatus burst recently during the course of an operation and the flying pieces of glass inflicted severe injuries upon the patient who was being operated upon.

Another Bellevue Sensation.—John Santa Rosa, formerly a probationer nurse at Bellevue Hospital, has brought charges of a serious character against nurses with whom he was associated in the hospital. The charges made are being investigated by the superintendent.

Plans for Treatment of Malaria.—The Health Department of the City of New York is making elaborate plans for the prevention and treatment of malarial fever, embracing the isolation of the patients in mosquito-proof booths, and the extermination of mosquitoes.

Hospital and College to Separate.—A petition has been filed for a *pro forma* decree of incorporation for the University Hospital of Kansas City, Mo., with the object of making the University Hospital independent of the University Medical College, to which it is now attached.

A Medical School at the University of Wisconsin will probably be established in the near future. The project is said to have been warmly approved by the authorities of the Chicago University who have been consulted in the matter by some of the physicians of Milwaukee.

A Nurses' Home on North Brother Island.—A four-story brick nurses' home is to be built on the south side of North Brother Island. The size of the building is 70 x 34 feet. W. Wheeler Smith is the architect, and the city of New York is the owner. The estimated cost is \$40,000.

A Quarantine Official Killed.—Dr. John M. Broomall Ward, deputy quarantine physician at the Pennsylvania State Quarantine Station at Marcus Hook, Pa., was killed on January 21st by falling through an open hatchway of a steamer which he had just boarded. Dr. Ward fell a distance of about thirty-five feet into the hold of the steamer. His neck was broken and he died within a few minutes. Dr. Ward was a graduate of the Philadelphia College of Pharmacy and of the Philadelphia Medical College. He was surgeon to the Sixth Pennsylvania Regiment with which he served through the war with Spain.

An Eight Hour Day for Hospital Employees.

—A bill has been introduced in the legislature of Minnesota limiting the number of hours of duty for nurses and hospital attendants in State institutions to eight hours out of the twenty-four.

The Missouri Board of Health held a meeting recently at Jefferson City at which resolutions were adopted approving the work done by the County Board of Health, and commending these boards to the people of the State. Emphasis was laid upon the value of the local boards instructing the laity as regards care of infectious diseases, such as tuberculosis, etc.

The Microbe of Hydrophobia.—Word comes from Milan that Professor Sormagni, of the University of Pavia, has communicated to the medical society there that his investigations have at length resulted in the isolation of the microbe of hydrophobia. If this result should be confirmed, it will complete the work which Pasteur's discoveries have only partially effected.

The Medical Club of Philadelphia.—At the annual session held at Bellevue Hotel, Philadelphia, on January 22d, the following officers were elected: President, Dr. E. E. Montgomery; first vice-president, Dr. R. G. Curtin; second vice-president, Dr. J. C. Biddle; secretary, Dr. Guy Hinsdale. During the year 112 new members were added to the roll, which now numbers 460. The meeting was followed by a banquet.

The Phipps Institute.—A temporary home for the Henry Phipps Institute for the Study, Treatment and Prevention of Tuberculosis, which has been recently endowed by Henry Phipps, the Pittsburgh iron master, is being fitted up in a four-story building at 238 Pine Street, Philadelphia. The building has a frontage of 36 feet and a depth of 140 feet, and it is expected it will be opened for the reception of patients within a fortnight.

Moving for a Hospital in Manila.—A movement has been set on foot looking toward the establishment of a general civil hospital in Manila, and a petition for the establishment of such an institution has been presented to the governor and civil commission. The plans of the Boston City Hospital were included in the petition, it being suggested that the proposed hospital be constructed along similar lines.

A New Tuberculosis Serum.—Dr. Marmorek, of the Paris Pasteur Institute, is said to have succeeded in elaborating a tuberculosis serum of the efficacy of which he has satisfied himself. A report will soon be made by him to the Paris Academy of Science. Nine months are said to have elapsed since Marmorek obtained his serum, but he has kept back his results for confirmatory investigations. It is to be hoped that he will be allowed to bring the matter forward in his own way and time, so that some rational scientific opinion of its value may be had before it is damaged by hysterical press heralding.

Major Ronald Ross Coming to America.—It is stated that Major Ronald Ross, formerly of the Indian Medical Service, now principal of the Liverpool School of Tropical Medicine, well known for his work on the relation of the mosquito to malarial disease, was said by Sir Alfred L. Jones, at a complimentary banquet given to Major Ross recently at Liverpool, to be coming to America to pursue investigations here.

The American Medico-Psychological Association having become affiliated with the Congress of American Physicians and Surgeons, it is obligatory under the Constitution and By-laws of the congress that the association hold its meeting in 1903 and every third year in Washington. The council has therefore instructed the secretary to issue a notice, changing the place of meeting from Providence to Washington, and fixing the dates, May 12th to 15th.

Amalgamation of Medical Societies of Toledo, Ohio.—The medical societies of Toledo, Ohio, have amalgamated into the Academy of Medicine of Toledo and Lucas County. Great efforts are being made to increase the library facilities. It is impossible to overestimate the great value to the profession of medicine of easily accessible facilities for reference in the shape of medical libraries and newsrooms, and any enterprise in this direction is to be commended.

Fifty Thousand Dollars for the College of Physicians of Philadelphia.—It is reported that Andrew Carnegie has promised to give \$50,000 to the College of Physicians of Philadelphia on condition that the same amount be subscribed by others. While no conditions have been imposed as to the method in which the sum is to be expended it is understood that should the required amount be subscribed to make up the \$100,000 the money will be devoted to the improvement of the library. The institution was founded in 1787.

The Philadelphia Bureau of Health to be Merged into the Department of Charities and Corrections.—A bill providing for the consolidation of the Bureau of Health and the Department of Charities and Corrections of the city of Philadelphia has been introduced into the legislature of the State of Pennsylvania. The measure is drawn upon lines suggested by the health authorities of this city and it seems probable that it will become a law. The bill provides for a single director with an assistant instead of the five directors called for under the present law.

St. Louis City Hospital Overcrowded.—The City Hospital of St. Louis has proved inadequate to the demands made upon it, there not being sufficient room for the patients. It is proposed to relieve the situation by renting temporary quarters. Considerable uncertainty exists regarding the validity of certain proposed charter amendments, and it is improbable that any inadequate provision can be made for the erection of a new building until these doubts are cleared by judicial decision.

The Condition of a Rochester Hospital Criticized.—The Grand Jury has made a report concerning the conditions of Hope Hospital in Rochester, which criticizes severely the conditions existing in that institution. In the report of the Grand Jury the fact is recognized that the conditions complained of are in large part due to lack of funds.

Politics in the Health Departments.—It is alleged that the resignations have been demanded in Jersey City of Chief Deputy Health Inspector Edwin P. Hart, M. D., and of Deputy Health Inspector John Stephen Stout, the actual, if not the avowed, motive being that the places are wanted for supporters of the political party now in power. If this is the case it is surely a *reductio ad absurdum* of the health department. Whatever may be the legitimate field of politics, it certainly is not the health department. Competence, and competence alone, should be considered in this matter.

The Legal Registration of Nurses.—A bill is shortly to be introduced at Albany on behalf of the New York State Nurses' Association, to provide for the supervision of all training schools for nurses by the State Board of Regents. It is understood that a minimum course of two years in an incorporated hospital or training school will be a *sine qua non* to the attainment of a diploma. It is hoped by this measure to put a stop to persons posing as trained nurses after a few months' work in private and often ill-qualified sanitariums.

A Change in the Alcoholic Ward at Bellevue.—For many years certain drunkards have looked upon the alcoholic ward at Bellevue as a convenient and economical place in which to sober up after their periodical debauches. An effort is now being made to prevent the abuse of this privilege by bringing charges against patients who repeatedly return to the ward for treatment. Two such patients have recently been brought before a magistrate by the physician in charge, and have been sentenced to six months' imprisonment in the workhouse.

A Vaccinator Convicted of Assault.—Dr. William W. Sanford, employed by the Health Department of the City of Rochester, as a vaccinator, has been convicted in a police court of assault in a case in which he entered a house with a view of vaccinating the inmates, or of inspecting their licenses. The testimony as to the details of the case differs in some essential respects. The complainant charges that when she opened the door a little way the doctor pushed the door open so that she was thrown against the wall with violence. While the doctor was found guilty of assault, judgment was suspended. The justice took occasion to criticize the department for sending as vaccinators men whose duty also involved attendance upon sufferers from smallpox.

The Associated Physicians of Long Island held their fifth annual meeting in the Library Building of the Medical Society of the County of Kings, on January 24th. Papers were read by Dr. G.

Morgan Muron, Dr. William E. Butler, and Dr. Walter B. Chase. The president was instructed to appoint one physician in each county to investigate and report to the association upon the occurrence and the best methods of destroying mosquitoes. Each appointee will be asked to carry on experiments along lines of his own choosing and to report at the next meeting which will take place in June. The following officers were elected: President, Dr. W. H. Ross; first vice-president, Dr. J. P. Valentine; second vice-president, Dr. R. F. Valentine; third vice-president, Dr. W. B. Savage; secretary, Dr. James Carle Hancock; treasurer, Dr. William H. Auger.

Proposed Changes in Public Hospital Administration.—At the thirtieth annual meeting of the State Charities Aid Association, held on January 24th, Homer Folks, one of the Charities Commissioners, referred to several proposed changes in the administration of the municipal hospitals. Among other things he said that it was proposed to establish a new dietary for each institution, specially adapted to the needs of the particular class of patients cared for, as well as to ensure order and system in the food supplies for the employees. The speaker also considered the organization of the medical boards, the frequent changes of those on duty, and the traditionary change in the officers and duties every year, as responsible largely for the failure of the medical service to exercise a due influence on the management and development of the hospitals. In regard to the admission to the civil service in the middle-grade positions in the hospital service, he advocated more frequent examinations as a partial remedy. The clinging to an original list of eligibles had a damaging effect in keeping out new candidates, no matter how promising or well qualified they might be.

Fire at a Smallpox Hospital.—The smallpox hospital at Biddeford, Maine, was destroyed by fire on January 25th. There were thirty-six patients in the hospital at the time. Owing to the severe frost the patients suffered severely. When the fire was discovered some of the patients seized mattresses and dragged them out on the snow, far enough away from the building to be out of danger from the fire, and huddled together upon them. Others wrapped blankets and other bed clothing about themselves and stood shivering in the snow. The first alarm of the fire was given when a smallpox patient kicked in the door of the station and yelled out the facts. It was an hour before the firemen could get to work, and by that time the hospital proper was gone. Both policemen and firemen gave up their outer clothing to protect the patients. The latter were finally cared for in the houses offered by owners as temporary hospitals.

A Fatal Fire at an English Lunatic Asylum.—A terrible fire occurred recently at Colney Hatch Insane Asylum, a few miles out of London, in which it is reported that at least fifty patients, all women, lost their lives. Colney Hatch is one of the most widely known insane asylums. It was founded in 1851, and was fitted for the reception

of between two and three thousand patients. It is reported, however, that it has actually been accommodating considerably over the proper number, and there appear to have been in use some temporary wooden buildings. Among other defects there is said to have been a very inadequate water supply and fire apparatus. The complex locks, moreover, added materially to the difficulty of releasing the unfortunate patients. The lack of sense of the patients, added to by terror, increased the obstacles in the way of the attendants (several hundred in number) in their efforts at rescue. Many lunatics are said to have escaped and to be at large.

Mount Sinai Hospital.—The directors of Mount Sinai Hospital held their annual meeting on January 25th, in the United Hebrew Charities Building, Second Avenue and Twenty-first Street. President Isaac Wallach, in the fiftieth annual report stated that during the fiscal year ended November 30, 1902, 34,879 cases had been treated, and there had been 6,287 applicants for admission and 3,032 patients admitted to Mount Sinai Hospital, making a total of 75,569 patients since the founding of the hospital. The bequests to the hospital for the year amounted to \$85,890, making a total of \$1,366,000 so far contributed, and an additional \$250,000 required to complete the hospital under construction at Lexington Avenue and Sixty-sixth Street. When completed Mount Sinai Hospital will require about \$225,000 a year for its support. At present it carries a list of 3,705 members, which is an increase of 230 over the membership of a year ago. After the reading of the report, a life-size portrait of President Wallach, painted in oil by Francesco Paolo Finocchiaro, was unveiled. The portrait is a present to the hospital by the directors. The presentation was made by Edward Lauterbach. The following officers were elected for the current year: President, Isaac Wallach; vice-president, Isaac Stein; second vice-president, David Wile; treasurer, E. Asiel; secretary, Leo Arnstein; directors, Edward Oppenheimer, Joseph Fox, Joseph Cullman, Adolph Lewisohn, Emil S. Levi, and Jacob Emsheimer.

Official News.

Public Health and Marine-Hospital Service:

Official List of Changes of Station and Duties of Commissioned and Non-commissioned officers of the Public Health and Marine-Hospital Service for the Seven Days ended January 22, 1903:

BAILHACHE, PRESTON H., Surgeon. Leave of absence for thirty days from January 6, 1902, amended so that it shall be for twelve days—January 22, 1903.

AUSTIN, H. W., Surgeon. Leave of absence for three days, under paragraph 179 of the regulations.

GUIERAS, G. M., Passed Assistant Surgeon. Granted leave of absence for seven days, under paragraph 181 of the regulations, from January 19, 1903.

OAKLEY, J. H., Passed Assistant Surgeon. Leave of absence for two days granted by bureau letter of January 13, 1903, revoked—January 20, 1903.

KORN, W. A., Assistant Surgeon. To proceed to Delaware Breakwater Quarantine, and assume temporary charge of the station during the absence, on leave, of Passed Assistant Surgeon C. H. Lavinder—January 17, 1903.

BOGESS, J. S., Assistant Surgeon. Granted leave of absence for four days from January 21 to January 16, 1903.

SAMS, F. F., Acting Assistant Surgeon. Leave of absence for thirty days from January 1, 1903, granted by department letter of January 5th, amended to read thirty days from January 5—January 14, 1903.

Infectious Diseases in New York:

We are indebted to the Sanitary Bureau of the Health Department for the following statement of cases and deaths reported for the two weeks ending January 24, 1903:

DISEASES.	Week end'g Jan. 17		Week end'g Jan. 24.	
	Cases.	Deaths.	Cases.	Deaths.
Typhoid fever.....	64	10	59	5
Scarlet fever.....	158	16	250	17
Cerebro-spinal meningitis.....	0	0	0	0
Measles.....	165	10	158	7
Diphtheria and Croup.....	395	47	391	46
Small-pox.....	2	1	1	0
Tuberculosis.....	248	183	285	168
Chicken-pox.....	64	10	99	0

Naval Intelligence:

Official List of Changes in the Medical Corps of the United States Navy for the week ending January 24th, 1903:

ARNOLD, W. F., Surgeon. Detached from Cavite Naval Station and ordered to Port Isabella, P. I.

BLOCK, W. H. Appointed Acting Assistant Surgeon.

BLACKWELL, B. M., Assistant Surgeon. Assigned to additional duty as a Member of the Board of Examiners for Civil Engineers, New York.

BOGAN, F. M., Assistant Surgeon. Detached from the Naval Hospital, Washington, D. C., and ordered to the Navy Yard, Washington, D. C.

CAMPBELL, R. A., Acting Assistant Surgeon. Ordered to duty with Recruiting Party.

CHAPMAN, R. B., Acting Assistant Surgeon. Ordered to duty with Recruiting Party.

DE BRULER, J. P. Appointed Assistant Surgeon.

DE LANCY, C. H., Assistant Surgeon. Detached from duty with Recruiting Party, and ordered to the Naval Hospital, Norfolk, Va.

FOSTER, T. G. Appointed Acting Assistant Surgeon.

FURLONG, F. M., Passed Assistant Surgeon. Detached from the Recruiting Party, and ordered to the Navy Yard, New York.

GRUNWELL, A. G., Passed Assistant Surgeon. Detached from the Naval Hospital, Norfolk, Va., and ordered to the Naval Hospital, Washington, D. C.

HART, G. G. Appointed Acting Assistant Surgeon.

HOLCOMB, R. C., Passed Assistant Surgeon. Commissioned from December 2, 1902.

JANEY, W. H., Acting Assistant Surgeon. Ordered to the Naval Hospital, Port Royal, S. C.

KAINES, A. W. Appointed Acting Assistant Surgeon.

KERR, D. B., Passed Assistant Surgeon. Detached from Recruiting duty, and ordered to the *Wabash*.

KEENE, W. P., Acting Assistant Surgeon. Ordered to duty with Recruiting Party.

HUNTINGTON, E. O., Passed Assistant Surgeon. Detached from the Navy Yard, New York, and ordered to the *Maine*.

MILLER, J. T., Acting Assistant Surgeon. Ordered to Recruiting duty.

MOORE, A. M., Surgeon. Retired, appointed a member of the Board of Examiners of Civil Engineers, Chicago, Ill.

OMAN, C. M., Assistant Surgeon. Detached from Fort Isabella, P. I., and ordered to the *Frolic*.

PLUMMER, R. W., Passed Assistant Surgeon. Detached from Recruiting duty and ordered to the *Prairie*.

DYKES, J. R. Appointed Acting Assistant Surgeon.

BYRNES, J. C., Surgeon. Appointed a member of the Board of Examiners of Civil Engineers, New York.

Public Health and Marine-Hospital Service Health Reports:

The following cases of smallpox, yellow fever, cholera, and plague were reported to the surgeon-general during the week ending January 24, 1903:

Smallpox—United States.			
Location.	Dates.	Cases.	Deaths.
California—San Francisco	Dec. 28-Jan. 11..	10	
Colorado—Denver	Jan. 3-10	7	
District of Columbia—Washington	Jan. 10-17	2	
Illinois—Chicago	Jan. 10-17	14	
Indiana—Evansville	Jan. 10-17	3	
(2 imported, 1, on river steamer)			
Indiana—South Bend	Jan. 10-17	5	
Kansas—Wichita	Jan. 10-17	1	
Kentucky—Lexington	Jan. 10-17	1	
Kentucky—Louisville	Jan. 14	1	
Louisiana—New Orleans	Jan. 10-17	1	
Maine—Biddeford	Jan. 10-17	15	
Maine—Lewiston	Jan. 10-17	7	
Massachusetts—Boston	Jan. 10-17	15	3
Massachusetts—Cambridge	Jan. 10-17	1	
Massachusetts—Chelsea	Jan. 10-17	1	
Massachusetts—Melrose	Jan. 10-17	1	
Michigan—Grand Rapids	Jan. 10-17	6	
Missouri—St. Louis	Jan. 4-18	31	
Nebraska—Omaha	Jan. 10-17	10	
New Hampshire—Nashua	Jan. 10-17	4	
New Jersey—Camden	Jan. 10-17	3	
New Jersey—Newark	Jan. 10-17	3	1
New Jersey—Plainfield	Jan. 10-17	2	
New York—Buffalo	Jan. 10-17	5	
New York—New York	Jan. 10-17	2	1
Ohio—Cincinnati	Jan. 2-16	22	
Ohio—Cleveland	Jan. 10-17	16	
Ohio—Dayton	Jan. 10-17	4	
Ohio—Hamilton	Jan. 10-17	1	
Pennsylvania—Altoona	Jan. 10-17	1	
Pennsylvania—Erie	Jan. 10-17	4	1
Pennsylvania—Johnstown	Jan. 10-17	8	
Pennsylvania—McKeesport	Jan. 10-17	3	
Pennsylvania—Philadelphia	Jan. 10-17	35	2
Pennsylvania—Pittsburgh	Jan. 10-17	19	3
South Carolina—Charleston	Jan. 3-17	9	
Tennessee—Memphis	Jan. 10-17	4	
Texas—San Antonio	Dec. 1-31	3	
Utah—Salt Lake City	Jan. 3-17	45	1
Virginia—Danville	Jan. 10-17	9	1
Wisconsin—Green Bay	Jan. 11-18	1	
Wisconsin—Milwaukee	Jan. 10-17	13	
Smallpox—Foreign.			
Austria—Prague	Dec. 20-27	5	
Barbados	Dec. 19-Jan. 2.	9	1
Belgium—Antwerp	Dec. 20-27	4	1
Belgium—Brussels	Dec. 20-27	2	
Brazil—Bahia	Dec. 13-27	4	
Canada—Amherstburg	Jan. 10-17	2	
Canary Islands—Las Palmas	Dec. 6-13	2	
Great Britain—Birmingham	Dec. 27-Jan. 3	2	
Great Britain—Leeds	Dec. 27-Jan. 3	7	
Great Britain—Liverpool	Dec. 27-Jan. 3	48	3
Great Britain—London	Dec. 27-Jan. 3	14	
Great Britain—Manchester	Dec. 27-Jan. 3	5	
India—Bombay	Dec. 9-23	10	
India—Madras	Nov. 27-Dec. 12	2	
Italy—Palermo	Dec. 20-27	13	1
Mexico—City of Mexico	Jan. 4-14	4	2
Russia—Moscow	Dec. 13-20	2	
Russia—Odessa	Dec. 20-27	5	2
Russia—St. Petersburg	Dec. 20-27	21	2
Straits Settlements—Singapore	Nov. 8-Dec. 6	12	12
Yellow Fever.			
Colombia—Panama	Dec. 29-Jan. 12..	9	3
Ecuador—Guayaquil	Dec. 20-Jan. 3..	22	6
Mexico—Tampico	Jan. 3-10	9	8
Mexico—Vera Cruz	Jan. 3-17	9	
Cholera—Insular.			
Philippines—Manila	Nov. 16-Dec. 6	154	126
Total to Dec. 9, 4,533 cases and 3,402 deaths.			
Philippines—Provinces	Nov. 16-Dec. 6	1,358	852
Total to Dec. 9, approximate, 117,246 cases and 74,505 deaths.			
Cholera—Foreign.			
Egypt—Alexandria	Dec. 12-26	21	16
India—Bombay	Dec. 9-23	3	
India—Calcutta	Dec. 6-13	35	
Plague—Insular.			
Hawaii—Honolulu	Dec. 31	1	
Plague—Foreign.			
India—Bombay	Dec. 8-23	243	
India—Calcutta	Dec. 6-13	18	
India—Karachi	Dec. 7-14	17	14

Army Intelligence:

Official List of Changes in the Station and Duties of Officers serving in the Medical Department of the United States Army for the week ending January 24th, 1903:

STRAUB, PAUL F., Captain and Assistant Surgeon. Relieved from duty at Fort Crook, Neb., and ordered to proceed to San Francisco, Cal., and report in person

to the Commanding General of the Department of California for transportation to the Philippine Islands. Upon arrival at Manila Captain Straub will report to the Commanding General of the Division of the Philippines for assignment to duty.

TURNBULL, WILFRID, First Lieutenant and Assistant Surgeon. Now in San Francisco, Cal., will proceed to Fort Myer, Va., and report in person to the Commanding Officer for duty.

Births, Marriages, and Deaths.

Married.

DOWNEY—McSHERRY.—In Seattle, Washington, on Wednesday, October 8, 1902, Dr. William St. John Downey and Miss Josephine Louise McSherry, of San Francisco.

RICHARDSON—ATKINSON.—In Rahway, New Jersey, on Monday, January 19th, Mr. George Partridge Richardson and Miss Kathleen Gill Atkinson, daughter of Dr. Jerome Gill Atkinson.

SMITH—MILLER.—In New York City, on Wednesday, January 21st, Dr. Harris Smith and Miss Fannie Sara Miller.

TAYLOR—NELSON.—In Brooklyn, New York, on Wednesday, January 21st, Dr. John Waterman Taylor and Miss Henrietta Nelson.

Died.

CLARK.—In Brooklyn, New York, on Tuesday, January 20th, Dr. Joseph Edwin Clark, in the seventy-ninth year of his age.

HAESLER.—In Pottsville, Pennsylvania, on Thursday, January 22d, Dr. Charles H. Haesler, in the seventy-third year of his age.

HILDRETH.—In Newton, Massachusetts, on Friday, January 22d, Dr. William Hartwell Hildreth, in the fifty-ninth year of his age.

KIERSTED.—In Jersey City, New Jersey, on Friday, January 23d, Dr. Christopher Kiersted, in the eighty-first year of his age.

KAUFMAN.—In Washington, D. C., on Thursday, January 15th, Dr. Harry Marx Kaufman.

OWEN.—In San Bernardino, California, on Monday, January 19th, Dr. R. Otway Owen, of Lynchburg, Virginia, in the thirty-eighth year of his age.

POLLOCK.—In Pittsburg, Pennsylvania, on Tuesday, January 13th, Dr. John Harbin Pollock, of New York, in the thirty-fourth year of his age.

QUIMBY.—In Jersey City, New Jersey, on Tuesday, January 20th, Mrs. Frances H. Quimby, widow of Dr. Isaac N. Quimby.

RALPH.—In New York City, on Tuesday, January 20th, Julian Ralph, son of Dr. Joseph Ralph, in the fiftieth year of his age.

SCOTT.—In Forest, Ontario, on Wednesday, January 21st, Dr. Alexander Scott, in the sixty-second year of his age.

SHEPHERD.—In Oswego, New York, on Sunday, January 25th, Dr. Lucien H. Shepherd, in the thirty-seventh year of his age.

SHUTT.—In Springfield, Illinois, on Saturday, January 24th, Dr. Margaret Taylor Shutt, in the thirty-fifth year of her age.

SPENCER.—In Cambridge, Massachusetts, on Monday, January 19th, Dr. E. Edwin Spencer, in the seventieth year of his age.

STAIR.—In Evansville, Wisconsin, on Saturday, January 17th, Dr. T. F. Stair.

STANTON.—In Syracuse, New York, on Thursday, January 22d, Dr. Margaret Stanton, in the fifty-eighth year of her age.

STONE.—In Garrisonville, Virginia, on Wednesday, January 21st, Dr. Hawkins Stone, in the eighty-seventh year of his age.

WARD.—In Marcus Hook, Pennsylvania, on Wednesday, January 21st, Dr. John M. Broomall Ward, deputy quarantine physician at the State Quarantine Station, in the fortieth year of his age.

Pith of Current Literature.

Hereditary and Congenital Heart Disease.—

Dr. Gioacchino Arnone (*Riforma medica*, November 20th) discusses the various theories that are held concerning the congenital and hereditary factors in the causation of heart lesions. The principle that lesions of the right side of the heart are congenital in character, and lesions of the left side acquired, has been opposed by the writings of a number of modern authors. The studies of embryologists have shown that pathological heredity depends upon teratological changes. A number of cases of heart disease in young persons have been reported, in which, in spite of the most careful examination, nothing could be found in the history or the antecedents of the patient to account for the cardiopathic changes seen. The school of Palermo, which has given to medicine a new pathological condition of the heart known as cardioposis, or Rummo's disease, has also brought forward the family factor in the causation of cardiac lesions. Ferrarini, of Palermo, has published numerous histories of cases in which there was shown a heredity in heart lesions and a coincidence of other anomalies of development, skeletal and musculofibrous. These researches bring out the fact that lesions of the left side of the heart, especially of the mitral valve, may be hereditary. The hereditary theory explains the fact so frequently commented on in clinical writings, that while the slightest attack of rheumatism or the mildest toxæmia suffices to affect the heart of some patients, others go through much more severe attacks of the same maladies without any bad effects upon the heart. In these cases it is probable that the heart valves were predisposed to stenosis by a peculiarity of development which could be traced to foetal life and which depended upon a hereditary tendency to cardiac malformations. The final disease which caused the development of a mitral stenosis should not be considered necessarily as the determining cause of the condition of the heart, but as the exciting cause. The author contributes the outlines of the histories of two families in which heart disease was hereditary, which he offers as additions to the records of eight families collected by Ferrarini. The author believes that any physician who will take the pains to investigate the family history of his heart cases will find numerous examples of such heredity in heart disease. He urges the diagnosis of heart lesions at an early stage in their development, and says that an educated ear can diagnose a beginning mitral stenosis some years before it becomes markedly evident by a murmur. If the pure mitral stenoses are of hereditary origin, and if many acquired stenoses are due principally to an anomaly of intrauterine development followed by an exciting cause acting during extrauterine life, then it must be admitted that congenital heart disease is more frequent on the right side than on the left. It is the duty of the physician to discourage marriages of persons with hereditary taints, and it is his duty to prevent the action of accidental exciting causes in persons who are known to be hereditarily predisposed to heart lesions.

The Value of an Accurate Knowledge of Arterial Blood Pressure to the Clinician. By John Bradford Briggs, M. D., and Henry Wireman Cook, M. D. (*Maryland Medical Journal*, January). —The purpose of the article is to call the attention of the general practitioner to the benefit to be derived from the study of systolic blood pressure by the Riva-Rocci sphygmomanometer. Such a study will prove of the greatest value both as an aid to diagnosis and to intelligent treatment. This sphygmomanometer is the only one so far devised that is of the slightest use for accurate work, and it has another great advantage, viz., simplicity. Without going into the details of its construction we give the general principle of its action. A rubber bag is so fashioned that it can be applied to a person's limb in such a way that by inflating the bag with a force pump the arterial circulation can be cut off. To this bag is connected a simple upright mercury manometer bearing a scale. By this may be read off the air pressure needed in the bag to cut off the arterial pulse in the distal portion of the limb. The manner of employing the instrument is as follows: The rubber bag is fixed in position and the force pump applied; then with a finger on the artery, distally to the bag, the pulse is found and the inflation of the bag is commenced. When the pulse is lost the mercury manometer is read, and the figure given on the scale will be the systolic blood pressure in millimetres of mercury, since manifestly, if the point at which the pulse has been lost is accurately noted, the pressure of air in the bag must equal at that instant the systolic blood pressure in the artery. Of course, the systolic and diastolic pressures may, and do, vary independently of one another to some extent, but any marked variation in the maximum pressure will be a sure indication of a change in the mean pressure in the same direction. This instrument, therefore, makes it possible to use exact methods in the study of blood pressure, and we are no longer forced to use such vague terms as "good" or "high" in describing tension. We may say instead that the pulse tension is 170 or 130 millimetres of mercury. So much for the general principle of this method of studying the pulse. The authors of the paper we abstract have performed a large number of experiments with this machine on patients in the Johns Hopkins Hospital, and some of their conclusions we summarize. There is a marked relationship between intracranial pressure and general arterial tension. All conditions that increase the pressure within the skull, such as tumors, hæmorrhage, depressed fractures, etc., are accompanied by increased pulse tension. This observation has a practical application: "If hæmorrhage has been diagnosed by the general signs and symptoms, the existence of a high and rising blood pressure in the patient is a positive evidence of increasing hæmorrhage, and is in itself a sufficient indication for surgical intervention." Another application of this same principle will enable one to distinguish with some degree of accuracy between uræmia and cerebral hæmorrhage, in a comatose patient with reflexes absent and without localizing signs. There is a limit above which blood pressure does not rise

in nephritis, even when accompanied by a high degree of sclerosis of the vessels. The highest limit ever recorded was 300 millimetres of mercury, while the usual height is 250 millimetres. In intracranial hæmorrhage, on the other hand, the limit is much higher; it soon reaches 300, and readings of 350 are not uncommon. These two examples will serve to show the general scope of this new method in diagnosis. The authors in their paper show its utility in a number of other directions, of which we mention the following: (a) During surgical operations in which shock is to be expected. (b) In the study and treatment of chronic interstitial nephritis. (c) In cases presenting palpitation, irregularities of pulse, respiratory distress, and other symptoms of cardiac failure, and in which it has to be decided whether the case is one of failure of the cardiac muscle or a neurosis peculiar to the patient. (d) In attempting to make an accurate diagnosis between false and true angina pectoris. (e) In cases of suspected thoracic aneurysm in which the unaided finger is unable to distinguish any difference in the radial pulses. Finally, there are many other conditions that will readily suggest themselves in which an accurate knowledge of the blood pressure would be of the greatest value.

The Nomenclature of Malaria: A Suggestion.

By Dr. D. Bruce (*British Medical Journal*, January 3rd).—The author suggests the following nomenclature for the three well-recognized species of malaria:

Malarial Fever.—Synonyms: Ague, intermittent fever, and remittent fever.

(a) Tertian Synonyms: *Hæmamoeba vivax*, simple or benign tertian.

(b) Quartan Synonyms: *Hæmamoeba Golgii*.

(c) Crescent tertian Synonyms: *Laverania laverani æstivoautumnal* fever, malignant tertian, tropical tertian, remittent fever.

Chronic Malaria.—Synonym: Malarial cachexia.

Remarks on the Treatment of Visceral Ptoses.

By J. Madison Taylor, M. D. (*Philadelphia Medical Journal*, January 10th).—Dr. Taylor recommends his method especially in cases of ptoses occurring in neurasthenic patients and persons troubled with obesity or excessive abdominal enlargement. The general treatment of such cases will require measures not strictly called for by the enteroptosis, such as the rest cure, stomach washing, intragastric faradization, etc. It is especially important to regain, if possible, the normal tonicity of the belly muscles. All belts are therefore to be deplored, as they only serve to weaken these muscles. Dr. Taylor does not seem to consider belts as a rule of much service. If used at all, however, belts should be worn only as a temporary measure of relief. The special features of the recommended treatment are a series of exercises devised for the purpose of restoring tone to the abdominal muscles. They fall into three groups: (a) Position. The patient must be taught to stand with the pelvis level, in such a way that it will give good support to the abdominal viscera and not allow them to roll outward over its brim. At the same

time a habit should be acquired of holding in the contents of the abdomen by voluntary effort. (b) Muscular development. This is to be acquired by systematic exercises of the various muscles specially concerned in restraining the abdominal contents. Many of these exercises are described in detail. (c) Restoration of the abdominal organs to their normal position. This the author endeavors to accomplish by placing the patient in a modified Trendelenburg posture and teaching her to make rhythmical contractions with the belly muscles. The abdominal contents will soon be forced back to approximately their normal position. As the patient becomes accustomed to the position it is gradually exaggerated until it becomes the true Trendelenburg, when gravity will materially aid in the reposition of the viscera. "This plan has served me so well that I have little hesitation in promising relief to those who fall into my hands, and in whom the visceral ptoses can be recognized."

SURGERY AND ANATOMY.

A Case of Hæmorrhagic Cyst of the Spleen.—

Dr. Ettore Giuliano (*Riforma medica*, November 21st, 22nd, and 23rd) reports a case of hæmorrhagic cyst of the spleen—a condition which has been described in very few cases, and is therefore very rare indeed. The patient was a man aged thirty-three years, who had been suffering from malarial fever of a quotidian type every spring for the past few years. The spleen became enlarged from the first of these attacks and grew larger with each attack. Finally, he began to feel an acute pain in the tumor, which radiated into the left shoulder and became worse when he exerted himself. The pain became less marked only after prolonged rest in bed, in the left lateral position, or on the dorsal decubitus, but again increased when the patient changed to the right lateral position. An exploratory puncture made by his physician revealed the presence of an orange yellow fluid. The tumor was large, ovoid, with its long axis parallel to that of the body. It reached to the sternum and the median line internally, to the posterior axillary line externally, and was lost in the iliac fossa below. The upper part of the tumor showed fluctuation, and pressure on the lower pole of it caused pain that radiated through the entire mass. An exploratory puncture into the fluctuating portion revealed the presence of bloody chocolate colored fluid. About 160 c. c. of this fluid were removed and under the microscope showed red and white blood cells, and a few undetermined cells in a state of fatty degeneration. After the puncture there was no more fluctuation to be felt, and the tumor diminished considerably in size. At first the patient improved markedly after this puncture, but later he developed general peritonitis. This was not very severe in character, however, and the patient gradually improved until he was discharged with a much smaller tumor than he had when he entered. The pain had disappeared and only a slight sense of weight in the abdomen had remained. His malarial infection was treated with injections of arsenate of iron. The ætiology of hæmorrhagic cysts of the spleen is obscure, but the predisposing elements are the pres-

ence of malarial infection and the occurrence of traumatism. The diagnosis of these cysts presents the difficulties common to all abdominal tumors, and in many cases exploratory puncture is necessary. The prognosis is good if the cysts are treated surgically, but unfavorable if they are left to themselves. The ideal treatment is puncture, but in some cases, when this fails, the spleen must be explored and the cavity emptied and sewed to the parietes and drained. Splenectomy is to be rejected, as *ultima ratio*. Twelve cases reported in literature are briefly abstracted and three other cases are mentioned in this article.

The Treatment of Serous Effusions in the Pleura by Subcutaneous Injections of Pleuritic Fluid. Method of Auto-serumtherapy.—Dr. N. F. Tchigayeff (*Roussky Meditsinsky Viestnik*, November 1st) reports his experience with the method of serum-treatment in serofibrinous pleurisy, which was first suggested by Gilbert in 1894. It consists of the subcutaneous injections of pleuritic fluid obtained from the same patient. In all of Gilbert's cases the exudate was seen to disappear within from six to ten days after a single injection of one cubic centimetre of the pleuritic exudate. In a few instances the injections had to be repeated. Gilbert explained this effect by the presence of a small amount of tuberculin in the serum injected, noting that in pure case of serofibrinous pleurisy, without tuberculosis, there was no effect. A number of observers since then have found that the injections are perfectly harmless. The present author treated eight cases by this method from 1897 to the current year. In none of these were Koch's bacilli found. The operation was performed under observance of strict asepsis with a Jaquet's syringe and the first injection was always given after the microscope had shown that there was no pus in the pleural fluid. The first injections were made in the interscapular region, and later injections in the axillary lines, where the exudate was located. From one to four cubic centimetres was the dose used, varying with the severity of the case. The temperature usually fell after the first injection, but sometimes only after the fourth. The exudate usually began to diminish after the first injections, sometimes after a second. The patients were better subjectively after the injections, and the quantity of urine rapidly increased after each dose. The exudates were removed in about two weeks on the average, the earlier the injections had been given, the sooner they were absorbed.

The Simulation of Intestinal Obstruction. By A. Bowlby, F. R. C. S. (*British Medical Journal*, January 3rd).—In cases of internal strangulation, as opposed to those of external hernia, the symptoms are much more rapid in their onset, and symptoms of peritonitis and septic poisoning are early present. It is the peritonitis which complicates internal obstruction that so often renders an exact diagnosis impossible. Thus, it happens that peritonitis more frequently simulates mechanical obstruction than does any other affection, the peritonitis being usually due to inflammation of the ap-

pendix. Certain cases of pneumonia and pleurisy also simulate intestinal obstruction and cause abdominal pain, distention, and vomiting. Many of the acute affections of the solid abdominal viscera cause severe and sudden abdominal pain and vomiting; in some cases constipation and flatulence co-exist, so that, to some degree, the cardinal symptoms of intestinal obstruction may be present. Renal colic, gall stone colic, and acute pancreatitis are examples of such affections. The symptoms caused by embolism of the superior mesenteric artery or its branches may simulate obstruction and peritonitis. Functional constipation, where purgatives lose their characteristic action, and acute enteritis are often mistaken for intestinal obstruction. The author is opposed to the foolish and harmful practice of making an exploratory incision in every doubtful case of intestinal obstruction. But when it is decided to open the abdomen, the following points should be borne in mind: (1) Open in the middle line below the umbilicus, because most of the causes of obstruction will be found in the lower half of the abdomen. (2) Examine first the right iliac region, passing from there to the umbilicus, to determine whether there are any adhesions. In this right lower half of the abdomen are found (a) the appendix; (b) intestinal diverticula; (c) the cæcum, which is the commonest site for volvulus; (d) the usual site for the lodgment of an impacted gall stone (the lower end of the ileum); (e) a common place for adhesions due to caseous mesenteric glands; (f) the sites of inguinal, femoral, and obturator hernæ; and (g) it is in the right iliac fossa that undistended intestine will be found, which can be secured and traced upward to the seat of obstruction. (3) Examine next the left iliac region and the pelvic region, especially in women, in whom inflamed ovaries and tubes may be the cause of adhesions. (4) If no cause can be discovered then either open a coil of distended intestine and suture it to the skin, or if the patient can stand it, take the distended bowel out of the abdomen altogether, open and empty it, and suture it. It is only by so doing that it can be returned to the abdominal cavity, and often a deeply-seated obstruction will be revealed.

The Use of Paraffin for Sunken Noses. By S. Paget, F. R. C. S. (*British Medical Journal*, January 3rd).—The author gives the history of this method of treatment: Gersuny first injected paraffin into the scrotum of a man whose testicles had been removed for tuberculous disease, in order to simulate the existence of testicles. Since then, however, the injection of paraffin has gradually become limited to cases of sunken noses. The author has used it in twenty-six cases, with very good results. In only one case did he fail to bring about any improvement; the nose had been flat for fifty years and the skin was very tense and rigid. It is impossible to make a perfect nose, but the patients can be made happy and be able to get married or get work without being suspected of syphilis. The author uses a paraffin of relatively low melting point, 111° to 115° F., Pfannenstiel's paraffin melting at 115° F. is easy to inject, easy to mould, not too hot,

and sets perfectly hard. When paraffin sets, it shrinks, and the hardest paraffin shrinks the most. So that in most cases it is necessary to "touch up" the nose at the end of a week with a few drops more. The author prefers Eckstein's syringe, which is jacketed with India rubber, as is the proximal half of the needle. A general anæsthetic should be given. The average quantity of paraffin required for a badly sunken nose is 7 or 8 c. cm., and it is better to use too little than too much. The needle must be put well under the skin, a little to one side of the middle line, below the point where the bridge ought to be and directed upward. The moulding must be done vigorously and kept up until the paraffin is quite hard. Where the skin is scarred and adherent it may be necessary to use a tenotomy needle. Very hard paraffin becomes encapsulated; soft paraffins are slowly, very slowly, replaced by fibrous tissue.

Redressement in Scoliosis.—Dr. A. Schanz (*Berliner klinische Wochenschrift*, December 1st) says that recent advances in the treatment of scoliosis are dependent upon redressement. This must be preceded by treatment directed toward immobilizing the spine and accustoming the patient to the use of the apparatus for forcible reduction. The author describes an apparatus of his device, immediately after the use of which a plaster jacket is applied, which is renewed after a few days. Massage and gymnastics must form a part of the second division of the treatment. The general results are very good and benefits may accrue even to patients suffering from scoliosis of the second degree.

The Diagnosis and Treatment of Various Forms of Septic Synovitis. By Dr. F. C. Wallis. (*British Medical Journal*, January 3rd).—When a patient has one or more joints swollen, hot, and painful, and has fever, the case is usually considered to be one of rheumatic fever. But cases of septic synovitis may present just three symptoms, and as the treatment of the two affections is widely different, the diagnosis is important. The profuse sweating, almost invariably present in rheumatic fever, is absent in synovitis. Further, the skin is dry, harsh, and unpleasant, and the patients are restless, distressed, and unhappy. The author reports cases of synovitis due to gonorrhœa, influenza, osteomyelitis and streptococcus infection—also a case of pyæmic synovitis. One of the objects of his paper is to show the necessity for early and more effective treatment in certain cases of synovitis, the origin or progress of which in any way suggest sepsis. In uniaxial cases—when, without any adequate known cause, a joint becomes distended with fluid, often associated with a rise of temperature—unless in a very few days improvement takes place, the joint should be opened, washed out, and sewn up. In cases of injury, followed by increasing temperature, great distention, local pain, and general distress, no time should be lost, but the joint should be opened, the fluid, if possible, then and there examined, and the joint should, if necessary, be drained. By this means the septic

fluid is got rid of before much damage has been done, the synovial membrane recovers itself and the movements of the joint are unimpaired. When once the synovial membrane has been overcome and the cartilage eroded, a stiff joint is the best that can be expected. Early incision and washing out will prevent many of these. No harm can happen to the joint when this is properly done, and no joint can be properly washed out through a trocar. An incision sufficiently large to admit the examining finger should be made, in order that the condition of the cartilage and membrane may be felt.

The Malignancy of Joint Tuberculosis, Illustrated by a Series of Forty-seven Cases. By Charles F. Painter, M. D. (*Boston Medical and Surgical Journal*, January 8th).—The author calls malignant those cases of joint tuberculosis in which recurrence takes place after a longer or shorter period. Such recurrences are far more frequent than ordinary statistics show, and the majority of books on orthopædic surgery convey an entirely wrong impression of the curability of bone tuberculosis. For instance, the percentage of recoveries during the first decade has been placed as high as 65 per cent., but the period of time covered by these observations has in no case exceeded eight years, while in another series of thirty-nine cases only eight were under observation for over four years. In the author's forty-seven cases the average interval that elapsed from the end of the treatment of the first attack to the second attack was twelve and one half years, that is four and one half years more than the elapsed time on which the text book statistics were based. The prognosis of bone tuberculosis is, therefore, not so good as has generally been supposed. Dr. Painter draws the following conclusions: (1) Tuberculous disease tends to recur, in a considerable number of cases, after apparent cure. (2) This recurrence is usually local and not metastatic. (3) Trauma is frequently associated with recurrence. (4) Patients who have suffered from bone or joint tuberculosis must be cautioned to be constantly on their guard. (5) Deformity and shortening should be corrected as well as possible. (6) Mechanical fixation is called for in the acute attack in childhood. Exploratory incision is advisable in many cases in children, and is to be urged in the majority of the cases of recrudescence if seen early.

OBSTETRICS AND DISEASES OF WOMEN.

The Ætiology of "Missed Abortion."—Dr. E. Koudrinovsky (*Roussky Vrach*, December 7th) calls attention to the fact that but little has been written on the causes of "missed abortion," a term used by Oldham to designate the retention of a dead fœtus *in utero* for a more or less prolonged period of time. Most writers on the subject report cases and content themselves with a few words of comment as to the possible causes of missed labor. Even the most elaborate text-books on obstetrics touch but lightly on this question, and yet the ætiology of these cases constitutes the really

interesting part of the subject. As no autopsies have been performed during the persistence of the foetus *in utero* in cases of missed abortion, the condition of the womb in these cases must remain hypothetical. The suppositions of Sinclair, and others as to the significance of metritis in causing the condition in question, are but remotely probable. The physiological activity of the uterus may, however, be impeded by certain new growths in the uterine walls, or by such conditions as very sharp uterine flexions. The hypothesis that missed abortions depend upon a nervous exhaustion of the uterus is one that requires to be explained. It is impossible to understand how a uterus becomes temporarily exhausted and then again suddenly becomes strong and expels its contents. Cases of missed abortion, moreover, occur frequently in young primiparæ who are in perfect health and not always in multiparæ or older women. In a case reported by the author, a woman had carried the dead foetus in her uterus for several months. At the time when the foetus was supposed to have died, as testified by the cessation of movements and the arrest of growth of the uterine tumor, the woman felt generally weak, easily tired, was subject to headaches, and showed other signs of general debility. The explanation of these symptoms is that there are developed certain toxins, as the result of the death of the foetus *in utero*, which give rise to systemic disturbances.

Lateral Section of the Os Pubis.—Dr. L. Gigli (*Centralblatt für Gynäkologie*, November 29th) speaks of the failures of symphysiotomy as depending mainly upon its non-adherence to surgical principles, for a joint is opened in the operation and is subsequently not immobilized; and secondly to the possible interference with the healing by an abnormal puerperium. He recommends lateral section of the pubic bone as advised more than a century ago by Bar le Duc. Nine cases treated in this way have had satisfactory convalescences.

Accouchement Forcé with Metal Dilators.—Professor Ludwig Knapp, Dr. Wagner, Dr. C. W. Bischoff, Dr. H. Langhoff, and Dr. A. Mueller (*Centralblatt für Gynäkologie*, November 22nd) discuss Bossi's new method. They praise it individually and collectively, and bring reports of cases to bear upon their views. In the hands of all it has been most successful. The main indications for the use of the instrument, as brought out in the papers, are protracted labor with danger to mother or child, eclampsia, and placenta prævia. In some cases, a laceration of the cervix could be subsequently demonstrated, but in all cases a rapid dilatation was accomplished. An unopened cervix can be fully dilated in from twenty to thirty minutes. In the same issue Knapp and Frommer give descriptions of modifications of Bossi's instrument, which seem to possess some advantages.

OPHTHALMOLOGY.

The Diminution of Working Capacity by Injuries to the Eyes. By Dr. E. P. Braunstein (*Roussky Vrach*, December 7th).—The great

growth of industrial enterprises and the introduction of machinery operated by steam, electricity, etc., have brought about a marked increase in the frequency of accidental injuries to the eyes of operatives in factories, etc. In several countries this has given rise to special legislation which forms part of the comparatively recently introduced code of factory sanitation. The laws of most countries secure the right to damages on the part of an injured employee, and the principle on which these laws are based was given to us in that edict of the Roman prætor which placed responsibility for injuries upon the captains of ships and the keepers of taverns or of stable yards. Insurance companies that insure the employer against the possibility of an injury occurring among the employees, or that insure the employees who renounce all claims to further damages from the employer, have been established in many countries, but as yet a comparatively small proportion of workmen have been insured in this manner. Experts are frequently called by the courts to determine the degree to which a man's working capacity has been impaired by the injury to his eyes, and numerous articles have appeared in literature within the past few years giving the methods whereby a comparative estimate of the loss of working capacity through eye injuries could be made with some accuracy. The author shows by numerous examples that mathematical formulæ are of no value in determining the question, as they only serve to mislead the ophthalmologist. In his opinion each case must be judged on its own merits. In the first place, the mental and material condition of the patient must be considered. The occupation of the injured person, whether it be manual labor or a profession, must be taken into account. The professions which require a fine degree of vision must be separated from those which do not require very accurate work. Hence, the general scheme of estimating the working capacity lost by an eye injury should be somewhat as follows: (1) Complete loss of capacity for work: (a) for professional work and all other kinds of labor; (b) loss of capacity for professional, and considerably impaired capacity for other kinds of work; (c) loss of capacity for professional work and moderate impairment of capacity for other work. (2) The capacity for work is limited to a marked degree: (a) The capacity for both professional and other kinds of work may be limited to a marked degree. (b) The capacity for professional work may be markedly affected, while that for other kinds of work may be only slightly affected. (3) The capacity for work is impaired in a moderate degree: (a) Capacity for all kinds of work impaired moderately; (b) capacity for professional work impaired moderately and for other kinds of work, slightly. (4) The capacity for any kind of work may be impaired slightly. In addition, we must consider the question of changes in the field of vision, in the locomotion of the eye, and the presence of inflammatory processes in the conjunctiva, and in the deformities wrought by the injuries received. In this way the extent of a claim for damages may be properly estimated by an expert.

GENITO-URINARY DISEASES.

Boiling as a Method of Sterilizing Catheters.

By C. B. Nancrede, M. D., and W. H. Hutchings, M. D. (*Medical News*, January 10th).—The authors reprint the conclusions reached after the first set of experiments they made, in which old laboratory cultures were used as the infecting media. They now add to their previous report notes on ninety-five new experiments in which the catheters were infected by being used on actual cases. Their latest conclusions are as follows: (1) Previous washing with warm soap and water, which is a prerequisite in most methods of chemical sterilization, is not essential when heat is employed. It simply reduces the time required. (2) One of the chief obstacles to the sterilization of catheters is the oily lubricant so generally used. (3) The English catheter is more easily sterilized than the soft rubber ones, and is not damaged by boiling if proper precautions are taken. (4) English web catheters should preferably be boiled in a saturated solution of ammonium sulphate, and subsequently washed in sterile water. (5) The only precaution that must be observed in boiling English catheters is to keep them from coming in contact with the bottom of the vessel in which they are boiled. (6) Finally (a) all catheters, except the soft French ones, can be sterilized by boiling, provided all air is expelled from their interior; (b) although five minutes' immersion in actually boiling water is usually sufficient, yet not less than ten minutes should be employed, especially in the case of instruments of small calibre; (c) previous cleaning in soap and water, though not essential, is most desirable and also reduces the time required.

The Action of Silver Nitrate in the Tunica Vaginalis of the Injured, Inflamed, or Infected Testicle.—Dr. Vincenzo Montesano (*Riforma medica*, November 25th) experimented on animals on the effect of silver nitrate on the tunica vaginalis of the testes, having obtained favorable results in man in cases of infectious inflammation of this membrane. Campani, of Rome, noted the favorable effects of injections of silver nitrate in the tunica in cases of severe gonorrhœal epididymitis combined with infectious and hæmorrhagic vaginitis. The observations of the present author were directed to the study of the effects of silver nitrate solutions on the inflammatory process in the tunica, and in animals to the determination of the mode of action of the silver salt under these conditions. In a student aged twenty-four years, who had contracted an acute urethritis followed by an epididymitis, he emptied the tunica by means of a trocar and cannula of its yellow clear contents; and injected under aseptic precautions two c. c. of a $\frac{1}{2}$ per cent. solution of silver nitrate. This liquid was allowed to remain in the sac a few minutes, gentle friction being used to spread it throughout the tunica. Attempts were then made to remove the fluid from the sac, but in the end most of it remained. The injection caused only a transient burning, and the parts were dressed aseptically and allowed perfect rest. At the end of twelve hours the patient complained of some

pain in the scrotum, which was found slightly swollen and red. There was no fever, and no other symptoms. Cold compresses of lead (zinc?) acetate lotion were ordered, and under their influence the reactive phenomena gradually disappeared. The liquid in the tunica did not reappear, and the scrotum resumed its normal appearance. Repeated injections of a one-per-cent. solution of silver nitrate, one c. c. at a time, into the tunica vaginalis of a dog produced no reaction, and the introduction of a silk suture into the scrotum down to the tunica produced an adhesive inflammation with round cell infiltration. Silver nitrate solutions can therefore be injected without harm into the tunica, provided they do not exceed 1 per cent. in strength. The fear of necrosis coagulation and gangrene need not be entertained unless the tunica is infected during the injections.

HYGIENE AND SANITARY SCIENCE.

On the Influence of Artificial Dyes of the Aromatic Series upon Digestion.—Dr. A. I. Vinogradoff (*Roussky Vrach*, December 7th) has investigated the effects of a series of twenty-five colors of the aniline dye series on the process of digestion. The dyes selected as far as possible, were those most commonly used in coloring food products and in industries. The author's experimental work was incomplete and was communicated because he was unable to continue it. The influence of various dyes upon the digestion of egg albumin by means of artificial gastric juice was tested in a series of Mettloff's tubes (See, Pavloff, *Lectures on the Work of the Principal Digestive Glands*). The whites of several hen's eggs were beaten by means of a metallic brush so as to destroy the membranes, and then were allowed to remain for some time in a separating-funnel. The lower portion, free from membrane, was poured into a jar with ground-glass stopper. The artificial gastric juice was prepared by macerating the stomach of a pig with a two-per-cent. hydrochloric acid solution, etc., according to the usual method employed for such experiments. Quantitative solutions of the dyes were made, and the effect of these solutions on the process of digestion was tested as follows: Small glass jars with ground-glass stoppers were partly filled with a mixture of the gastric juice and the dye solution, and a Mettloff's tube containing egg albumen was suspended in the liquid in such a way that the precipitate which resulted from mixing the dye with the gastric juice would not cover the tube, but would fall under it, so as not to interfere with the penetration of the digestive fluid into the tube. These glass receptacles were then sealed, and placed for different periods in the thermostat at body temperature. The tubes were removed, cleansed with distilled water, and examined under the microscope. The extent of the albumen digested was measured in each tube by a micrometer scale. In a control glass the gastric juice was diluted with a corresponding amount of distilled water to make up for the addition of the dye. Without venturing to draw definite conclusions, the author emphasizes the fact that the dyes known as safranin ponceau RR., asofuchsin, orange II, cærulein S., phloxin R. B. N.,

iodeosin, chrysaniline, magdala red, asoflavin, benzo-purpurin, and carise, in quantities of a few milligrammes, or in other words in solutions of hundredths or tenths of one per cent. in gastric juice show a marked inhibitory action upon the digestive powers of chyme. The dyes known as quino-line yellow, methylene green, acid green, iodine green, asosauregelb C., yellow T., naphthol yellow, aniline yellow, martius yellow, and metanil yellow, impaired the digestive powers of the chyme, although not to such a marked degree as the first-named group of dyes. Further experiments are required to shed light on this interesting question of hygiene.

PHYSIOLOGY AND PATHOLOGY.

A Case of Complete Absence of Anus and Rectum.—An interesting contribution to the curiosities of medical literature is found in the report by Dr. Cuéllar Durán (*Revista Médica de Bogotá*, Year xxiii, No. 296) of the case of an infant in whom failure to pass the meconium led to an examination, which revealed the absence of an anal orifice; a slight depression in the skin, which in this location was very thin and resembled the anal mucosa in color and consistency, alone marked the anal point. Notwithstanding the texture of the skin in this location, the dark mass of the meconium behind it was not visible, as is usual in cases of imperforate anus. A tentative diagnosis of imperforate rectum also was made, and operation decided upon. After incision of the skin, the most thorough exploration of the region failed to show any trace of an external sphincter, this being sought especially as a guide to the location of the rectum, and the subcutaneous region consisted solely of cellular tissue and fat. The condition of the patient rendered further operative procedure inadvisable, and the colotomy which was contemplated as a last resource, was abandoned. Death ensuing upon the following day, an autopsy was obtained, and all the organs were found normal including the intestines up to the sigmoid flexure, which was the termination of the intestinal canal. This portion of the intestine was represented by an ampulla, dilated by the accumulated meconium and terminating in a thin, fibrous cord which was inserted in the upper part of the bladder. No slightest trace of the rectum could be found, and the space usually occupied by that organ was filled with fatty and cellular tissue. The fact that the child's father had a history of neglected syphilis and probable tuberculosis, lends support, in the author's belief, to the opinion held by Fournier and others, that malformations most frequently occur in the offspring of syphilitic and tuberculous subjects.

The Mode of Action of Hydrochloric Acid and of Infusions of Gastric Mucous Membrane in Hydrochloric Acid on the Secretory Function of the Pancreas.—Dr. L. B. Popelsky (*Roussky Vrach*, November 30th) calls attention to the question as to whether the elements of food which are eaten exercise their influence upon digestive secretions when they are taken into the stomach or whether they are first absorbed and act on the nervous elements

of the gastrointestinal tract through the blood. This question has attained great importance since the statement made by Bayliss and Starling, that hydrochloric acid introduced into the duodenum produces a special body, a secretine, from the pro-secretine of the mucous membrane of that portion of the gut. The secretine is absorbed by the blood, reaches the pancreas, and only then evokes activity in this gland. The mutual action between the organs is effected, according to these authors, by means of chemical substances elaborated in one organ and reaching the other through the blood. An example is the formation of milk in the breasts, which receive an impulse to activity from the uterus by means of a special chemical substance. The assistance of the nervous system in these phenomena is regarded as unnecessary and even improbable by Bayliss and Starling.

The present author endeavors to confirm the results recorded by Bayliss and Starling as regards the secretion of a specific secretine. For this purpose he used dogs with chronic duodenal fistulæ. He prepared infusions of the mucous membrane of the stomach, intestine, and the blood, in a 0.4 per cent. solution of HCl., and also a solution of blood in ether. The dogs were fed until eighteen or twenty-four hours before the experiment. The normal secretion of the pancreas was determined for an hour, and then the infusion was introduced into a vein or into the skin. These infusions proved to be stimulants to the secretion of pancreatic juice. The same infusions also proved to be stimulant in the gastric secretion in dogs with gastric fistulæ. The secretion of bile was also increased under their influence and the same can be said of the saliva. The fact that these solutions produced increased secretion of almost all the digestive juices shows that the secretine produces its stimulating effect upon the glands through the medium of the nervous system, and therefore the conclusion of Bayliss and Starling, that the secretine is a specific substance which stimulates the activity of the pancreas, must be erroneous. While the theory of Bayliss and Starling (*Journal of Physiology*, No. 5, 1902) is not demonstrable, yet their work has given rise to a large series of experimental researches, which have brought out a number of new facts.

On the Growth of Bacteria in the Intestine. By Dr. J. L. Smith and Dr. J. Tennant. (*British Medical Journal*, December 27th).—The authors have made direct observations of the number of bacteria in the contents of the intestines of dogs and rabbits, at short intervals in their course. They find that the growth of bacteria in the small intestine is very limited in comparison with the amount of nutrient material present. In general the growth of bacteria is small until the region of the lower ileum is reached. Here, the number of bacteria is greatly increased, and below the ileocaecal valve they are found in the numbers characteristic of the fæces; so that the intestine, in spite of the loss of acidity from the addition of alkaline secretions, still retains the power of inhibiting bacterial growth, and acidity has therefore but little to do with bacterial inhibition. Where intestinal parasites are

present there is an increase in the absolute number of bacteria present, but the inhibitory effect is not wholly lost. A non-specific irritation may set up abundant bacterial growth in areas in the intestine in which it is normally present only to a limited extent. The bacterial growth in the large intestine is usually plentiful. The contents of the rabbit's intestine are, in general, more nearly sterile than those of dogs. One of the first places in which a disturbance of the regulation of bacterial growth takes place is the region of the ileocæcal junction. The power of inhibiting bacterial growth having become impaired, the bacteria which occur normally in the large intestine will become still more abundant, and approximately similar changes will take place in the small intestine. In the human subject the region of the ileocæcal valve is very liable to attacks of inflammation in the shape of appendicitis and typhlitis in their various forms. In the same way the lesions of typhoid fever and of tuberculosis of the intestine are gravest and appear earliest in the lower end of the small intestine. Bacteria possessing specific pathogenic power, if taken by the mouth will, like other bacteria so ingested, be restrained from multiplying until the lower ileum has been reached. The various forms of bacterial irritation of the intestine conform more or less to a type the determining factor of which is the normal power of inhibition of bacterial growth in the small intestine. When the regulation of bacterial growth is disturbed, microbes ordinarily harmless may become virulent. In typhoid fever, for instance, the colon bacilli normally present in the intestine may increase greatly in number, become virulent, and play an important part in the disease. The blood of typhoid fever patients often gives pronounced reactions with varieties of the *Bacillus coli communis*.

The Problems, Significance, and Methods of Study in the Comparative Pathology of Infectious Diseases of Animals.—Dr. N. P. Savvatoff (*Roussky Vrach*, December 7th), in an introductory lecture says that, while formerly the science of epizootology had to deal with ten or fifteen diseases of the infectious type to which animals were subject, the field opened by modern research in the comparative study of infectious diseases in animals has changed the entire scope. The subject of epizootology should form a conspicuous part of medical education, as it broadens the point of view of the physician and helps him to be a broadly educated observer, and not a mere narrow specialist. It is impossible to teach epizootology merely by theoretical lectures, but practical and experimental work should be done by each student who takes the course. The material for this work can easily be obtained in a large city. A great deal of pathological material from the lower domestic animals may be obtained from the autopsy rooms or morgues for animals established in connection with the sanitary administration of such cities as St. Petersburg, and the slaughter houses furnish a rich store of material of both contagious and non-contagious diseases in cattle, pigs, and horses. Some slaughter houses in St. Petersburg have even established

museums of pathological anatomy under the direction of the veterinarians who are in charge of these establishments. The zoological gardens and animal parks of the large cities also offer great opportunities for the study of comparative pathology; for the mortality in these gardens is always considerable, and the diseased conditions of tropical animals, etc., are but very imperfectly known. There is no doubt that the study of these diseases will throw some light upon a number of questions in human pathology. The study of various epidemics of contagious disease, made on the spot wherever they occur by a delegation of scientific men who are sent to the site of the epidemic by the government, is also one of the most efficient methods of investigating the pathology of epizootics, and this method should be used more frequently and on a larger scale than heretofore, wherever contagious diseases exist in man or the lower animals.

The Action of Alternate Freezing and Melting upon the Vitality and Virulence of Pathogenic Bacteria.—Dr. Francesco Testi (*Riforma medica*, November 19th) has repeated the experiments of Pietet and Yung and of other investigators, as to the effects of intense cold upon the vitality of pathogenic bacteria, in order to clear up the differences of opinion held by various writers on this question. He has studied the resistance of these germs to wide variations of temperature, the variations of morphology produced by such changes, and the modifications in virulence induced thereby. He examined the spirillum of Asiatic cholera, the germ of cholera in chickens, the typhoid bacillus, the bacillus of diphtheria, etc. His experiments were so arranged that in each set there was an alternation of freezing and melting every half hour for twelve hours. Examinations of hanging-drop preparations showed that these alternations of temperature markedly diminished the motility of the typhoid bacillus and of the germ of Asiatic cholera. The germs showed in all cases changes in morphology due to the alternation of cold and heat, but on planting cultures grown under normal conditions from these altered germs the original morphological characters of the organisms were obtained. The cultures grew unhindered in all cases, after the alternate freezing and melting, except in the case of chicken-cholera, in which the growth was delayed six or seven days. The number of germs growing after this treatment was not markedly altered. The virulence of these germs, as attested by their effects on animals when injected, was undiminished in all cases except in that of the chicken-cholera bacillus, which did not produce any pathogenic effects on the animals experimented upon. If this effect of alternate freezing is a constant one, then we have a new method of diminishing the virulence of germs, which may prove useful in preparing antitoxic serums, etc. The number and extent of these experiments, however, does not allow of a definite conclusion on this question. A repetition of the alternate freezing forty times on the same culture is of no value, as it does not imitate anything that can take place under ordinary conditions. Twelve times is often enough for all purposes.

Proceedings of Societies.

AMERICAN ASSOCIATION OF OBSTETRICIANS AND GYNÆCOLOGISTS.

*Fourteenth Annual Meeting, held in Washington,
September 16, 17, and 18, 1902.*

The President, Dr. EDWIN RICKETTS, of Cincinnati,
in the chair.

(Concluded from page 173.)

Perforating Ulcer of the Duodenum.—Dr. JOHN B. MURPHY, of Chicago, read this paper. He reviewed the salient points in the ætiology, pathology, and diagnosis of duodenal ulcers, and considered especially the surgical treatment of perforations. He had collected from literature nineteen cases, including one of his own, in which operations had been performed for this complication.

The average age in the thirteen cases in which it was stated was thirty-five years. Of the nineteen cases, five were in females, fourteen in males. Of the twelve cases in which it was stated whether or not there were symptoms present previous to the perforation, in nine they were present; in three there were no previous symptoms; in only five cases did the symptoms point to the stomach or duodenum; in six cases it was stated that the perforations were sutured. Of these six patients two died and three recovered; in one case the result was not stated. In eight cases drainage only was used; in these cases seven patients died and one recovered.

The diagnosis of perforating ulcer was difficult or practically impossible without an exploratory laparotomy. In many cases there was no evidence of duodenal disease previous to the perforation. The most important physical sign, in addition to those of peritonitis from perforations in other portions of the intestinal tract, was the flatness of the superficial piano percussion note in the right hypochondrium.

The leucocytosis in the author's case, the only one in which it was given, was pronounced, showing an inflammatory condition in contradistinction to the usual absence of it in intestinal obstruction and fat necrosis of the pancreas. Leucocytosis, however, was not a necessary manifestation of perforation or of inflammation. It was a manifestation of the reaction of blood to infection, biotic or toxic. It was often entirely absent in typhoid perforations.

Collapse was absent in duodenal perforation except where it was associated with severe hæmorrhage. Collapse in intestinal perforation was the manifestation of the absorption of the product of infection, and not a manifestation of the perforation *per se*. Collapse was always secondary to abrasion or denudation of the endothelial covering of the peritonæum, which abrasion permitted of rapid absorption.

In all cases of perforative peritonitis, to which duodenal perforations were no exception, an operation should be done at the earliest possible moment after perforation had taken place: and experience showed that the mortality was in direct ratio to the

length of time that elapsed between the occurrence of perforation and the operation. In perforation the longer the escaping material was in contact with the peritonæum, the greater the danger of destruction of its endothelial covering, and thus the greater the danger of absorption. Of thirteen patients operated upon more than thirty hours after perforation, all died; while in twelve cases where less than thirty hours had elapsed, 66⅔ per cent. of the patients recovered. The operation must be complete, that is, it must be pursued to an effective suture of the perforation. Drainage was insufficient, as of eighteen patients treated by drainage alone, all died. The suture of the opening could be easily done, as in 98 per cent. of the perforating ulcers into the peritonæum the opening was in the first portion of the duodenum, its most accessible portion. Where duodenal perforation was suspected, the incision should be through the right rectus muscle. It could then be carried upward to the costal arch or downward to the symphysis pubis. The incision through the rectus muscle was the one which he commonly made in operating for appendicitis. It could be enlarged upward or downward without interfering with the muscle fibres. Drainage or no drainage was a matter of personal election, influenced more or less by the pathological condition present at the time of the operation.

The after-treatment was that commonly followed after abdominal section, except that the patient was kept elevated in bed at an angle of 35° for the first forty-eight hours after the operation. The prognosis depended, first, upon the virulence of the peritonitis produced; second, upon the time the material had been allowed to remain in the peritonæum; third, upon the presence or absence of blistering or abrasion of the peritonæum at the time of operation.

Peritoneal Tuberculosis.—The author, Dr. RUFUS B. HALL, of Cincinnati, reported a few cases of operation for peritoneal tuberculosis, and made some remarks as to operating in this disease. He contended that tuberculosis of the peritonæum in women was not a rare affection. It occurred often enough to make it necessary to consider it in the diagnosis of all obscure diseases in the pelvis and abdomen. In a large majority of cases coming under his observation there were no appreciable manifestations of the disease in other parts of the body. The symptoms of this disease simulated several other conditions in the pelvis and abdomen, and it required patient and careful study to distinguish one from the other. The disease most likely to be confounded with this affection were the recurrent attacks of appendicitis of the catarrhal form, small fibroid tumors with old tuboovarian disease, and recurrent attacks of pelvic inflammation. An ovarian cyst of moderate size might be confounded with encysted tuberculous dropsy. But he insisted that if the case was one of tuberculosis the temperature chart would suggest this disease if the temperature was taken every four hours for a period of from ten to fifteen days. In no other condition was there the same exact regularity in the afternoon rise of temperature as in tuberculosis. In all cases of peritoneal tuberculosis in which there was encysted

dropsy or an accumulation of pus or serum, the patient should be operated upon; after the necessary surgical repair the abdomen should be drained. He advocated vaginal drainage in women, first, because it gave perfect drainage and, second, because it prevented ventral hernia, which so often followed on account of the fact that the drainage tube must be kept in for so many days.

Of 110 patients operated upon by the author for peritoneal tuberculosis, twelve were supposed to have appendicitis, four males, and eight females. For other conditions he had operated ninety-eight times on the female. Of this number, two deaths were directly due to the operation. One patient died on the seventeenth day, of meningitis; one died six weeks after the operation, from general dissemination of the disease; one died in ten weeks from general dissemination. These five patients all died in the hospital; one recovered in four weeks, left the hospital convalescent, and died two weeks afterward, of meningitis after three days' illness. One recovered and left the hospital in the fourth week, and died in thirteen weeks after the operation, from general dissemination. Eight died from tuberculosis in various forms in from fourteen months to four years and a half after the operation. Two were suffering from pulmonary tuberculosis and would probably die within a year. The remaining ninety were symptomatically well. A few of these patients had been operated upon so recently that no conclusion could be drawn. Taking the cases as a whole, the results were gratifying beyond expectation. A large percentage of the patients were enjoying the best of health, and from their appearance one would never suspect that they had had tuberculous disease.

The Surgical Treatment of Perforating Gastric Ulcer with General Infection of the Peritoneal Cavity.—Dr. H. HOWITT, of Guelph, Ont., stated that acute perforation with general infection of the abdomen was caused usually by the acute round ulcer, but might occasionally take place in the course of the chronic ulcer, especially when it was situated on the ever-moving anterior wall. All the phenomena of acute perforation might result in either form of ulcer in a more indirect manner by the formation of a localized abscess which afterward ruptured internally. The initial symptoms of acute perforation were described. In a case of perforation with general infection of the abdomen medicinal remedies were useless as regarded effecting a cure. Nothing short of early, bold, and thorough surgery could save the patient. A large irrigating tank, capable of throwing a stream almost an inch in diameter, expedited matters. All sutures should be made ready beforehand, ready for instant use. When the patient was anesthetized, an incision from the ensiform cartilage to the pubes should be made at once, and the bowels drawn out and protected. Then the stomach was examined and the perforated part brought as far as possible out of the wound and the field guarded by sponges. The ulcer perforation might be excised, if it was considered advisable, but it was generally merely closed with two or more rows of silk sutures. Now every pouch and corner in the abdomen was thor-

oughly inspected by sight and flushed clean. Three rubber drainage tubes were used, not one of which was placed in the wound, but through stabs, one at the back in each flank depression below the kidney, and one in the lower part of the abdomen to the right or left. After the intestines were replaced and the omentum was spread over them and fastened below the lower end of the wound with a suture or two, the incision was closed as quickly as possible and dressed. In a desperate condition of the patient, a pint of peptonized milk or other suitable liquid food was injected into the jejunum during the operation.

Suitable measures to combat shock should be employed subsequently. The patient was supported for the first week by rectal enemata, and nothing was allowed by the mouth but sips of hot water. No morphine was given unless it was evident that death was inevitable. The bowels were to be regulated by injections of magnesium sulphate in solution.

In conclusion, the author stated that he was aware that many surgeons strongly objected to evisceration in abdominal work, but he maintained that in the conditions under discussion it was impossible by any other known method to make certain that the toilet of the peritonæum had been done thoroughly, and he said that imperfect toilet was followed by more shock and was vastly more dangerous than hours of properly managed evisceration.

Carcinoma of the Cervix Uteri.—Dr. L. H. DUNNING, of Indianapolis, read a paper on this subject in which he presented a summary of his sixty-two cases operated upon by hysterectomy. These cases showed, on applying the accepted test of time—five years—that the author had had an encouraging number of cures; they also showed the desirability of early operative procedure. The operative methods employed were indicated and the author's views of the same were discussed. He reported five cases of carcinoma of the cervix uteri in which the patients were alive five years after hysterectomy.

The following officers were elected for the ensuing year: President, Dr. L. H. Dunning, of Indianapolis; vice-presidents, Dr. Marcus Rosenwasser, of Cleveland, and Dr. Herman E. Hayd, of Buffalo; secretary, Dr. William Warren Potter, of Buffalo; treasurer, Dr. X. O. Werder, of Pittsburgh. Chicago was selected as the place for holding the next meeting in September, 1903.

Book Notices.

Psychopathological Researches. Studies in Mental Dissociation. By BORIS SIDIS, M. A., Ph. D., Director of the Psychopathological Laboratory. With Text, Figures and Ten Plates. Published under the Auspices of the Trustees of the Psychopathic Hospital, Department of the New York Infirmary for Women and Children. New York: G. E. Stechert, 1902. Pp. xxii-329.

The work of Boris Sidis covers a field of research in which there has so far been but little accomplished. Psychology has been developed along

the lines of normal mental processes by studies based as far as possible on facts elicited by physical methods. It has derived as much benefit as is possible at present from this line of investigation because of the natural limitations of the means employed. There is, however, another road along which the seeking for psychical knowledge can continue, and that is by the scientific study of abnormal mental states, psychopathology so called; and then by inference and correlation some light may be thrown on the normal psychical process. It is a study in psychopathology that Sidis offers to the scientific world.

His object in the present work is to elucidate the phenomena of functional mental disorders, and this he does by offering a résumé of facts and experiments in the nature of laboratory researches. There are six studies, comprising cases of hysteria, alcoholic amnesia, "psychic" epilepsy, and melancholia with marked delusion. All of these cases were studied by means of hypnotism or a modification of it which Sidis calls hypnoidization.

Psychologically, Sidis considers functional mental derangement to be coextensive with the whole domain of the subconscious, and in this view he is in agreement with most authorities, especially of the French school. Physiologically, he holds functional mental disturbances to be correlated, not with neurone degeneration, but with functional dissociation or disaggregation of whole systems of neurone groups. The function is lost to the higher consciousness, but lies in the subconscious. The loss is purely dissociative.

The first stages in the process of neurone disaggregation are those in which only the association, *i. e.*, the interrelations of the neurone systems, is affected. The neurones themselves are not implicated. Phenomena of hypnosis, of somnambulism, of motor and sensory automatism, and the so called sensorimotor disturbances of organs, are of this type. Here also are to be included the phenomena of double and multiple consciousness, also some forms of amnesia and of psychical epilepsy.

The second stage in dissociation is that in which the neurone itself is affected, but restitution is possible. Sidis calls this stage that of functional neuropathic disorders, and includes under it such conditions as paralysis agitans, choreas, idiopathic epilepsies, and the acute manias, melancholias, periodical and circular insanities, and paranoias. Here, it appears, he goes too far in assuming restitution of function, as the characteristic and distinguishing feature in this class, for, though no organic lesion has as yet been demonstrated in them, many of these functional conditions are incurable, and the neurone never returns to the normal condition. He admits that this class of cases has no subconscious state and says they are essentially organic in character. According to our present knowledge, we do not know that the neurone itself is altered in paralysis agitans and chorea any more than in the mental disorders of the first class. It may be that it is dissociated in the former as well as in the latter.

In order to include the organic diseases in his scheme, Sidis forms a third class which he designates as the necrotic neuropathies, and under this

heading he includes the degenerative or organic diseases, in which the neurone is destroyed and restitution is impossible. Such are tabes, general paresis, syringomyelia, chronic insanities, amyotrophic lateral sclerosis, and acute ascending palsy (erroneously considered as not capable of restitution). The value of his classification rests in ascribing the cause of diseases of the first class to a disturbance of association. He probably goes too far in assuming that the diseases of the second class are due to neurone derangement. He does not enter into any discussion of the theory of neurone retraction or of the theory of the neurone itself. He simply assumes that for his purpose the functional unit of the nervous system is the neurone, and whether it is independent of its neighbors or is connected by fibrillæ does not concern him. The neurone as generally conceived answers for psychological theories.

All the patients studied by him or his associates were cured when they passed from under their observation. Their method, which is amply described in the work, was to ascertain first the systems of neurones which were dissociated, and then to unite them by means of suggestion with the systems present in the higher consciousness. In short, they were taken out of the subconscious and fastened to ideas in the higher personality. This process Sidis calls that of synthesis, and he considers it the only rational method of treatment of functional mental derangement.

One of the cases leads Sidis to a discussion of the part that psychomotor processes play in mental life. He assigns to them the most important rôle in psychical activity. All animal life represents different stages in the evolution of sensorimotor life, and he thinks that the great majority of mankind still lead a life closely allied to animal sensorimotor states. He finds that in the animal world the more highly developed and specialized the muscular system, the more highly developed is the nervous system. It is the motor elements in a train of ideas which give order to it and are the important links in the association of ideas. "Motor memories are at the very heart of personality," and he shows the importance of motor and kinæsthetic sensations in making suggestions durable. What Sidis says about psychomotor processes is of the utmost practical value, especially in the science of education and in the study of mental troubles.

To sum up the value of this work, one must say that it is a step in the right direction and that it is worthy of a careful study by all who are at all interested in this branch of intellectual thought.

Zum Studium der Merkfähigkeit. Experimental-psychologische Untersuchung. Von Dr. AUG. DIEHL, Nervenarzt in Lübeck. Mit einem Vorwort von Professor Dr. AUG. FOREL. Berlin: S. Karger, 1902. Pp. 39.

In this study on the capacity of the memory, Dr. August Diehl points out the uncertainty and invalidity of memory tests for scientific purposes. He cites five cases, all of women of different ages, in which he tried tests with lines, angles, colors, and numbers. He finds that lines and angles are most often correctly retained, colors fairly well, and num-

bers very poorly borne in mind. He admits that different personalities remember different things in varied manners. He employs two methods of testing the memory after a lapse of time. One is to charge the mind with the facts to be remembered during a period of from one to two days, the other to avoid all conscious thought of the facts in question. Note the words "conscious thought," for herein lies an important point. It seems that things remembered correctly after a short time are almost always retained correctly after a period, without fixation of the attention; but that where an effort has been made to remember the tests, very often marked mistakes occur. This is explained by the fact that the energy consumed in the latter case, in fixing the attention, has been used subconsciously, so to speak, in the first; that is, that without the effort of trying to remember, the mind has still been working over the phenomena perceived, and to better advantage than when straining in the attempt. Another characteristic feature is that the feeling of subjective certainty is nearly always present, and to such an extent that the subject asserts that the examiner must have mixed up the tests, but that in no wise can the error be in the memory of the person tested. He points out that for all practical purposes, for instance the examination of witnesses in court, the memory test is really too inconclusive and uncertain to be relied upon. The article is prefaced by a few remarks of Professor August Forel, of Zurich, pointing out the value of this kind of work in educational and legal matters in determining the correctness of facts supposed to have been rightly retained.

A Textbook of Histology and Microscopic Anatomy of the Human Body, including Microscopic Technics. By Dr. LADISLAUS SZYMONOWICZ, A. O., Professor of Histology and Embryology in the University of Lemberg. Translated and Edited by JOHN BRUCE MACCALLUM, M. D., Johns Hopkins University, Baltimore. Illustrated with 277 Engravings, including 57 Plates in Colors and Monochrome. Philadelphia and New York: Lea Brothers & Company, 1902. Pp. ix-17 to 435.

A most favorable reception may safely be predicted for this work. It is barely three years since the original edition appeared in Germany, and the book has already taken its place among the best of its kind as a reliable textbook for students. The editor and translator has been careful in his additions to the text and illustrations and has very materially enhanced its usefulness thereby.

The book is divided into two parts, the first dealing with the microscopic anatomy of cells and tissues, the second with the microscopical anatomy of the organs. Following this is a chapter on general and special microscopical technics. Much attention has been paid throughout to the genesis of the tissues, and as the author was formerly a worker in Hertwig's laboratory, it may readily be imagined that the substance of the book rests on a most reliable and safe groundwork. Attentive perusal of the more important portions of the work will convince one of the complete and systematic manner

in which all recent investigations have been noted.

Too much praise cannot be given to the matter of the illustrations. These are probably the most beautiful and artistic plates and engravings that have yet been introduced in a work of this kind. The majority of the illustrations are original, but a number have been collected from other sources. They are all reliable and accurate and will prove of immense service to the student. The explanatory notes to some of the more elaborate plates are printed on a separate sheet of tracing paper, together with an outline drawing of the specimen as a key. The introduction of a blank page behind the latter would be an improvement, as the text interferes at present with the clearness of the plan.

A few words of gentle criticism might be allowed. A plate illustrating the various types of leucocytes is missing in the chapter on the histology of the blood. The introduction of such an illustration in a work otherwise so complete would be of much service. The colored plate showing the various granulations in human leucæmic blood is somewhat out of place on the same page with the longitudinal section through the nail of a child. It has been placed here undoubtedly for the sake of convenience, but the reader who refers to the index for assistance in this matter will not be rewarded by his search. The description of Fig. 88, "cross section through a small artery and a corresponding view of a dog," is somewhat perplexing, to say the least. The name of so well known a man as Carl Zeiss should not have been changed to Karl Zeiss, certainly not in an American edition. We do not wish to detract from the value of the work by these few criticisms, but we desire to reiterate our conviction that all teachers of histology will heartily welcome the book, and we offer our congratulations to the editor and the publishers for such a valuable addition to the present textbooks on histology.

Atlas and Epitome of Abdominal Hernias. By Dr. GEORGE SULTAN, First Assistant in the Surgical Clinic, in Göttingen, Prussia. Authorized Translation from the German. Edited by WILLIAM B. COLEY, M. D., Clinical Lecturer on Surgery, College of Physicians and Surgeons, Columbia University, etc. With 119 Illustrations, 36 of them in Colors. Philadelphia and London: W. B. Saunders & Company, 1902. Pp. 9 to 227. *Saunders's Medical Hand Atlases*. (Price, \$3.)

The story of hernias is very directly told in these pages and very graphically portrayed by the excellent colored illustrations. There is but one illustration which we must criticize, the one picturing the *modus operandi* of taxis with a patient in the erect attitude.

In an authoritative book such as this purports to be, one would expect a greater attention to details to all the niceties bearing on hernia, such as the treatment of the urinary bladder injured during hernia operations, and the treatment of the wound in cases of strangulated hernia when a radical operation is not performed. Since intestinal resection received its greatest impetus in connection with strangulated hernia, certainly the fullest description of resection methods would be in place here. The

same criticism applies in regard to the making of an artificial anus, general peritonitis, and intestinal paresis following operations. Furthermore, the conduct toward an undescended testicle in the course of a kelotomy is common enough to call for debate, and far more common than rarer conditions considered is a torsion of the spermatic cord repeatedly mistaken for hernia, which receives no discussion.

Bassini's operation is tersely and accurately described, but it should have been elaborated upon, pointing out the pitfalls in its performance and what modifications of it are called for in very large hernias. These omissions are pointed out in contradistinction to what the editor claims for his work, that its operative side is its strongest feature.

With due allowance for these shortcomings, the student and practitioner taking refuge in this book will none the less be impressed by the straightforward and unequivocal advice offered.

Clinical Methods. A Guide to the Practical Study of Medicine. By ROBERT HUTCHISON, M. D., M. R. C. P., Assistant Physician to the London Hospital, etc., and HARRY RAINY, M. A., F. R. C. P. Ed., F. R. S. E., University Tutor in Clinical Medicine, Royal Infirmary, Edinburgh. With upwards of 150 Illustrations and 8 Colored Plates. Fifth Edition. Chicago: W. T. Koener & Company, 1902. Pp. xii-612. (Price, \$2.50.)

This handbook of clinical methods has been much in demand. It has been reprinted several times, and finally has been subjected to a revision, nine thousand copies in all having been printed. The revision has been thorough, the chapters on the blood, the nervous system, and clinical bacteriology having been for the most part rewritten. As it is, this the second edition has brought the subject up to date and presents a manual on clinical methods of great value. It deserves all the encomiums which were given to it when it originally appeared, in 1897.

System of Physiologic Therapeutics. Edited by SOLOMON SOLIS-COHEN, A. M., M. D., Professor of Medicine and Therapeutics in the Philadelphia Polyclinic, etc. Volume III. Climatology—Health Resorts—Mineral Springs. By F. PARKES WEBER, M. A., M. D., F. R. C. P. (Lond.), Physician to the German Hospital, Dalston, etc. With the Collaboration of GUY HINSDALE, A. M., M. D., Secretary of the American Climatological Association, etc. In Two Books. Book I. Principles of Climatotherapy—Ocean Voyages—Mediterranean, European, and British Health Resorts. Illustrated with Maps. Pp. xiii-17 to 336. Volume IV. Book II. Health Resorts of Africa, Asia, Australasia, and America. Special Therapeutics. With a Special Article on the Hawaiian Islands by Dr. TITUS MUNSON COAN, of New York. Illustrated with Maps. Pp. xiii-17 to 420. Philadelphia: P. Blakiston's Son & Company, 1901.

These two volumes on climatology, health resorts, and mineral springs support the good work done by Dr. S. Solis-Cohen in giving to the profession a system of physiological therapeutics outside the

domain of drugs. They are by Dr. F. Parkes Weber, of London, and Dr. Guy Hinsdale, of Philadelphia. The subjects of localities and climatic conditions in America and the descriptions of American health resorts are by the last mentioned gentleman.

The work is a very useful compilation, appealing forcibly to all physicians, before whom the question of climatic treatment of patients must necessarily arise. It is full and concise and gives exact geographical information, also the indications for which springs, baths, waters, etc., of the various localities are noted—in fact, takes the place of a medical Baedeker. This reminds us that the descriptions of the various resorts mentioned sound very much as if that noted series of guide books had been much consulted. Nevertheless, nothing but praise should be given to the authors, to whose industry we are indebted for such a valuable addition to medical literature.

A Handbook of Materia Medica, Pharmacy, and Therapeutics, including the Physiological Action of Drugs, the Special Therapeutics of Disease, Official and Practical Pharmacy, and Minute Directions for Prescription-writing. By SAMUEL O. L. POTTER, A. M., M. D., M. R. C. P. Lond., formerly Professor of the Principles and Practice of Medicine in the Cooper Medical College of San Francisco, etc. Ninth Edition. Revised and Enlarged. Philadelphia: P. Blakiston's Son & Company, 1902. Pp. xiii-17 to 951. (Price, \$5.)

In this edition, the same standard of merit reached in previous editions has been maintained. The book has been thoroughly revised and rewritten, and has been brought completely up to date. We feel safe in recommending it, and consider it a reliable addition to the literature on this important branch of medicine.

Handbook of Medical and Orthopædic Gymnastics. By ANDERS WIDE, M. D., Lecturer in Medical Gymnastics and Orthopædy in the Royal Carolean Medicosurgical Institute, Stockholm, etc. With a Frontispiece and 94 Illustrations in the Text. Second Revised Edition. New York: Funk & Wagnalls Company, 1902. Pp. 3 to 373. (Price, \$3.)

After this book has passed through two editions in the Swedish language, and been translated into many other languages, we are now fortunate enough to possess an English version that sets forth the excellent gymnastics practised by Swedish physicians following the teachings of Ling, Zander, and Brandt. The subject is considered under the headings Gymnastic Positions, Gymnastic Movements, Massage Movements, General Rules for Gymnastic Treatment, and an enumeration of the diseases to which massage is applicable.

A vivid portrayal of the varied movements and positions is afforded the reader by the very excellent illustrations, which are small and closely grouped so as to remind one, in a rapid review of them, of a cinematographic presentation. The tone of the text is neither extreme nor one-sided, but

constitutes a well balanced narrative of the needs of varieties of gymnastics as an excellent therapeutic measure when judiciously advocated by discerning physicians.

To the medical profession and to teachers of physical culture we can warmly commend this concise brochure as setting forth those principles of gymnastics which can be applied to the body in health and disease without the aid of the elaborate armamentarium of a gymnasium.

A Compend of Human Physiology. Especially Adapted for the Use of Medical Students. By ALBERT P. BRUBAKER, A. M., M. D., Adjunct Professor of Physiology in the Jefferson Medical College, Philadelphia. Eleventh Edition, Revised and Enlarged. With Illustrations and a Table of Physiologic Constants. Philadelphia: P. Blakiston's Son & Company, 1902. Pp. viii-9 to 270. (Price, 80 cents.)

Although brief works of this sort must of necessity be rather unsatisfactory, nevertheless they possess a certain value for the medical profession. For ready reference, this book can be recommended, as the author has succeeded in keeping it in touch with modern views.

Miscellany.

The Sensations of Drowning.—Dr. James A. Lowson, in the *Edinburgh Medical Journal* for January, gives a graphic account of his experiences and sensations in an escape from drowning. He was awakened from sleep in the P. and O. steamer *Bokhara*, in the Straits of Formosa, by a terrific crash. The vessel already disabled and helpless from a typhoon had struck a reef and went down almost instantly. Of his personal experiences Dr. Lowson writes: "My costume consisted at the time of a suit of pyjamas, a singlet, and a life belt.

"Getting out on deck, I at once made for the bridge, and was climbing up the steps when a perfect mountain of water seemed to come from overhead, as well as from below, and dashed me against the bridge companion, steps and legs seeming to be inextricably mixed up. The same sea washed my head up against the bridge, causing, as I afterwards found, a deep incised scalp wound, about four or five inches long, and knocking me insensible. The next thing I remember was trying to struggle through the rails of the upper bridge, which was now at the level of the water. The ship was evidently going down rapidly, and I was pulled down with her, still struggling to extricate myself. I got clear under water, and immediately struck out to reach the surface as I thought, but evidently only to go further down. This exertion was a serious waste of breath, and, after what appeared to be ten or fifteen seconds, the effort of inspiration could no longer be restrained, and pressure on the chest began to develop. Probably the most striking thing to remember at this period of time was the great pain produced in the chest, which increased at every effort of expiration and inspiration; it seemed as

if one were in a vice, which was gradually being screwed up tight until it felt as if the sternum and spinal column must break. Many years ago, my old teacher, Sir Henry Littlejohn, used to describe how painless and easy a death by drowning was—'like falling about in beautiful green fields in early summer'; this flashed across my brain at the time, and I said to myself, 'Poor old devil, Littlejohn—scarcely so accurate that time.' The 'gulping' process became more frequent for about ten efforts, and hope was then extinguished. * * * The pressure after these ten rapid 'gulps' seemed unbearable, but gradually the pain seemed to ease up as the carbonic acid was accumulating in the blood. At the same time the efforts at inspiration with their accompanying 'gulps' of water occurred at longer and longer intervals. My mental condition was now such that I appeared to be in a pleasant dream, although I had enough will power to think of friends at home, and still retain vivid recollections of the clearness of the sight of the Grampians, familiar to me in boyhood, which was brought to my view. Before finally losing consciousness, the chest pain had completely disappeared, and sensation was actually pleasant. What time I had then passed in the water I cannot possibly say—but I should think about two minutes; I was greatly handicapped below water by the previous exertion in getting on deck, and then by the stunning blow on the head, with the result that instead of going down after a full inspiration there was actually very little more than residual air in the lungs. Then the useless attempt to reach the surface would further reduce the time necessary to produce unconsciousness. What happened when inspiration was attempted was that the mouth was immediately filled with water, and, the epiglottis closing or closed down on the larynx, the act of swallowing at once occurred. I think the only time the epiglottis was not close down was during the short expirations which took place after every attempt at inspiration.

"The article on drowning in the *Encyclopædia Britannica* says: 'The drowned individual struggles to reach the surface of the water in his efforts to respire—as he does so he draws water into his windpipe which provokes cough.' I cannot see how it is possible for a man *under* water to cough, and I do not believe that any water will get into the trachea until after unconsciousness comes on. I have made post-mortem examination of scores of drowned bodies in Hong Kong, and 'froth in the trachea' is anything but a constant sign. Where efforts at artificial respiration have been made, one would expect this frothy condition, or if in drowning they had come to the surface once or twice. Captain Marryat's experience of drowning was that the sensations were rather pleasant than otherwise, and Sir Henry Littlejohn seems to have almost used Captain Marryat's words. They are both wrong—Marryat probably forgot about some of his sensations.

"To go on with the narrative: consciousness returned, and I found myself at the surface of the water, and managed to get about a dozen good inspirations. A hurried glance showed me the land apparently about 400 yards distant, and I proceeded to utilize first a bale of silk and then a long wooden

plank to assist me to the shore. These and the life-belt were of the greatest use also in saving my body from being dashed about on the reef in the tempestuous sea. As it was, feet, knees, and the regions of the anterior superior iliac spines were considerably lacerated. On landing and getting behind a sheltering rock, no effort was required to produce copious emesis. I do not think that much, if any, water could have got down the trachea. I gave it the chance to run out by gravity, while vomiting. It would be interesting to make sure at what stage the epiglottis begins to refuse work. The possibility of pneumonia or bronchitis occurring was soon forgotten in the further exigencies of the situation. Some idea of the journey shorewards may be gathered from the fact that not a trace of the pyjama coat and trousers remained. The singlet, also underneath the life-belt, was in ribbons, while the life-belt itself was considerably damaged.

"Our after-adventures were not very interesting, from a medical point of view. All wounds got badly inflamed, as is usual, from the action of the salt water, but I was able to relieve the pain of the gash in the scalp by getting it under a constant 'drip' of rain. After the excitement, sound sleep set in, although lying on sharp and rough stones in a ruined hut—the only shelter on a barren and uninhabited island. This sleep had lasted for about three hours when a profuse diarrhoea came on, evidently brought on by the sea-water ingested. Until morning broke all my muscles were in a constant tremor, which could not be controlled by any means. Some days after, I made acquaintance in a Chinese village with a powder, evidently prepared from some of the piper family, which had a very soothing action on the inflamed wounds, the sedative action being supplemented by that of a pint of champagne which a generous mandarin insisted on pouring down our throats. I can vouch for champagne having a good taste after one has been living on sea or brackish water for some days. We had further experiences with piratical gentlemen, and had many frights before reaching hospitable quarters in Taiwanfoo in Formosa. Up till this time I had been unaware of the presence of nerves in my body; but the reaction was now too great when sleeping in a comfortable bed, as, late in the evening, a nightmare led to my having a severe struggle with the bedroom furniture, finally taking a 'header' out of bed through the mosquito curtain, and coming to grief on the floor, where my kind hosts found me, and afterwards planted me back in bed.

"I have been in many other serious ship and train accidents, but none has left such a vivid impression on my memory as the one I have narrated. Looking back on it now, I am surprised at what must have been extraordinary rapidity of cerebration, resulting in actions which even an armchair-by-the-fire sailor could not improve on—with the one exception of commencing to strike out under water instead of conserving one's wind. The excruciating agony of the pressure was dreadful. I have lately had the doubtful pleasure of suffering and recovering from an acute pneumohydrothorax, where the pain again was of an agonizing nature. Here the pressure was from the interior of the

chest, but its character was very similar to what I have described—although, in the hydropneumothorax, the severe heart cramps lent additional *éclat* to the proceedings, which moreover could be partially mitigated by being able to roar out, a relief which could not be indulged in under water. The pleasant dreamy sensation, coming on just before unconsciousness, was only to be expected; but I hope Sir Henry Littlejohn won't again describe death by drowning as a pleasant death. The life-belt saved my life in two ways—bringing me up to the surface just in time, and preventing me being disembowelled on the rocks; and, were I in the same position again, I would certainly not have my boots off in such an emergency; the few survivors who had their sea-boots on came out comparatively unhurt, as they were able to wade most of the way ashore over the jagged reef, whereas I had rather a rough swim for about a quarter of a mile.

Multiple Personality.—Dr. Van Gieson (*Journal of Nervous and Mental Diseases*, November), in a paper on Mental Dissociation in Depressive Delusional States read recently before the New York Neurological Society, described a case in which as soon as the patient passed into hypnotic trance a metamorphosis occurred, the subject passing from intense depression to a state of great exaltation. Despite this the focal delusion persisted and appeared to be far better organized. This clearly pointed to the fact either that the state of depression was one of secondary formation, or that the delusion, being secondary in its origin, had gained sufficient strength to stand by itself, even after the emotional basis had been withdrawn. The latter alternative seemed to be the more probable. In his trance he could vividly remember all that had taken place in his waking life, and, on the other hand, he could recall fairly well what happened while in the trance. Later on, the patient at one time passed into a deeper trance and then passed from a state of inexpressible delight to one of grave composure. In the last trance personality he could remember all the experiences of the other trance personality and of the waking personality. The relation of these three personalities was described diagrammatically by three concentric rings. The central one was the melancholic personality, and outside of this were successively the rings representing the first and second trance personalities respectively. Of the three personalities, the waking was pathological. The first trance personality was an exaltant, while the second trance personality approached closely to the patient's healthy condition. The course of these personalities resembled quite closely what was observed in circular insanity. These alternating personalities were, however, ephemeral. Soon the first personality shrank and finally disappeared altogether. In the course of time the first trance personality disappeared and never returned. The mood of the second trance personality then lost some of its former seriousness. The tendency was for the intermediate personalities to disappear and the last one to become the dominant one. The process of evolution of species in general was one great illustration of the process just described. Throughout all

of these transformations the central delusion remained unshaken. The great assimilating power of this delusion was wonderful. Various suggestions were given to this patient; although they were designed to break up the nucleus of the delusion they were turned about by the patient and fed into this systematized delusion. It was necessary to follow the patient in his delusion and play into the hands of the latter in order to make the suggestion take root. Direct suggestion during deep hypnosis was the usual method of breaking such a strong delusion, but the objection to this method was that it was apt to be only temporary in its effect. The method of emotional substitution was especially valuable in a case of this kind. Some unimportant sensory changes were first attempted. The effort was then made to fuse the different personalities. During hypnosis dreams were suggested to the patient, with the object of effecting changes in the central delusion. These dreams impressed him deeply though slowly. The patient's melancholia finally disappeared completely and he had now resumed his original vocation.

Why Doctors Avoid the Army and Navy Services.—A correspondent writes on this subject to the *Army and Navy Journal* as follows: "I doubt if there is a medical college of any standing which has not put before its graduates at some time or other the advantages of the army and navy, and I think that most young doctors know of the opening in the medical corps of these services. Why, then, don't they take advantage of it? Because—take the army first—they have to pass a very severe examination. If successful they are given a commission and get a salary of \$1,650 per year, with quarters, allowances of fuel, forage, etc. This is a great bait for some, but it does not catch many. A man toils for five years here and there according to the desires of the surgeon general; then he is promoted to a captaincy and gets a raise to \$1,800 per year. Here he remains indefinitely. The army *was* a good place for a young M. D., but now there is no chance for promotion beyond a captain.

"Now, on the other hand, take the navy medical corps. A young M. D. passes his examination and is commissioned an assistant surgeon with rank of lieutenant, junior grade. This gives him \$1,650 per year at sea and no allowances whatever. On shore he gets \$1,402 and quarters, or, if quarters are not furnished him, he gets \$24 in lieu thereof per month. At the end of three years he is again examined rigidly, and if he passes he is commissioned a passed assistant surgeon, with no increase of pay nor in rank until a line officer who graduated at the Naval Academy about the time he entered the service goes through the grade of ensign, catches up to him, as a junior lieutenant, then passes him into the grade of senior lieutenant. Then this M. D. can get an increase in pay and rank, and not until then. Comparing the two services, army and navy, the M. D. who enters the former is far better off than the one who enters the navy, but neither one of them is as well off as his classmates who have stayed in civil life and put in their time in private practice. A good, upright man who pays strict attention to his

profession is far better off at the end of five or six years than one who has entered the government services and has to take every dollar he makes to pay his expenses.

"I know what I am talking about, because I have had the experience. I was in the navy on a salary of \$1,700 a year at sea, and I had a pretty hard time of it. On shore duty I got \$1,400, and after paying for uniforms, various odds and ends like subscribing for entertainments, memorial tablets, sailors' retreats, etc., and paying a cook \$30, besides my household expenses, my \$1,400 looked as if it had been struck by lightning. I cannot agree with you that the advantages you speak of are worth the trouble to go through a rigid examination, sever yourself from your family for years at a time, and at the end of five or six years be as badly off financially as when you started. Until the government can afford to pay better salaries to its surgeons, passed assistant surgeons, and assistant surgeons, they will always be short of medical officers."

The Transfer while Abroad of Medical Officers of the Mercantile Marine.—According to the *Indian Lancet* for December 1st, the following case of interest and importance to ship's surgeons has just been heard in the police court at Shanghai. Thomas William Staniforth Patterson, surgeon on board the Peninsular and Oriental steamer *Socotra*, was summoned for refusing to obey the lawful commands of G. W. Babot, master of the said vessel, contrary to section 225 B of the Merchant Shipping Act of 1894. Mr. J. H. Teesdale, of Messrs. Stokes and Platt, held a watching brief for the P. and O. Company. The evidence showed that the captain, acting on instructions from the agent of the P. and O. Company at Shanghai, ordered the accused to transfer to the *Ballarat*, which the doctor refused to do. The defendant made a statement on oath. He asked, however, in the first place, if he was charged with a misdemeanor or a criminal offense. The magistrate replied that the offense was one in respect of which defendant was liable to imprisonment without hard labor for a term not exceeding four weeks, or in the discretion of the Court to a fine not exceeding two days' pay. It was a criminal offense. The defendant then admitted that what the captain had stated was quite true, but defendant's first contention was that the captain had no authority to order him to leave the ship in foreign parts. It was outside his authority as laid down in Section 187 of the Merchant Shipping Act. He signed the articles after receiving a promise in London that he should not be transferred to any other ship, and the captain, in evidence, stated that he was informed by one of the clerks in London that Dr. Patterson was shipped only for the voyage. After taking a day to consider the legal aspect of the case the magistrate held as follows: "This is a foreign-going ship, and I cannot find that the clause as to transfer is rightly inserted. I therefore cannot punish this man under the Act for refusing to obey the order of the master, which was that he should leave the ship on which he was then serving and transfer to another. The summons is therefore, dismissed."

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Special Articles.

AN ASTIGMATISM CURED BY OPERATION.

By GEORGE J. BULL, M. D.,
PARIS.

I have been asked to report the case of one of my patients upon whom I made a surgical operation with the effect of curing an astigmatism.¹

I should have preferred to withhold the report for the present, and to continue my observations in order to prepare a more complete work with well established conclusions, but the case having been spoken of in the press, I think it only right to give my colleagues the following brief statement:

CASE.—A young woman, twenty-seven years of age, had complained for some years of headache and fatigue of the eyes; she had consulted several oculists, and had been given glasses, which afforded her no relief. She was wearing on the left eye a concave spherical glass, 0.50 D., combined with a concave cylindrical glass, 1. D., axis vertical; and on the right a concave spherical glass, 1 D., combined with a concave cylindrical glass, 0.25 D., axis vertical. These glasses had their centres widely separated for the relief of exophoria.

The ophthalmometer showed me: left cornea 80° —0.8; right cornea, 150° —0.7. Vision with either eye alone was $\frac{6}{18}$. Examination of the refraction showed me that the left eye required a concave cylindrical glass, 1.75 D., axis vertical, which gave $V = \frac{6}{5}$, and that the right eye required a concave spherical glass, 1 D., combined with a concave cylindrical glass, 0.50 D., axis 75° , which gave $V = \frac{6}{5}$.

The fact to which I would call attention is that the left eye had an inverse² astigmatism of 1.75 D., due in large part to the corneal curvature being greatest in the horizontal meridian: the eye, looking at the radiating lines on the distant clock dial, could see distinctly only the horizontal lines.

¹ The word *astigmatism* is derived from the Greek; *ἀ* privative, and *στίγμα*, genitive *ῆς*, a mathematical point. The word *astigmatism* comes from *ἀ* privative, and *στίγμα*, genitive *ατος*, a stain or prick, and for that reason does not express our meaning. Many French writers, among others Javal, Parent, Martin, Sulzer, and Pflüger have abandoned the use of the old word, and have adopted the word *astigmatia*. I count on my American *confrères* to aid in popularizing the new and proper word.

² For purposes of study and calculation it is well to use short words, the meaning of which is obvious. I therefore recommend that the old expressions "with the rule," and "against the rule," used to qualify astigmatism, be replaced by the terms "*direct*," and "*inverse*." By direct astigmatism we mean astigmatism with refraction greatest in the vertical meridian; and by inverse astigmatism that in which refraction is greatest in the horizontal meridian.

There was also an exophoria of 6° or 8° . When I proceeded to measure the amplitude of relative convergence,³ with the Holmes's stereoscope, I found the region unduly extended on the side of divergence, but was unable to determine the extent on the side of convergence, because the examination was interrupted by a violent attack of ocular pain.

On December 13, 1902, I made a complete (sub-conjunctival) tenotomy of the left external rectus, being careful not to cut the capsule much beyond the upper and lower borders of the tendon.

Three days later, the ophthalmometer showed that the corneal astigmatism of the left eye had disappeared. The curvature of the vertical meridian had not changed; that of the horizontal meridian had diminished.

Knowing from experience in other cases that operations on the recti muscles frequently cause changes in the refraction, and particularly in astigmatism, I gave the patient the trial-frame with the glasses chosen for her a few days before, and she remarked at once that they blurred her sight. Upon taking them off she discovered to her astonishment that she was able to see the lowest line of distant letters ($V = \frac{6}{5}$) without glasses, and that all the lines in the clock-dial were equally black and distinct. She put her hands up to her face to see if she had on her glasses, and finding they were not there, she could hardly believe her eyes. Her astigmatism had entirely disappeared.

I used every precaution to assure myself of the correctness of the observation. An astigmatism of 1.75 D. had disappeared and the vision had changed from $\frac{6}{18}$ to $\frac{6}{5}$.

It is hardly necessary to add that the refractive error of the unoperated eye was unchanged.

A detail which may not be without interest, inasmuch as it shows how complete was the tenotomy, is that the patient saw double (homonymous images) for several days. To remedy this, I thought of using a suture, but feared to bring back the astigmatism by increasing tension in the horizontal meridian. The diplopia disappeared of itself, and on January 2, 1903, the patient had binocular single vision in all parts of the field.

The improvement of the sight, observed three days after the operation, was maintained as long as the patient was under my observation.

Although the operation has given great satisfaction to the patient and seems to have had an excellent effect, I desire here to express my opinion that such an operation, for the cure of astigmatism, should be undertaken only in very exceptional cases.

The importance of this case depends, not upon the

³ *Bulletin de la Société Française d'ophtalmologie*. Tome xviii, 1901, p. 414.

cure of an astigmatism, but upon the light which it throws upon other questions.

If a tenotomy of one of the straight muscles of the eye can have the effect observed in this case, it is obvious that the tension of the external muscles has an important bearing on intraocular tension.

It has often been remarked, though the coincidence has never been explained, that inverse astigmatism, sometimes progressive, is singularly common in glaucoma. I venture to suggest that the cause of this curious coincidence may be found in the position and relative tension of the ocular muscles.

I have had neither the time nor the data to enable me to give proper consideration to this question, but I propose to examine carefully the muscles of eyes affected with glaucoma or predisposed to that disease, in order to determine whether we may not give relief to that condition by tenotomy.

Original Communications.

IMMIGRATION

A FACTOR IN THE SPREAD OF TUBERCULOSIS IN NEW YORK CITY.

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A little more than a year ago many criticisms and expressions of disapproval were aroused by the action of the government authorities at Ellis Island in debarring a consumptive immigrant from landing; and yet it should be apparent that when the State legislatures of both Colorado and California have seriously proposed to quarantine against tuberculous citizens from other States, the propriety of excluding aliens affected by pulmonary tuberculosis may at least be considered a suitable subject for unbiased discussion. The immigration law of 1891 excludes "persons suffering from a loathsome or a dangerous contagious disease." It would seem that tuberculosis, as presented in the ignorant and filthy immigrant from Southern or Eastern Europe, would come within the meaning of the Act. It is true that the conscientious, educated consumptive may reduce the danger of infection to others to a minimum by a nice regard for the well established, sanitary precautions necessary, but any one familiar with the character of recent immigration will be convinced that few of this class enter the country by way of Ellis Island. The distinction which the health department of New York city has sought to establish in classing tuberculosis as a communicable and not a contagious disease is rather academic than practical, when it is considered in connection with the illiterate and dirty im-

migrant. In the ignorant and vicious, tuberculosis of the lungs may be fairly considered a contagious disease, as a constantly accumulating mass of testimony proves, and it should be so treated. "Communicable" is a euphemism which may be permitted in order to spare the feelings of a sensitive patient, but "contagious" more nearly expresses the true nature of the disease as it occurs in the average immigrant of to-day. It is not the exclusion of one tuberculous immigrant, then, but the admission of many unrecognized cases in the cursory and oft times perfunctory examinations at Ellis Island, which is contrary to a sound and enlightened public policy. It is inconsistent that diseases such as favus and trachoma, which at their worst are not inimical to life, do not usually interfere with the patient's ability to support himself and family, are not more infectious than tuberculosis, and are certainly more amenable to treatment, should be deemed sufficient ground for exclusion, while the more dangerous consumptive, with his uncontrolled habit of expectoration, should be admitted through a singular exercise of sentiment in his favor. Infection in trachoma and favus is readily traced to immigrant sources; in tuberculosis the course of the disease is slow and insidious, and immediate sources of infection are less easily recognized. It is perhaps for this reason that the danger of the tuberculous immigrant to the health of the community has not been emphasized as it should be. Besides being a source of possible danger to all who come in intimate contact with him, he is almost sure to become a public charge himself, and in addition will often inflict posterity with a defective progeny, which, like the notorious Jukes family, will present in ever increasing geometrical progression, problems in disease, pauperism, and heredity for future generations. To prevent the incursion of numerous cases of tuberculosis which now slip in unrecognized, the medical staff provided at Ellis Island is inadequate, and it should be increased to a sufficient extent to make possible the detection of all cases. For this purpose the naked chest of each immigrant should be examined by a competent physician, skilled in the early diagnosis of tuberculosis.

Congress is engaged in a revision of the immigration laws, and at the present session it appears likely that the entire question in its social and economic bearings will be carefully considered, with a growing tendency to a more exacting scrutiny of the applicant for admission to our borders. The discussion of the medical aspects of immigration may be properly taken up by the physician and hygienist. More rigid measures of restriction have been rendered necessary by the changing character

of the immigrant himself. A generation ago the sturdy Irishman or stalwart German who constituted the bulk of immigration at that time, did not tarry in populous Eastern cities, but sought in the undeveloped West an outlet for his energies, and on farm and cattle range, in mine and forest, with his brawn and intelligence, was a welcome producer of national wealth and a source of health and power to the country. He and his children soon assimilated American ideals and became as good and as useful citizens as the best native born. He has been replaced to-day largely by the down-trodden Russian Hebrew and the degenerate Sicilian. The centres of immigration have shifted from Northern and Western Europe to the countries populated by the Latin, Semitic, and Slavonic races of Southern and Eastern Europe, whence comes to-day more than seventy per cent. of all immigration to this country. These peoples have not the clean bodies, pioneer spirit, or love for the institutions of their adopted country, of the Irishman or Anglo-Saxon. They make the un-American ghetto, the sweat shop, and the over-crowded, unsanitary tenement of our large cities; and New York is the greatest sufferer, for here most of them remain. They show no disposition to seek the soil; they are for the most part non-producers and occupy a low position in the industrial scale as pedlars, second-hand clothing dealers, push-cart men, fruit vendors and petty shop keepers, or as sweat shop tailors and unskilled laborers. Their gregariousness causes them to herd together in thickly populated urban communities of their own nationality, thereby lowering the standard of living among the city poor, and making their own education in the elementary principles of hygiene, slow and difficult. The tenement landlord derives an increased income by renting to the swarming Jew and Italian who crowd two or three families into rooms affording a decent accommodation for but one. It is becoming constantly more difficult for clean, self-respecting families to be comfortably housed, and there can be no doubt that the want of sunlight, fresh air, and baths, and the miseries of overcrowding are among the chief agencies in the production of new cases of tuberculosis in this city. All efforts to divert this stream of immigration from cities, and to distribute it in country districts have failed. Even the assisted agricultural colonies, in which ample means for the experiment have been provided by the generous philanthropy of the Baron de Hirsch fund, have met with little success.

It so happens that the Italians and Jews are at present the most numerous in the large class of unworthy immigrants, and many of the immigrants from Russia, Austria, and Southern Italy are physi-

cally and economically less desirable than the Chinese who are now excluded. Restrictive legislation, however, should be framed on broader than invidious national lines, and it should be possible to devise a law so comprehensive as to exclude the dangerously diseased, the pauper, the criminal, the illiterate, the degenerate and undeveloped of any and all nationalities, without singling out the Chinaman, the Slovak, the Italian, or the Jew.

Many observers have declared that a relative immunity from tuberculosis exists in the Hebrew race. The observation appears to have been well founded, but this immunity is fast disappearing in New York, for an ever-increasing proportion of cases in hospital and dispensary practice belongs to this nationality. In 1895 only two per cent. of the applicants for relief to the United Hebrew Charities were tuberculous; in 1899 the proportion had increased to 3 per cent.; and in 1902, according to the twenty-eighth annual report of this society, among 10,061 applicants for aid the proportion had risen to 4.8 per cent., and of all those seeking relief on account of illness more than 18.5 per cent. were consumptives. In an article entitled Health and Sanitation of the Immigrant Jewish Population of New York, in *The Menorah* for July, 1902, Dr. Maurice Fischberg says: "Physically the Jews appear to be inferior to all other people in New York city. Their average stature is from five feet one inch to five feet three inches, which means that they are the most stunted of the Europeans, with the exception, perhaps, of the Hungarian Magyars being about the same height as the average American youth between the ages of fifteen and sixteen. Another characteristic of the Jews is their narrow chest. We know that in the majority of healthy individuals the girth of the chest exceeds half of their stature. In the case of the Jews we find the majority show a chest girth less than half of their height. This, added to their illy developed muscular system, their emaciation and also the frequency of anæmia amongst them gives them the appearance of a sickly people." It is difficult to interest them to any extent in athletic sports, or in occupations involving the exercise of strength or muscular activity. Writing of the great need of physical development among them, Dr. Fischberg continues: "If this is not attended to, there is great danger that in the near future the inimical sanitary surroundings, the poisonous air in the congested 'double-decker' tenements, will deteriorate the physical condition of the people to such an extent that all their peculiar resistance to the infectious diseases will disappear, and they will succumb to the ravages of disease, particularly con-

sumption, in numbers hitherto unknown in the history of civilized mankind."

In a recent address, Mr. Jacob de Haas, secretary of the Federation of American Zionists, said that "in the last twenty years more than \$25,000,000 had been spent for charities among the Jews, but what had been the return? Practically nothing for the final betterment." Also he stated that "in Wilna thousands live in hovels two flights below the streets, while it is no uncommon thing for two families to occupy a single room nine feet square." That their condition in New York is but little, if any, better is apparent from the following description by Dr. Lee K. Frankel published in the annual report of the United Hebrew Charities for 1901: "The horrible congestion in which so many of our coreligionists live, the squalor and filth, the lack of air and sunlight, the absence frequently of even the most common decencies, are too well known to require repetition at this writing. Even more pronounced are the results accruing from these conditions, the vice and crime, the irreligiousness, lack of restraint, indifference to social conventions, indulgence of the most degraded and perverted appetites, which are lately growing more pronounced and offensive." In these presentments by experienced observers there is material for thought for those who are interested in the warfare against tuberculosis, as well as for the well-wisher of American institutions.

The immigrant from Southern Italy is usually superior physically to the Jew, but he, too, accustomed to life in a mild climate and amid whatever other disadvantages, enjoying at least an abundance of sunlight and air in the out-door life of Southern Europe, will often speedily succumb to tuberculosis in our varying climate and in the unsanitary life of the New York tenement.

If the total expenditure now made necessary in this city by the worthless and dependent immigration flocking hither, were available for the construction of sanatoria and improved tenements, it would go far toward a permanent solution of the problem of caring for the city's tuberculous poor. It may well be doubted if the care of wretched, alien degenerates who are the products of centuries of oppression and misrule abroad is any legitimate burden for the hospitals and charitable institutions of this city, especially as it has been conclusively shown that European governments and societies, in many instances, have directly encouraged and assisted emigration of this class, as a means of ridding themselves of the worst elements of their population. As bearing upon this point, Mr. Henry Rice, president of the United Hebrew Charities, in the twenty-seventh annual report of his society says: "Hitherto

we have had to bear the burden, which should properly have been borne by our British coreligionists. They (the London Board of Guardians) were perfectly willing to furnish free transportation to those persons who were unable to make a living in England, but who believed if they could only reach the shores of America (which means New York to all Jewish immigrants) their troubles would be at an end." The inspector sent by the treasury department to investigate and report on the conditions in Europe regarding immigration to this country reports that of 373 diseased persons rejected at Antwerp from January 1st to August 9th of last year, not more than forty, it is estimated, failed to get over to Canada, and thence reach their destination to this country. A line of steamers sailing from Hull to Quebec and Montreal has made a regular business of bringing in diseased immigrants rejected by direct lines coming to this country. As one passenger agent expressed it in speaking of this back door Canadian route, "any one is accepted who is capable of walking off the ship." Mr. Robert Watchorn, special inspector of immigration, in the government annual report for 1902, thus writes of the class smuggled in from Canada: "I unhesitatingly assert that no human beings who ever came under my observation presented a more forlorn and hopelessly unimprovable appearance than those who have attempted to enter the United States via the Canadian border. The Canadian route to the United States is known to every unscrupulous agent in Europe, and is by that means made known to the very dregs of society, many of whom having been rejected at United States ports sought this easy mode of escaping the effect of official vigilance." The United Hebrew Charities have estimated that 75 per cent. of all their dependents come to them by Canada. Israel Zangwill, with all the charm of his literary art, has in *The Land of Promise* woven a pretty story about a Jewish immigrant maiden whose dark eyes flashed behind trachomatous lids, and was for this reason refused admission at Ellis Island. The distinguished author relates with apparent approval the incident of her return and subsequent entrance by stealth through Canada. What can be expected from a class of future citizens whose first act in relation to the country is a violation of the law? As law breakers they will probably have but little respect for the sanitary or other statutes of their adopted country.

Of 497,791 steerage passengers inspected upon arrival at Ellis Island last year, there were certified on account of dangerous contagious or loathsome diseases or other physical causes 2,833 persons. The increase of alien immigration over the previous year was not quite one third, yet the comparative

increase of diseased immigrants for the same period was more than two to one. Of the entire number of diseased persons reported, only twenty-nine were certified for tubercle of the lungs, one for chronic phthisis, and eight for chronic pleurisy, according to the report of the Commissioner-General of Immigration to the Treasury Department for 1902. It cannot be doubted that among this large total number of immigrants admitted, many cases of unrecognized tuberculosis were passed, as the staff of examiners is too small to permit any but the most hasty and superficial examination. If the proportion of tuberculous were the same for the entire number of immigrants coming to this country as for applicants for aid of the same class to the United Hebrew Charities, 4.8 per cent., it would make the total number of consumptives admitted 23,893 for the one year 1902. This figure, indeed, might with reason be considered too low an estimate, as the percentage of tuberculous among the Jews has been shown to be much below that of other nationalities. There is no available means, however, of estimating the proportion of consumptive immigrants among other races. Even the half or tenth part of this conjectural estimate would constitute an amazing figure, and should emphasize the importance of a careful physical examination for every immigrant.

Besides the peril to our own population of admitting large numbers of consumptives, the conditions aboard ship are most favorable for the contraction of the disease by the healthy steerage passenger in the poorly-ventilated, over-crowded, cramped, and unsanitary quarters of the steerage. In justice to the healthy immigrant, steamship companies should not be permitted to embark tuberculous passengers, without at least making suitable provision for them in separate quarters under proper hygienic supervision.

Illiteracy in the immigrant of to-day renders futile in great measure the propaganda of education against tuberculosis in New York among the classes who need it most. It is idle to post municipal ordinances against spitting, the distribution of tracts and circulars inculcating the prevention and hygiene of tuberculosis can have little effect, and newspaper articles teaching the public the dangers of consumption and the importance of its early recognition are wasted on the numerous illiterate among our recent immigrant population. The report for 1902 of the committee on tuberculosis of the United Hebrew Charities states that "The distribution of pamphlets was attended with but little success as the desire and ability to read and understand them were usually lacking. Practically all the good that was accomplished was through verbal guidance." Of the

648,743 total immigrants to this country in 1902, 574,680 were over fourteen years of age. Of this number, 162,188 could neither read nor write, and 2,917 could read but could not write, representing more than 28.7 per cent. of illiteracy. This figure, however, does not accurately include the entire proportion, for many of the children between ten and fourteen who are illiterate will remain so after their arrival in this country, as they are put to work in many cases by their parents instead of being permitted to go to school. Of those nationalities sending considerable numbers of immigrants, the worst showings for illiteracy are made by the Syrians, Ruthenians, Slovaks, Poles, Southern Italians, Hebrews, Greeks, Croatians, and Slovenians, and these races contribute the greater part of all immigration at the present time.

Certain occupations are recognized as favoring the development of tuberculosis on account of their in-door and sedentary character, or exposure to irritant dust and vapors. The immigrant Jew, by force of circumstances or choice, is found mostly in these unhealthy occupations. Of 57,688 Hebrew immigrants for 1902, no fewer than 6,110, or considerably more than 10 per cent., were tailors. If from the total number 25,952 women and children are deducted, the proportion of adult male Hebrews who were tailors would rise to nearly 19 per cent. Five hundred and forty-nine were clerks and accountants, 2,246 were put down as merchant dealers and grocers, 2,018 were carpenters and joiners, 232 were workers in tobacco, 592 were bakers, 1,285 were shoemakers, 808 were painters and glaziers; only 58 were farmers, 317 farm laborers, and 17 gardeners. The Southern Italians who share with the Jews the distinction of being least desirable as immigrants of those nationalities which are coming in large numbers, are more fortunate in their occupations as regards liability to tuberculosis. A large proportion of their number are farmers, out-door laborers, gardeners, and sailors.

As regards geographical distribution of this ever swelling tide of worthless immigration, New York city naturally fares the worst of any spot in the country. Of 57,688 immigrant Jews in 1902, 39,520 declared New York State to be their destination, and for nearly all of them that meant New York city. Of the 152,915 Southern Italians, 79,545 gave New York State as their place of future residence, and of these the greater portion, doubtless, remained in this city. Nearly a third of the total number of immigrants on arriving gave New York State as their final destination. The advocates of practically unrestricted immigration sometimes urge the requirements of the unskilled labor market as a reason for the admission of all comers.

The supply of laborers would not be affected by a health test excluding the tuberculous, for these unfortunates can never be of much value in any productive capacity.

It must be admitted that at present the privilege of admission to this country is held too cheaply and is granted too unreservedly, to the detriment of our social well being and bodily health. If notification to the health department is necessary in cases of tuberculosis, if disinfection after death of the premises occupied by the consumptive is a justifiable requirement, if the position of the French government is sound in its recent measure prohibiting tuberculous schoolmasters from teaching in the French schools, then tuberculosis is certainly a disease which may properly be quarantined against, and the tuberculous alien immigrant should in every case be refused admission to the country. Let the consumptive, who is ever among us, be treated with gentle sympathy and intelligent care—his lot is indeed hard enough—but there should be no false sentimentality in the matter of excluding additional sources of infection. That the enforcement of a sanitary or other law entails hardship in individual cases is no reason for its not being executed, if in the first instance the law is a wise one and works for the good of the greatest number. All sanitary legislation is more or less a question of expediency. Recent hygienic reforms have already accomplished much in lessening the prevalence and mortality of tuberculosis, and it is the belief of the writer that no more promising step in further diminishing its ravages can be taken to-day, than by instituting a careful inspection, and the rigid exclusion, of the thousands of tuberculous immigrants, who, it is believed, are now coming to this city each year. In adopting such a measure, there need be no fear of reprisals in the form of retaliatory legislation by European governments, for fortunately this country has no indigenous elements of its population at all comparable to the diseased paupers which Europe is sending so freely to us. If we had, and the tide of such immigration were reversed, all experience indicates that European nations would know how to protect themselves, and would promptly take the necessary steps to do so.

Registration on Diploma may be Abolished in Michigan.—At a recent meeting of the Michigan Board of Registration in Medicine several amendments to the present medical practice acts were discussed. Among these amendments was one empowering the Michigan board to accept certificates issued by boards of other States. It was also proposed to require that all applicants for registration be examined, whether they are graduates of a recognized medical college or not.

TUBERCULOUS LARYNGITIS.*

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Tuberculous laryngitis has always been looked upon with much dread, the physician and friends of the patient feeling that the disease marks the beginning of the end. It will be my pleasure this evening to draw your attention more closely to this class of cases, and I hope to show you that a certain number of subjects of these lesions do recover, and the ulcerations heal so nicely that it is almost impossible to note the scar, unless the location of the ulceration has been carefully noted before healing.

In the last decade the treatment of laryngeal tuberculosis has undergone a great change, the local treatment of the organ has given away to non-interference, and it is to be hoped that this policy of leaving the larynx alone will continue. Many a poor sufferer has been hastened into eternity by an active, over-zealous, local medication of the organ afflicted, the specialist believing that as an ulceration exists it calls for treatment, and forgetting the fact that the patient suffers also with a tuberculous lesion of the lung.

The writer does not believe that a primary tuberculosis of the larynx ever exists. It is always a secondary process to phthisis, and the pulmonary involvement may be so slight that it is not recognizable.

Ten years ago these cases were sprayed, curetted, and cauterized with lactic acid, in the belief that this would destroy the bacilli. This treatment appeared to me so harsh that I never had the courage to use it.

About four years ago, when Dr. Walter F. Chappell read a very interesting paper advocating submucous injection into the larynx, it was my good fortune to have under treatment at Bellevue Dispensary seven cases of tuberculous laryngitis. We were using at this time only morphine to give the patient relief, discarding all direct applications to the larynx. We decided to divide the cases and begin again some active local treatment. The cases were divided as follows:

Two patients were given treatment with creosote directly to the larynx.

Three patients were given U. S. solution of morphine and creosote internally.

Two patients were given simply U. S. solution

* Read before the Northwestern Medical and Surgical Society, December 17, 1902.

of morphine. All these cases had well marked tuberculous lesions in the lungs.

The patients treated locally with creosote improved very much in the first ten days, and then a return of the disease occurred. The larynx became rapidly infiltrated and the patient promptly succumbed.

The two patients taking U. S. solution of morphine did not show much improvement; when the bad weather set in they rapidly grew worse, and both died in less than three months.

The three patients to whom the creosote mixture and the U. S. solution of morphine were given did better than the others. They lived from four to six months longer, passing through their illness with far less suffering than the two in whom creosote was used locally in the larynx. This confirmed the belief that the mucous membrane of the larynx, just as the mucous membrane in any other part of the body, should receive the most gentle treatment.

I then began to study the lesions of tuberculous laryngitis more carefully, and soon found that ulcerations in certain parts of the larynx differed very much. Upon closer clinical study I decided to divide tuberculosis of the larynx into two main classes, and upon them to base my prognosis.

First, cases where the ulceration is confined to the true cords, ventricular bands and interarytænoid commissure, without infiltration of the surrounding structures.

Secondly, cases with ulceration of the aryttænoids, aryepiglottic fold, true cords, and ventricular bands with infiltration, or infiltration without ulceration.

In patients with ulceration without infiltration, and with pulmonary involvement not far advanced, particularly where little digestive disturbance has occurred and the patient can well tolerate large doses of creosote, the chance for recovery is good, even on Manhattan Island, and I give a favorable prognosis in these cases.

But if the case comes under the second division, when infiltration of the aryepiglottic fold and aryttænoids has occurred, no matter how slightly, the patient will certainly die unless he can at once be removed to a high altitude and dry climate. If to the infiltration is added an ulceration of the aryepiglottic fold and aryttænoid, the patient will die in from three to six months. It is folly to send these patients away from home and friends when their last days might be made more comfortable.

There is another condition of the larynx little mentioned in text books. This is the condition we call mixed infection. By this is meant tuberculous and syphilitic ulcerations existing side by side. Patients of this class of cases do very well indeed if

the diagnosis is made early enough and treatment instituted, not for tuberculosis, but for syphilis. The syphilitic virus seems to act as an antitoxine to the tuberculous infection, and while the syphilis is active, the tuberculous ulceration is quiet. In other words, if there is a tuberculous process in the larynx and syphilis makes its appearance, the tuberculous ulceration becomes inactive.

Great care must be taken in using the iodides under such a condition, because the larynx will not tolerate such large doses as when no mixed infection exists. It is necessary to watch the larynx carefully, and just as soon as the syphilitic ulceration is healed, the iodides should be stopped, mercury should be given by inunction, and creosote should take the place of the iodides.

The diagnosis between tuberculous and syphilitic ulceration of the larynx is sometimes very difficult to make, even if the tubercle bacilli are found in the sputa. It must be remembered that, in patients who have tuberculosis of the lung and have an ulceration in the larynx, the process need not necessarily be tuberculous.

If, upon examination the larynx, the aryttænoids, and true cords are found to be thickened, with edges ragged, voice husky, surrounding tissues œdematous, of pearly appearance, and looking as though serum would flow on puncture with a knife, with infiltration of the aryepiglottic fold, one can safely make a diagnosis of tuberculous laryngitis.

Syphilis of the larynx will present a different aspect. Ulcers deep and having a punched out appearance; usually unilateral; mucopurulent secretion; dyspnœa slight, if paralysis or much thickening exists. The whole larynx is intensely red and infiltrated. The patient will have no pain, only an annoyance in swallowing. As regards the pain in laryngeal affections, it is more often absent than present in ulceration of the cords, ventricular bands and interaryttænoid commissure. Pain is, however, always present and severe when infiltration has occurred, or if ulceration of the aryepiglottic fold or aryttænoid exists.

There is another condition of the larynx to which I wish to call attention, because it is often mistaken for tuberculous ulceration. Such a diagnosis causes the patient great worry and annoyance. Patients frequently present themselves complaining of cough, difficulty in breathing, voice husky, with or without pulmonary phthisis. Examination of the larynx shows a thickening of the interaryttænoid commissure, presenting a stellate appearance frequently mistaken for an ulceration. This condition is a hyperplasia of the mucous membrane. It is caused by the constantly recurring attacks of subacute laryngitis. It is often found in washerwomen, as they expose

themselves so much while at work. They get in a dripping perspiration and then, without throwing anything around their shoulders, expose themselves at a window or roof.

This condition calls for careful treatment and should never under any condition be cauterized, because if the patient has tuberculosis we expose a raw surface to all infections as well as to a sudden attack of œdema of the larynx.

The nose should always be examined, and if any obstruction is found it should be removed, unless the tuberculosis is far advanced. In the early stages I do not hesitate to operate and remove any deflected sæptum or section of inferior turbinates. If adrenalin is used and the patient is put to bed he will lose very little blood; and I think it is better to make a clean cut than to subject the patient to repeated cauterization.

When confronted with a case of tuberculous laryngitis, the question arises, What is the best treatment for this particular case? If the patient has means, we must decide whether it is best to send him away, and where. If we find the arytænoids and aryepiglottic folds infiltrated or ulcerating, the patient should be kept at home, as he will die in from three to six months. He should receive morphine enough to keep him comfortable and to quiet his cough. Creosote should not be given in these cases, as it irritates the mucous membrane. I have never seen this class of cases improve, no matter where you send them, or what you do for them. But if the tuberculous deposit has not broken down, then the patient, if his means will admit, should be sent away; I prefer to send these patients to the Adirondack Mountains, and if the pulmonary involvement is not too far advanced the patient has a fighting chance of recovery.

The second class of cases—where ulceration of the interarytænoid commissure, ventricular band, and true cord exists, but where infiltration is absent—will do well on large doses of creosote; and if the drug is well borne by the patient, a large percentage of these patients will recover, if they are made to lead an out-door life. These patients will do well on Manhattan Island and need not be sent away.

I use beechwood creosote in either liquid or pill form. Carbonate of creosote I have given up using, as after a fair trial I find that the beechwood creosote acts better.

I will not attempt to explain how creosote acts, but I have watched the larynx very carefully and have seen the ulcers become more healthy as the dose of the drug has been increased. I have seen the ulcers heal, as in the case of Lyman, whose larynx healed under thirty drops of creosote four

times a day, though his cords remained congested. As he was in fine condition, I decided to push the creosote to the limit and finally reached in two weeks' time fifty drops four times a day. One could see the congestion gradually disappear and the cords become whiter. In four weeks' time they appeared normal, and all that can be seen now is the scar on the left cord.

I kept him at this dose for six weeks and then he disappeared. Without my permission he began to increase the dose at the rate of three drops a day. He finally took 100 drops t. i. d., which he kept up for two weeks. When he came under observation again he showed the constitutional effect of the drug. The creosote was discontinued and he was all right in one week. His pulmonary disturbance improved at the same time—the large cavity in the right apex has cicatrized, and the left one is healing nicely.

I always insist upon these patients bathing every morning in as cold water as possible, sleeping in a well ventilated room, southern exposure if it is to be had, and the windows wide open, but I never allow them to dress in a cold room. I am also very particular about their underwear and try to impress upon them the idea that underwear is worn for cleanliness, and not for warmth, and that they must depend upon outside clothes for comfort. I have them wear a linen or cotton mesh, as by this means a healthier condition of the skin can be maintained, and the danger of congestion to the mucous membrane of the nose and throat can be greatly reduced. In one case of laryngeal tuberculosis I have used the application of the x ray. The case was one where infiltration existed, with œdema and ulceration of the left arytænoid and ventricular band. The swallowing and pain were much relieved for the first ten days of the treatment. The larynx, however, became very much inflamed, causing an increased difficulty in swallowing, and severe pain. He was given fourteen treatments, one exposure every other day; the inflammation and pain continued for several days and then the larynx returned to the condition it was in before exposure.

Dr. McDonald, of Edinburgh, reports cases in which he has used the brush exposure with good results. I should hesitate to use this in any case showing ulceration without infiltration. This treatment is in its infancy as yet. I should not advise any spraying of the larynx, as all these patients are very sensitive and the mildest solution irritates, causing the patient to strain and cough, which is the very thing we wish to avoid.

The operation of laryngofissure, tracheotomy, or partial resection of the larynx should never be advised. When the ulceration becomes so far ad-

vanced that the patient is not able to swallow food, what advantage will a laryngofissure or a tracheotomy tube be to the patient? These patients die from starvation, not suffocation.

The following cases of tuberculous laryngitis may prove of interest:

CASE I.—Peter Lyman, aged thirty-one years, driver by occupation, presented himself for treatment on August 24, 1899. Father died of paralysis, aged forty-nine years. Mother died of dysentery. Patient was in good health, weighing about 145 pounds, up to about eight years ago, when he noticed shortness of breath and nervousness. He obtained relief by medicine. In 1897 cough and expectoration appeared with hæmorrhages, off and on for two years, and in June of the same year he was taken to Bellevue Hospital suffering from pneumonia. He presented himself at Bellevue Dispensary having just been dismissed from the hospital. He complained then of husky voice, cough, and expectoration. His weight was 90 pounds, and his emaciation marked.

The examination showed the pharynx very anæmic. Larynx: right cord normal; posterior one-third of the left cord the seat of a large ulceration. The rest of the cord very much congested and thickened. Arytænoids, ventricular bands, and interarytænoid commissure anæmic; no infiltration or œdema in any other part of the larynx.

Dr. Herman Reis examined the lungs and diagnosed a cavity at each apex. When I first examined this patient I gave an unfavorable prognosis and thought he would live about two months. Now, three years later, after just recovering from smallpox, having been confined to the hospital for five weeks, his larynx is in perfect condition. Dr. Reis was again asked to examine him and I give his report in full.

"Fremitus increased over the left apex, anteriorly and posteriorly; marked dullness over left upper lobe, anteriorly and posteriorly, extending down posteriorly to about the eighth rib. Breathing over the left upper lobe cavernous, with some large gurgles anteriorly. Posteriorly, some few crackling râles with prolonged expiration. Right apex posterior, breathing slightly high pitched and prolonged and a few râles. A few fine râles are heard posteriorly on left side at about the seventh or eighth interspaces, with slight dullness. Bronchophony very distinct over left upper lobe anteriorly and posteriorly, and also at right apex posteriorly."

The board of health examined the sputa on April 7, 1902, and reports a few tubercle bacilli.

Treatment.—This patient was started upon cod liver oil, one ounce four times a day, and still continues to take this large amount. He was also started upon pure beechwood creosote, five drops in a large amount of water after each meal for one week, then ten drops for one week, and increased five drops every week until he was taking twenty drops three times a day; this was continued for four months. Then it was increased to thirty drops four times a day, which he took for eight months. He then increased the dose to forty drops t. i. d., and continued this for one year. Finally he took

fifty drops, t. i. d., for four months. The climax was reached when, without my knowledge, he took 100 drops of creosote three times a day. This large dose he had taken for five weeks when he presented himself. The only symptoms present as a result of the large dose were smoky urine and anæmia. The medicine was at once discontinued and all symptoms disappeared in a week. Since then he has continued to take twenty-five drops of the drug after each meal. I saw this patient yesterday, and found his larynx absolutely normal.

CASE II.—In June, 1899, Mr. J., a policeman, presented himself with a troublesome cough, a profuse expectoration, and husky voice. His temperature at the time of his first visit was 103° F. The patient had been ill for three months, his trouble having started with chills and fever. Examination of his larynx showed an ulceration of the left cord and interarytænoid commissure without infiltration. The larynx was anæmic as well as the pharynx. Examination of the lung showed dullness on percussion over the right lung posteriorly. Breathing was of a bronchial character. The expectoration was very profuse and of very foul odor. The foul odor of the sputa pointed to gangrene of the lung. Microscopical examination showed the presence of tubercle bacilli. The patient had lost forty pounds in weight.

Tuberculous laryngitis cases with high temperature usually do poorly, and the prognosis is very unfavorable. The patient was strongly advised to leave the city and seek a more favorable climate. He did not leave, but led an out-door life, drank plenty of milk, slept with the windows widely open, paid attention to his skin and, finally, made a complete recovery. The treatment in this case was entirely medicinal, no local treatment of any description being used. He was given five drops of beechwood creosote three times a day after meals, well diluted with water. This dose to be increased daily by one drop. The largest quantity of creosote that the patient could take at one time was nineteen drops four times a day. These cases need careful watching while the patients are under treatment. The appearance of the lesion in the larynx should be the guide to the amount of medication called for. If the ulceration appears to be stationary in its tendency to heal, and the patient's tolerance for the creosote is good, the dose should be increased. Should the stomach refuse, the dose of the creosote must be reduced. The laryngeal ulceration in these cases may be taken as an index of the extent and progress of the pathological lesion in the lung. If the tuberculous ulcer in the larynx heals kindly, we can be assured that the lung lesion is also on the mend, because no ulcer will improve if the pulmonary lesion is progressive. In this patient the administration of creosote was followed by great improvement of all symptoms, and six months later the larynx presented a normal appearance.

The cough promptly subsided, the expectoration diminished and the patient never even left the police force. He was put on day duty and an outdoor life was thereby encouraged. He continued his treatment for eighteen months, the pulmonary symptoms

disappeared, and on examination of the chest three years later only a slight dullness on percussion could be made out. The patient was seen last July; he had then regained his normal weight and felt as well as ever.

62 WEST FORTY-SIXTH STREET.

THE MODERN ASPECT OF COMMON "COLDS."

By JOHN ZAHORSKY, M. D.,
ST. LOUIS.

He who reads the latest treatises on the acute diseases of the upper air passages will observe the tendency everywhere to abandon the old theory of "colds." In spite of the tenacity of old beliefs, it is becoming generally recognized that the so called "colds" are not due to cold at all, but depend on the activity of pathogenic microorganisms. The clinician who observes an epidemic of these colds permeate a household or a school, attacking almost every member in a varying degree, or who watches the gradual extension of the local inflammatory process from the nasopharynx to the larynx and trachea, can compare these phenomena only with others which have been clearly demonstrated as produced by bacteria.

In a previous paper I have considered the effect of cold on the air passages (Cold as an Ætiological Factor in Diseases of the Air Passages, *St. Louis Courier of Medicine*, June, 1900), and discussed the evidence which places these diseases among the infectious diseases. Here I will only briefly refer to the reasons why we must accept this ætiological concept.

1. Colds run a more or less definite course. If colds were merely reflex congestions, these should terminate soon after the excitant ceased. As a matter of fact, colds last from three to seven days in spite of our therapy.

2. The inflammation begins at one point and spreads up and down the respiratory tract. This is a common observation, and very much resembles the dermatitides of infectious origin; *e. g.*, erysipelas.

3. Colds are accompanied by fever and general symptoms. This is especially true among infants. These general symptoms are usually proportional to the extent of the local inflammation.

4. Microscopically, as well as macroscopically, inflammatory changes are found in the mucous membrane.

5. The ordinary secretion of the mucous membrane is soon replaced by a discharge more or less purulent.

6. Specific microorganisms have been isolated from these secretions. Among these, the *Bacillus*

influenzæ, *Diplococcus lanceolatus*, Friedländer's bacillus, streptococcus, etc., have been demonstrated.¹

7. The varying clinical picture of colds speaks for a variety in the virulence and character of the bacteria.

8. Colds are contagious. It is hard to conceive how this clinical fact, so easily demonstrable, has received so little attention in the literature of the past. In schools, asylums, and hospitals this fact is very clearly shown almost annually. In family practice, too, the development of one case after another in spite of care is a very common observation.

9. A relative immunity follows each attack. Were colds merely reflex congestions, these congestions should appear after each exposure. But after an attack the individual will be free from a cold for some time.

As to the actual part played by cold in these diseases, much doubt still exists. The fact that many people get swollen turbinated bodies after being in the cold has probably little influence with the acute diseases. When a person is out of doors and inspires cold air, there is an unusual roominess in the nasal passage, and on his entering a warm room the turbinated bodies swell, and there is a slight secretion. This is a relaxation of the vasomotor apparatus, which had been overstimulated by the cold. This passes off in a few hours. Whether this condition of the mucous membrane predisposes to infections is debatable. Certain it is that a vast majority of colds are contracted without any exposure.

The subject is much simplified by searching for the origin of "colds" in contagion. They are contracted one from another. The immunity conferred by an attack is fleeting. In some individuals it lasts for a few weeks only, in others for months or even years. The susceptibility to "colds" is simply a diminished resistance of the respiratory tract to the invasion of certain microorganisms. In some persons the local immunity is so short that they have repeated colds during the winter. Repeated colds may also be explained on the ground that different germs produce disease at different times.

The question of whether the germs of "colds" are always present and only need a diminished resistance produced by exposure to cold to initiate the disease is undecided. If one carefully studies house epidemics of bronchitis, it will usually be found that the schoolboy or parent who mingles with others brings the disease home. In most cases the disease can be traced from one having a cold to another, so that autoinfection must be very uncommon. Even when the influenza bacillus, or the diplococcus is accidentally present in a mucous membrane, the immunity

¹ For an extensive study of these microorganisms, see Supplementary Volume, *Twentieth Century Practice of Medicine*.

from a former attack must have passed away before another attack can be initiated.

The great factor which makes these diseases more prevalent in the winter season is the same that makes diphtheria and scarlet fever prevail. In summer, gastroenteric diseases prevail because the bacteria have a better chance to reach the alimentary canal in numbers sufficient to cause disease. In winter, the respiratory diseases prevail because more germs reach the respiratory tract from one person to another due to the commingling of people in houses in which ventilation is imperfect. In summer, we live always in the open air, for the windows and doors of our residences are open. In winter these are closed and the air is stagnant. Air infections are, therefore, very prone to occur. The work of Flügge and his pupils has clearly elucidated the mode of air infections. The infectious particles discharged through sneezing or coughing can only be carried from one to another when the air is stagnant. An air infection in the open air must be viewed as a curiosity, if it ever occurs.

If we accept this ætiological concept in regard to "colds," our prophylactic and therapeutic principles must accordingly be changed. When we desire to harden the body against colds we seek to alter the local and general states, so that the inroads of bacteria may be prevented. The general nutrition should receive the first attention. The digestive apparatus should be examined. A change in diet is often advantageous. Healthful outdoor exercise, regular bathing,² and correct habits add to individual strength. The chronic deformities and affections of the upper air passages must be corrected by appropriate means.

Great depressions of the body in the seasons when colds are prevalent must be avoided. In this category belong excessive fatigue, mental worry, exposure to cold, and overheating.

The infectious cause may be avoided by living as much as possible outdoors. Crowded, ill ventilated rooms should not be entered. Persons with "colds" should be shunned. One should always sleep in a well ventilated room regardless of the terrestrial temperature.

Until we make a specific diagnosis of the microorganism present, and possess a specific treatment for each infection, our therapeutic efforts will remain, as they are at present, very unsatisfactory. We can very rarely abort a cold. The disease must be treated symptomatically; we make the patient comfortable. The infections are, no doubt, overcome by the forma-

tion of specific antibodies. Whether our present medication has much effect on the formation of these bodies is exceedingly doubtful. How often is the practitioner exasperated when he finds that a mild bronchitis has become very severe in spite of careful medication. We are ignorant of agents that enhance the formation of the specific antibodies.

SOME UNUSUAL CASES OF APPENDICITIS FROM PRIVATE PRACTICE.*

By HOWARD LILIENTHAL, M. D.,
NEW YORK,

ATTENDING SURGEON TO MOUNT SINAI HOSPITAL.

No matter how wide our experience may be, every new case of appendicitis we are called upon to treat will teach a fresh lesson or will emphasize old knowledge by putting it before us in a new light. The very elect in medicine and surgery occasionally have their self-confidence as to the diagnosis and treatment of this interesting disease rudely disturbed and all calculations and predictions go awry. I venture to present to you this evening a few histories which illustrate the protean aspects which this disorder may assume. The histories are all those of private patients, whose statements are as a rule more exact and whose observations are more intelligent than are those of the usual run from the hospital wards.

CASE I. Miss D., sixteen years old, a patient of Dr. Mitchel, of Newburgh, had had two typical attacks of appendicitis from which she had recovered under medical treatment. On June 5, 1896, she was attacked with severe right iliac pain and tenderness, with high temperature, rapid pulse, and almost incessant vomiting. There was some diarrhoea and great prostration. On examination the principal phenomenon was the great resistance and tenderness in the right iliac region. The symptoms having increased in violence steadily since the onset of the disease, immediate operation was decided upon. The usual incision revealed an almost solidly obliterated appendix, the greater portion of which was buried in the wall of the cæcum. It was pale in color and showed no evidences of acute infection. It was noted that the ileum was thickened and injected and that the mesentery was filled with greatly swollen lymph nodes. The provisional diagnosis of typhoid fever was made, the appendix was quickly removed, and the abdomen closed. The patient died a number of days after the operation, evidently of her disease.

Now, looking back at this case I do not see how a different course could have been pursued. The local signs, indeed, were so severe that had I known that the patient was suffering from typhoid fever

² Hecker, *Wiener klinische Wochenschrift*, has recently studied the effect of cold baths on hardening children against colds. He found that these processes of hardening did not effect the susceptibility to "colds." This is another proof that cold is only a general predisposing cause which diminishes the activity of the human body.

* Read at the meeting of the Harlem Medical Association, January 7, 1903.

I should have advised operation under the impression that the appendix, after all, was the point from which we had to expect the greatest danger. In these days the Widal blood test might settle the presence of typhoid while it might not influence the advisability of the operation.

CASE II. Miss S. L., a large, well-formed girl, eighteen years of age, had an attack of right iliac pain and tenderness with some fever, in February, 1898. A curious accompaniment of this attack was a severe hæmorrhage from the bowel. The patient made a partial recovery, but there was always an uneasy feeling with occasional pain in the region of the appendix. On August 19th, three days after a fall from a bicycle, the pain became acute and there was moderate fever. Two days later, the symptoms having become slightly more aggravated, there was a profuse discharge of dark blood from the rectum, so that a distinct condition of acute anæmia was found by me the following day when I examined her for the first time. A mass could be made out in the right iliac region, but examination by the rectum was absolutely negative. Operation was at once suggested, but was deferred until the 25th, three days after my first visit. On incision I found an axial twist of the appendix with its mesentery. There was a distinct hæmorrhagic appendicitis, with clots within the organ. Recovery was prompt and there has been no return of the bleeding.

This case is, I believe, a unique one. I have never heard of another in which there was a distinct and even alarming, intestinal hæmorrhage entirely due to trouble in the appendix.

CASE III. S. S., a young man, twenty-two years of age, had had scarlet fever in childhood, during which there was a severe nephritis. On July 17, 1897, the third day of an illness characterized by pain in the abdomen with tenderness and resistance in the right iliac region, Dr. L. Stieglitz asked me to see him. At the time of the first visit the temperature of the patient was 103° , the pulse was rapid, and his general appearance was one indicating the presence of some serious disorder. A remission came on and surgical treatment was postponed, but when within forty-eight hours an exacerbation occurred further delay was deemed unwise and the operation was undertaken. There were no adhesions and, indeed, there were no local appearances which would have indicated a sufficient cause for severe sepsis. The appendix was considerably thickened, deeply injected, and quite rigid. It contained no pus. The operation was short and technically simple, chloroform being the anæsthetic employed. For the following three days, however, the patient's life was threatened by a severe septic nephritis with scanty smoky urine, high temperatures, and absence of intestinal peristalsis. There was no trouble with the healing of the wound. Under appropriate medical treatment the nephritis subsided, and with it the clinical signs of sepsis, the patient eventually making a good recovery.

I have seen this complication of septic nephritis with an apparently mild appendicitis, judged by the

anatomical conditions, in a sufficient number of cases to recognize it as a distinct type. The aspect of the case before operation is usually ominous and, though the appearance of the organ itself on exposure is often innocent enough, the disease runs a course which is, to say the least, disquieting. It would be interesting and valuable to know the condition of the urine before the onset of the attack, but this is rarely possible.

The history of the following case is one of those which illustrates the great danger of delay in appendicitis. This, it may be said, is a trite lesson, for the average practitioner of general medicine has learned that his position is a safe one in direct proportion to his timeliness in suggesting consultation with a surgeon. Here it was the surgeon who was responsible for a delay which must have influenced the case for evil.

CASE IV. On September 2, 1899, I was called by Dr. T. Berger to see S. J., a little boy ten years of age, who had been sick for several days and who was apparently on the high road to recovery. The temperature, which had been high, had dropped to 100° F., the pulse was slow and regular, the pain had disappeared, and the bowels, which for some days had been obstinately constipated, had moved satisfactorily. Thinking that this would be a good case in which to wait for the interval, medical treatment was advised. The following day, however, there was a chill and the temperature rose to 103° F., the pulse to 110, and immediate operation was performed. The gangrenous appendix, already perforated and containing a large concretion, lay in an abnormal position. It was situated between the walls of the mesocolon, which was itself extremely œdematous. Numerous thrombosed vessels were seen in the mesocolon and, although the appendix was quickly removed and perfect drainage of the abscess cavity established, a grave prognosis was made. Death occurred three days later after another period of deceptive relief following the operation.

It is probable that, owing to the position of the appendix, between the layers of the mesocolon, a high degree of septic absorption must have existed from a very early period in the disease, so that the patient may have been doomed, even from the inception of his appendicitis. Nevertheless, the earlier the operation the better would have been the chances. And it is well to remember that there is no method by which to recognize the conditions before abdominal section.

CASE V. Adolph M., thirty-three years old, was sent to me by Dr. H. Rodman, on May 9, 1900. Three years before, and again one year before, he had been operated upon for suppurative appendicitis. Apparently, the surgeon had not considered it advisable to remove the offending organ in the presence of the abscess and, indeed, it is probable that it did not come into view during the operations. The patient, however, though relieved, was not cured,

and continued to suffer from attacks of pain in a hard mass in his right iliac region, which appeared to be pretty close to the abdominal wall. It was during one of these attacks that I first saw him. At that time a hard nodular tumor, scarcely painful on manipulation, could be easily felt. The patient's temperature was 102° F., and there were the usual constitutional symptoms of a sepsis of moderate degree. The following day I removed the appendix and the mass in one piece, together with the cutaneous cicatrix, closing the wound by suture with drainage. Recovery was prompt and the patient was cured.

It is a good rule when in the presence of an acute abscess the appendix is not sought, to inform the patient of the exact state of affairs and to warn him that other attacks of appendicitis may possibly occur. Yet, until they do occur, it would be unwise to operate for the removal of the organ, because in a large number of instances Nature has performed the appendectomy through the process of sloughing, casting off the remains of the appendix in the form of one or more necrotic shreds.

CASE VI. Leopold M., twenty-three years old, a patient of Dr. Albert Kohn, was seen by me on May 20, 1900. His brother had been operated upon by me two months before for acute appendicitis, this fact illustrating the frequent family type of the disease. The patient dated his illness from one month before he came under medical observation, when he had a measles-like eruption upon his body and suffered with pain in the right iliac region, accompanied by fever and vomiting. He was a very thin individual and his appendix was palpable. When I saw him there were no acute symptoms, but being anxious to be rid of his appendix the operation was performed the following day. A peculiar and unusual condition was disclosed, the proximal and distal portions of the organ being obliterated and atrophied, while the central portion was dilated into a cystic tumor nearly as large as a pigeon's egg. It contained colloid material. The wound, a very small one, was closed by layer suture, chromicized catgut being used for the aponeurosis. There was primary union, but about the eighth day a peculiar induration was noted, and gradually the entire wound reopened with at first a scanty, then a more profuse purulent discharge. Under the impression that possibly the chromicized gut was to blame, the patient was placed under nitrous oxide anæsthesia with the idea of removing the noxious foreign material. The catgut had all disappeared, however, and still the wound would not heal. Finally, about three weeks after the operation, I noted that the granulations looked rather suspicious, and placed the patient upon constitutional treatment with mercury inunctions and the internal administration of small doses of the iodide of potassium. The wound was dressed with mercurial ointment several times a day. At once the picture changed and recovery was quick. He was discharged on July 5th, forty-five days after the operation.

No initial lesion had ever been noted by this patient and he had absolutely no sign of syphilis excepting the remarkable progress of the wound. Note, however, the history of the measly eruption of the month before the operation.

As to the healing of wounds in patients afflicted with syphilis, it has been my experience that primary union is the rule in the tertiary stage, and also in the secondary stage provided the disease is under treatment. When there has been no treatment, however, wounds in persons suffering with secondary syphilis are apt to act as did the one under discussion. The wound then seems to be a "place of less resistance" and becomes the seat of a mixed infection.

These cases have not been reported for the purpose either of illustrating any one point or of laying stress on any single principle. They are merely suggestive histories, from any one of which many lessons may be learned. If they have interested you this evening they will not have been presented in vain.

766 MADISON AVENUE.

Methods of Quarantine Against Yellow Fever Adopted in Havana, Cuba, During the Year 1901. By W. C. Gorgas, M. D. (*Medical Record*, January 17th).—In our issue of January 17th, we abstracted a paper by the same author on the Disappearance of Yellow Fever from Havana. We now, therefore, only call attention to what is new. After Havana was freed from yellow fever it was found that some half dozen of its suburbs were still infected, and the question arose how best to keep the capital city from becoming reinfected by fresh importation. It was recognized that if the system of quarantine were made too harsh it would only lead to evasion. The following plan was therefore adopted. Absolutely no restriction was placed upon the transit of merchandise or passengers from the infected districts to Havana. In each infected town an inspector was appointed, generally the resident physician, with an adequate staff of assistants. There was also an inspector on every train entering Havana, as well as on every highway leading to the city. It was the duty of these inspectors to notify by telegraph the central Havana office of the name, home residence, and proposed Havana residence of all the non-immune people about to enter the city. Upon their arrival they were visited by a district physician, and, if found suffering from yellow fever, they were either sent to the city hospital or isolated in their own homes. If they showed no sign of the disease they were allowed to go about their business and for the five following days were visited daily by the district physician. By this means during one year twenty-seven cases of the fever were detected and the imported cases were kept from spreading the disease. The author concludes his article by indicating what he believes to be the necessary regulations by which any city can protect itself from surrounding towns infected with yellow fever.

Our Subscribers' Discussions.

A SERIES OF MONTHLY PRIZE ESSAYS.

[Questions for discussion in this department are announced once a month. So far as they have been decided upon, the further questions are as follows:

XXI.—How do you treat infantile convulsions? (Answers due not later than February 10, 1903.)

XXII.—How do you manage occipitoposterior positions of the presenting head? (Answers due not later than March 10, 1903.)

XXIII.—How do you treat ingrowing toenail? (Answers due not later than April 10, 1903.)

XXIV.—How do you treat delirium tremens? (Answers due not later than May 11, 1903.)

Whoever among our subscribers (with the limitations mentioned below) answers one of these questions in the manner most satisfactory to the editor and his advisers will receive a prize of \$25. No importance whatever will be attached to literary style, but the award will be based solely on the value of the substance of the answer. It is requested (but NOT REQUIRED) that the answers be short, if practicable, no one answer to contain more than six hundred words. So far as our space will allow, we shall publish the substance of such of the answers as seem to us most likely to prove interesting to our readers, and we reserve the right to publish any of the answers in any department of the JOURNAL.

Only subscribers to the NEW YORK MEDICAL JOURNAL (including regular and volunteer officers of the medical corps of the United States Army, Navy, and Marine-Hospital Service, commissioned or under contract) will be entitled to compete, and all persons known to be engaged in medical journalism are disqualified. This prize will not be awarded to any one person more than once within one year. Every answer must be accompanied by the writer's full name and address, both of which we must be at liberty to publish.]

The prize of \$25 for the best essay submitted in January, has been awarded to Dr. Elbert S. Sherman, of Newark, N. J., whose paper appears below:

PRIZE QUESTION NO. XX.

THE TREATMENT OF BUBOES THAT THREATEN TO SUPPURATE.

By ELBERT S. SHERMAN, M. D.,
NEWARK, N. J.

A large percentage of buboes could be entirely prevented by the proper care of the concomitant genital lesion. Therefore the prophylactic treatment is important. Any suppurative condition of the external genitals may cause an inguinal adenitis, but the most common cause is chancroids and especially that class of cases in which the free discharge of pus from the ulcers is more or less obstructed, as by crusts, dry, adherent dressings, and phimosis. When a patient with any ulcerative lesion of the external genitals presents himself, the local treatment should be thorough and antiseptic. Scabs or crusts should be removed, the prepuce slit up if there is ulceration under it with phimosis, and measures taken to keep all ulcers clean and free from obstructive accumulations. In the case of chancroids, they may be cleansed with peroxide of hydrogen, dried with cotton, and the specific nature of the sores destroyed by the application of pure carbolic acid followed by nitric acid. The anæsthetic effect of the carbolic acid lessens the pain of

the nitric acid application. A bit of cotton twisted tightly on the end of a match makes a good applicator for this procedure. Care should be taken that none of the acid touches the healthy skin or mucous membrane. Patients on whom this treatment is begun early have glandular involvement much less frequently than do those with neglected ulcerations. If one or more glands become inflamed or are already inflamed and threatening to suppurate when the patient is first seen, a saline laxative should be prescribed and the following ointment applied on lint, and over this a compress and a firm spica bandage:

R	Ichthyol,	} equal parts
	Mercurial ointment (50 per cent)	
	Compound iodine ointment,	
M.		

If practicable, the patient should go to bed and have an ice bag placed over the dressing. If after twenty-four hours the inflammatory symptoms have improved or are stationary, this treatment may be continued. But if there is no improvement, the patient will be saved much time and pain and probably an unsightly scar by an immediate excision of the inflamed glands. For this, an anæsthetic should be given and strict asepsis observed. The incision should be parallel with Poupart's ligament and no longer than necessary for the removal of the inflamed gland or glands. They may be dissected out with blunt-pointed scissors and the wound closed without drainage if no pus is present. If any pus is found, all broken down tissue should be thoroughly curetted out and the wound lightly packed with sterile or bichloride gauze.

If, however, after twenty-four hours' local treatment, the formation of pus seems inevitable and the patient declines an operation, pain may be somewhat relieved and suppuration hastened by warm, mildly antiseptic applications, such as gauze compresses wrung out of hot bichloride of mercury solution, 1-5,000 in strength, or sodium bisulphite solution, one ounce to a quart of water.

159 SUMMER AVENUE.

Dr. J. A. Nydegger, of the United States Public Health and Marine Hospital Service, writes:

In a paper as brief as this, one cannot discuss to any extent the ætiology, pathology, and classification of buboes. I will, however, for convenience's sake, here make a brief classification of them, for, as will be shown later, the treatment differs in buboes due to different causes.

The class of buboes most frequently seen are a result of chancroid, or soft chancre, of the genitalia. Next in order of frequency are those from syphilis, third, from gonorrhœa, and fourth, fifth and sixth,

from tubercle, pest, and various other infections, in the order enumerated.

In this very frequent condition, as seen among those occupying certain walks in life, we most generally are not consulted until the bubo has existed for a time. In all cases of buboes, in this condition, absolute rest is of the greatest importance, and for that reason the patient must always be put to bed, or when this is impracticable, kept in a constantly reclining position on a lounge or couch. Frequently this of itself, kept up for two or three days, permits of the subsidence of the inflammation and pain without further treatment. In a bubo due to a chancroidal ulcer, in conjunction with rest in bed, an ice water coil, ice pack or bag is applied for every other half or three fourths of an hour over the bubo, to decrease the blood supply to the gland through vasomotor influences. The cold, in addition to its vasomotor effect, also relieves pain and lessens leucocytosis in the inflamed area.

Where the cold applications are not effective, use liquor opii et plumbi subacetatis dilutus, applied three times daily on gauze or cotton, and cover with rubber tissue, or a tenpercent. solution of ichthyol or guaiacol in glycerin, applied thoroughly twice daily. At the same time the ulcer or sore is cauterized, if accessible, under cocaine anæsthesia, with pure carbolic acid to destroy the source of the gland irritation.

The patient is placed on a partially restricted diet, the bowels are kept open by calomel or magnesium sulphate to relieve the system of any effete material, and quinine sulphate in ten grain doses is administered three times daily to reduce the temperature.

In this class of buboes, with which we have more to do, perhaps, than those from all other causes, if after forty-eight hours of this treatment there is no improvement, I do not temporize longer, but, other things being equal, resort at once to radical surgical measures.

The patient is prepared in the usual way for the operation. An incision of sufficient length, generally parallel to Poupart's ligament, is made down upon the gland. It is enucleated without being cut into, and hæmorrhage stopped by tying vessels and packing with gauze. Sutures of silver wire are carried through the skin and parts below and across under the bottom of the gland cavity and are brought out through the skin on the opposite side of the incision, thus coaptating the walls of the incision and cavity and securing healing by first intention, with complete recovery in from one week to ten days from the date of operation.

Care is exercised to see that all oozing of blood into the gland cavity has ceased before closing the

sutures, otherwise we have a dead space filled with blood, which is liable to become disorganized and will seek an outlet at some part of the wound, which must then heal by granulation.

Cases in which the more radical surgical intervention cannot be carried out, or for some other reason is inadvisable, are further treated by constant counter-pressure applied over the bubo in the shape of a small bag of salt or clean dry sand, preferably the latter, weighing from one half to one pound. Should the pain be increased by the pressure of the bag, it is shifted slightly from time to time.

Gonorrhœal buboes respond to abortive treatment more readily than the above mentioned class. Rest in bed, cold applied in the manner stated, or an anodyne, such as belladonna ointment rubbed on well twice daily, or tincture of iodine painted over the bubo twice daily for two days in succession, will frequently abort pending suppuration. These methods failing, the gland is enucleated in the manner above described.

In bubo caused by syphilis, in which class an operation is far less frequently required, rest in bed, twenty-five grains of mercurial ointment rubbed in well over the swelling once daily, and in conjunction with this potassium iodide, beginning with ten or fifteen grains three times daily and increased one grain daily, is the procedure. If suppuration continues to threaten, enucleate.

Tuberculous buboes should be treated on the above described general plan. Put the patient on nutritious diet to build up the system, and administer cod liver oil and Basham's mixture. But in spite of this the gland will generally go on slowly to suppuration. Before this point is reached the gland should be enucleated to prevent the formation of a new focus of infection.

After all is said, the treatment of all treatments is prompt and complete enucleation of the gland under proper precautions.

Theoretically there is a dividing line between a bubo threatening to suppurate and a suppurating one, but clinically we can in but a very limited number of cases make out this distinction. In other words, we are unable to discover when inflammation in a bubo passes into suppuration.

In the vast majority of cases after the gamut of abortive treatment has been exhausted and the patient has been subjected to discomforts, vexatious delays, and disappointments, the operative treatment must at last be resorted to, this after the gland has broken down into pus and it is too late to get union by first intention. For this reason the only safe and proper treatment, after abortive methods

have failed, is prompt removal of the bubo threatening to suppurate.

U. S. MARINE HOSPITAL, BALTIMORE.

Dr. Charles D. Luckett, of English, Indiana, writes:

In considering the treatment of buboes which threaten to suppurate, two methods claim attention: (1) the abortive, and (2) the operative. The abortive aims to bring about resolution in the gland, in cases where the pathological condition present is one of simple glandular hyperplasia. This is accomplished by the external use of some form of counterirritation, together with pressure over the gland properly applied, early in the course of the affection.

The most satisfactory results that I have seen have been attained by the following treatment, pursued for the last five years, which aims to bring about resolution in the gland by direct application in the form of an ointment of drugs alterative in character, combined with steady pressure obtained from the use of a spica bandage. The ointment to be used for this purpose is made up as follows:

R	Mercurial ointment,	}	equal parts.
	Belladonna ointment,		
	Ichthyol,		
	Lanolin,		
M.			

If the bubo is seen early, no heat or redness being present, a piece of surgical lint spread with the ointment is applied direct to the swollen gland; over this is placed a piece of oiled silk of the same size. A large pad of cotton is next applied, and firm continuous pressure is obtained by the application of a wide spica of the groin bandage, two bandages being employed.

This treatment is applied every other day until, in cases where it acts successfully, entire resolution of the bubo is accomplished; usually a period of from ten days to two weeks.

This treatment is only applicable in cases where there is no tuberculous adenitis. From careful study in the last five years I have become impressed with the belief that full sixty per cent. of buboes, other than tuberculous, can be successfully aborted by a plan of treatment such as just outlined, provided, of course, it is employed early in the case, prior to the formation of pus.

STONE BUILDING.

Dr. Joseph N. Weller, of Akron, Ohio, writes:

The lymphatic glands are virtually cesspools that drain the surrounding territory. Very often we see red lines extending from the seat of an inflam-

matory lesion to a neighboring lymphatic gland. These are lymphatic vessels which are congested and inflamed by septic material on its way to the gland, which soon becomes swollen and inflamed, and we term it a bubo.

In the more mild infections the lymphatic system is able to dispose of the effete matter without suffering impairment of its own structure, but in cases where the septic process is virulent and the accumulation of toxins is great, the glandular tissue is broken down and suppuration takes place.

Inguinal buboes that threaten to suppurate are usually associated with gonorrhœa or chancroid. Inflammatory lesions of the foot, thigh, and region of the anus often cause enlargement of the crural and inguinal glands, but these rarely go on to pus formation.

While I was resident physician in the venereal wards of the Philadelphia Hospital, a great many cases of buboes came under my observation. I have aborted buboes in which suppuration was imminent, but in a great many instances after the condition has reached a far advanced stage, suppuration will occur despite every effort at abortion. The chancroidal bubo seems especially prone to break down and become purulent.

To prevent enlarged glands from suppurating, treatment should be instituted early and persistently carried out. After softening has occurred, fluctuation will soon be detected, and then there is nothing to do but evacuate the pus sac.

As soon as the gland becomes enlarged and painful, the part should be put at rest. The bowels should be kept freely open by the use of salines or cascara sagrada in appropriate doses. If possible, the patient should be placed in bed and the buttocks elevated upon a pillow.

The rational treatment is that directed to the cause. Whatever the lesion may be, it should be treated vigorously and rendered clean of all discharges, so that the toxins and bacteria entering the lymphatic circulation may be reduced to a minimum. Local applications to the gland are beneficial and soothing to the patient. One of the best of these is a solution composed of an ounce of tincture of opium and a pint of liquor plumbi subacetatis dilutus. Gauze compresses saturated with this solution should be applied often. An ice bag laid over the compresses will be found useful in allaying the acute process. Another efficient remedy is a 25 per cent. ichthyol ointment applied on lint and held firmly in place by a spica bandage of the groin. This treatment will often cause a marked decrease in the size of the gland in twenty-four hours. The following ointment is very efficient, especially where there is much induration:

R Iodine 5 grains;
 Potassium iodide 20 grains;
 Lanolin 1 ounce.
 M.

Injecting the bubo with iodine and pure carbolic acid sometimes yields good results. I have seen considerable fibroid thickening in the gland follow this method of using these irritating drugs. Eventually it was necessary to remove this fibroid glandular mass, both for the convenience of the patient and for cosmetic effect.

The most trustworthy injecting fluid is 85 parts of sterile water and 15 parts of pure carbolic acid. A few drops of this solution should be injected into the gland at various points by means of a hypodermic syringe. The watery solution permeates the gland more thoroughly than the pure drug, which only cauterizes in a limited area. The injections should be made once a day for three days. They should be supplemented by the use of any of the above mentioned remedies, or by the application of gauze pads saturated with a 1-2,000 solution of bichloride of mercury. A leech applied near the spine of the pubis is beneficial when local depletion is demanded.

In debilitated persons tonics containing iron, quinine, and strychnine should be used from the start of the causative disease. If there is a suspicion of the condition being tuberculous, guaiacol in five minim doses after meals, is a useful internal remedy. Rest and elevation should be secured in all cases until the acute inflammation subsides.

406 HAMILTON BUILDING.

Dr. William A. Groat, of Syracuse, N. Y., writes:

The treatment of buboes which threaten to suppurate comprises rest in bed, removal of the exciting cause or inhibition of its infective virulence, and local applications to the inflamed glands.

Absolute rest in the recumbent posture is imperative, with light non-stimulating diet, principally fluid. One-tenth of a grain of calomel should be given every hour until the bowels act freely, and thereafter salines should be used throughout the course of treatment. From three to five grain doses of calcium chloride may be given three times daily.

The exciting cause demands prompt attention. If it is an acute gonorrhœa, the urethra or that portion only which is involved should be irrigated two or three times a day with at least two quarts of warm normal saline solution followed by the instillation of a very weak solution of some one of the organic silver compounds. As the case progresses the number of irrigations may be decreased to one daily and the percentage of the silver salt in the instilled fluid raised.

If the infection of the lymphatics is from a chancre, it should be well cauterized with the actual cautery. All doubtful sores on the penis should be cauterized. If the exciting cause is a chancre it should be cleaned and kept clean, and cauterized if the discharge is at all yellow. If the secondary symptoms have appeared, mercurials should be pushed.

In brief, whatever the cause of the glandular infection, the point of entrance, if discoverable, should receive prompt and vigorous attention calculated to destroy the infecting microorganisms, inhibit their growth, or sweep them away with their toxic products.

To the inflamed glands an ointment dressing is to be applied composed as follows:

R Ichthyol 20 parts;
 Guaiacol 10 parts;
 Mercurial ointment 10 parts;
 Lanolin, enough to make.....100 parts.

M. Sig: Apply thickly over the swollen glands, cover with gauze and a layer of cotton or cotton wool dressing.

125 EAST ONONDAGA STREET.

Correspondence.

LETTER FROM PARIS.

Precautions against Tuberculous Disease.—Alcoholism as a Cause of Disease.—The Typical Paris Student.—The Library of the School of Medicine.—Bathing Facilities.—Street Cleaning.—Cat Meat.

PARIS, January 10, 1903.

From the sanitary conditions of a great many *quartiers* in Paris, one can readily appreciate the fact that no element of unusualness would attach to a prevalence of "the great white plague." Tuberculosis is prevalent, and the climate of Paris in winter is one that fosters its development. Fortunately, however, the Parisian by force of circumstances is an outdoor animal. The temperature of most houses in winter is that of the outer air, and outdoor activity is preferable to indoor quiescence. In all the offices of the Administration des postes the following *avis* is placarded:

"*Notice concerning the Propagation of Tuberculosis.*—Tuberculosis kills in Paris alone more than thirteen thousand persons each year. In the other cities and in the country it is far from rare. It is well to know that contagion alone can cause it. All the modes of contagion are known; it is therefore avoidable. In almost every case it is propagated in the following manner: A consumptive spits upon the ground, and his expectorations dry. The mi-

crobes of tuberculosis are found in his expectorations by millions, and, being dried, can remain alive for long periods, always ready to germinate like grain. They float in the dust of the air, and if the dust is breathed they penetrate to the lungs, developing there and reproducing the disease. No age, no constitution is proof against their attacks. It is, then, in the interest of all to enforce the execution of the following prescriptions: 1. It is forbidden in all offices of the Administration des postes et des télégraphes to spit on the floor. 2. Dry sweeping is forbidden; one must substitute washing the floors with the aid of wet cloths."

While I am writing of public placards, let me make note of another one: "Bilan de l'alcool en France. Crimes, folies, suicides doublés depuis 20 ans. Sur 100 Phthisiques 71 alcooliques." It certainly would seem as if the French people were very much alive to certain facts.

At the École de médecine one is struck very forcibly by the omnium gatherum of all sorts and conditions of men who come there as students. Patrick and Sandy are there with John Henry, and the amiable Gaston and Alphonse fraternize with Alixhoff and Rudolph quite as readily as with Woo Loon and his rival from Tokio. Beards are prominent, and cravats are characteristic. A peculiar leather portfolio, presumably filled with learned treatises and greasy (possibly with midnight oil), is an indispensable adjunct of the student, and highly desirable for the better understanding of the Æsculapian art in Paris. High hats are also important, and many if not most look as if they were the ones left behind by the respectable "ancestors" who sailed for America in the Mayflower. But I shall not be sportive about the Paris student. He only *looks* funny. In reality he is very serious—ask him.

At the Bibliothèque de l'École de médecine every visitor is impressed. The attendants are garbed impressively, the approach to the library is impressive, as is its size. I believe it is one of the finest, if not the very finest, medical library in the world. But—I asked for eight medical periodicals in succession, very important British periodicals, and ascertained that three of the eight were not taken at the library, and only one of the five remaining ones could be had for the current month (though they had been on sale in England three weeks before), while the four others could be had only for the issues of three months previous. Now, such a lack, to my mind, is a fatal one. I cannot but recollect that a similar demand in the library of the New York Academy of Medicine would have been complied with *at once*. "Comparisons are odorous," however.

In the barber shops the operator does not, as in New York, cover your face with a hot towel. The barbered one washes his own face in a stationary wash stand before the barber's chair. There is no plug in the basin, which is arranged on pivots so as to be easily tipped over, pouring the contents into the waste pipe beneath. The educated Parisian is very appreciative and ready to approve of any innovation that makes for better sanitation, and the government sees that he has the requisite information. I give the placard on tuberculosis as an instance of what the government is doing in the way of education. Though baths in private houses are not common, there are numbers of Établissements de bains where a bath may be obtained. In France it is seldom the case that one pays for anything with "fixins." You pay for the thing, then you pay for each individual "fixing." So with the bath at one of these establishments. You pay a fixed sum for the room and water, if a towel is required, more must be paid; if soap should be needed, still more; and more again for a comb and brush. A lover of variety can get a deal of pleasure if he takes a daily bath. One day let him take hot water, comb, and towel; another day towel, hot water, and soap; etc. I believe that if some American eccentric were to ask for a bath without soap and water, the combination could be arranged for him here in Paris.

The streets are clean, though not to the extent that one would expect who credited the great reputation of Paris as a clean city. There is a marked absence of horse droppings. There are horses in abundance, but the droppings are gathered by some means that I have not as yet ascertained. Possibly the *vis a tergo* may be some pecuniary value that attaches to the droppings, but I do not know. I do know, however, that there are little boys who gather up for sale the many evidences of digestion and excretion that the street dogs leave.

Every one knows, of course, that horse meat is sold in special shops in Paris. Hares and rabbits are also sold. Of course every one has at some time or other eaten hare. But here you will see meat exposed that you recognize at once to be hare, and meat that you recognize immediately to be rabbit. And—you will see meat that looks like hare but isn't, and looks like rabbit but isn't. And there is an unavoidable suspicion of cats.

Studying Tuberculosis in Maryland.—At the last session of the Maryland Legislature a commission on tuberculosis was appointed with instructions to collect data with reference to this disease in the State with a view to taking some steps towards its suppression. This commission has recently sent out a series of questions to the medical profession all over the United States with a view to collecting the desired data.

Therapeutical Notes.

Injections of Solutions of Sodium Iodide in Rheumatism and Allied Complaints.—Dr. N. S. Poliansky (*Praktichesky Vrach*, November 16th) finds that injections of a five-per-cent. solution of sodium iodide gives excellent results in the treatment of rheumatism, sciatica, lumbago, etc. He has been using this method for over two years in a number of cases, and cites several examples in which the action of this mode of administering iodides is shown. He concludes from a study of the subject, that in all cases in which sodium iodide was used the effects were permanent, so that the patients who have remained under observation have had no relapses. No other treatment was given from the beginning in all the cases so treated, and the injections were easily borne, painless, and not complicated by any unpleasant effects. Sodium iodide is therefore a remedy of such value in the treatment of rheumatic affections, that it may be recommended for extensive use.

A Method of Facilitating the Administration of Castor Oil.—Obrastzoff, a Russian physician (quoted in *Nouveaux Rémèdes*, 1902, p. 549), tells of the following method of preparing castor oil to facilitate its administration. The combination offers the additional advantage of exercising an antiseptic action upon the intestine:

℞ Castor oil.....30.0 grammes (1 ounce);
Menthol 0.50 gramme (7½ grains);
Tincture of iodine.....ten drops.

M. Dose, a tablespoonful of this mixture. Before administering this mixture it is best to warm it on a water bath, in order to get rid of the viscosity, which renders the taking of castor oil so disagreeable.

For Dandruff.—The following ointment has been highly commended for dandruff (eczema furfurans, or pityriasis capitis):

℞ Red precipitate ointment 4 drachms;
Benzoated lard.....1½ ounce;
Oil of bergamot 2 drops.
M. ft. ungt.

2. The following lotion is also useful:

℞ Borax 2 drachms;
Glycerin 3 drachms;
Water to 5 ounces.
M. ft. lotio.

3. Where there is a constitutional taint the following mixture may be given with advantage:

℞ Wine of iron 1½ ounce;
Syrup 3 drachms;
Fowler's solution 1 drachm;
Water to 4 ounces.
M. ft. mist. One drachm to be taken three times a day.

Subconjunctival Injections of Sodium Cinnamate.—Letzenius (quoted in *Nouveaux Rémèdes*, 1902, p. 546) encouraged by the good results reported by Pflueger, of Berne, with subconjunctival injections of sodium cinnamate, has experimented with this remedy upon a series of patients in the

Eye Infirmary of St. Petersburg. After having secured asepsis and having anesthetized the eye with the aid of cocaine, he injected five divisions of the hypodermic syringe of a one-per-cent. solution of sodium cinnamate, under the conjunctiva. These injections are not painful, and may be repeated every other day or even daily without producing any inflammatory reaction, except a slight hyperæmia. In this manner, Letzenius treated a variety of keratitides (herpetiform, traumatic, parenchymatous, etc.) as well as ulcers of the cornea, iritis, iridochorioiditis, iridocyclitis, scleritis, episcleritis. In all these affections the subconjunctival injections of sodium cinnamate exercised a marked soothing action on the pain. As regards their effect on the lesions themselves, these were principally marked in cases of corneal disease, and not so marked in cases of disease of the iris, the chorioid, and the sclerotic. In suppurative cases, it may be added, these injections proved less useful than harmful.

For Acute Pleurisy.—*Progrès médical* for January 3rd ascribes the following to Millard, for use at the outset of acute pleurisy:

℞ Juniper berries.....20 grammes (5 drachms);
infuse in
Boiling water 200 grammes (6¼ ounces);
add
Potassium nitrate ..) of each 2 grammes (30 grains);
Potassium acetate ..)
Oxymel of squill 30 grammes (1 ounce);
Syrup of five roots 35 grammes (9 drachms).

M. This quantity to be taken in divided doses in the course of twenty-four hours.

For the Dysphagia of Acute Anginas.—*Progrès médical* for January 3rd attributes the following to Regin:

℞ Powdered talc.....)
Powdered boric acid) of each 2 grammes (30 grains);
Powdered lactose ..)
Orthoform 1 gramme (15 grains);
Cocaine hydrochloride 0.05 gramme (¾ grain);
Powdered menthol.....0.02 gramme (⅓ grain).

M. ft. pulv. A small quantity to be insufflated in the patient's throat through a tube during inspiration, a few minutes before taking food.

Massage in Nocturnal Enuresis.—The *Revue médicale* for December 31st, citing the *Revue de thérapeutique médico-chirurgicale*, ascribes the following procedure to Herbsman: The patient being in the "cow posture" (*position à la vache*, i. e. the knee-chest posture), the right index finger is introduced into the rectum and pushed as far up as the neck of the bladder, which it massages with its palmar surface, at first transversely, then longitudinally. These manipulations are made at first gently, little by little increasing the intensity of the friction. The duration of the manipulations varies between two and three minutes, after which the neck is subjected to concussive movements for half a minute. The séances take place every day or every two days, according to the case. In the five cases in which the author has used this procedure he has obtained very satisfactory results.

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THE ARMY TRANSPORT SERVICE.

Before we proceed to the proper subject of this article, we wish to protest mildly against the cover which we find on the January number of the *Journal of the Association of Military Surgeons of the United States*, which contains a contribution by Major Henry Sayles Kilbourne, a surgeon in the army and lately medical superintendent of the army transport service. Being obliged to write by artificial light, we find it extremely difficult to make out with any reasonable approach to conviction that it is the January number, for the title page is printed in brick red ink on a nondescript blue background. This kind of cover may have a sentimental significance, but we should like to know what our ophthalmological friends think of it. We have so often had occasion to comment on the contents of our military contemporary, and have such a high opinion of its usefulness to the nation and to the profession, that we are doubly annoyed to see it appearing in such an irritating dress.

But to our mutttons. Major Kilbourne gives a brief sketch of the character of the improvised transports for soldiers employed up to the time of the Philippine rebellion against the Americans. We all know that, however creditable they were as improvisations, they fell miserably short of the requirements of modern warfare. Much ingenuity was displayed in their arrangements, even so far back as in the time of the civil war, but at the best they were makeshifts. We are glad to learn from Major Kilbourne's description that the present transports are on a par with those of nations long subject to foreign wars.

We are, of course, especially interested in the hospital accommodations. The present equipment of a transport hospital, says Major Kilbourne, is similar in personnel and material to that of a post hospital, with allowance for the limitations of a ship. The medical service, supplies, records, reports, etc., are maintained in accordance with army methods. Provision is made for aseptic surgery, special diets, and isolation of infectious diseases. On the larger ships, such as the *Thomas* and the *Logan*, carrying a maximum regiment, there is hospital accommodation for about seventy sick. This amount is said to have proved sufficient except during the prevalence of measles among unseasoned troops. It was judged inexpedient to provide quarters for women nurses—why, we are not informed—but when they were carried as passengers their services were frequently made use of and found as valuable as in the general hospitals on shore. All things considered, we may congratulate ourselves that our army transport service is now in an excellent state of efficiency.

THE BUBONIC PLAGUE IN SAN FRANCISCO.

An interesting review of the course of the plague in San Francisco was recently prepared by Dr. D. M. Currie for the United States Public Health and Marine Hospital Service. Unfortunately it was not received by the surgeon general of that service until after the adjournment of the recent plague conference, but, as we have before remarked, that conference had substantially the facts before it, and it dealt with them in a way which promises that similar conferences from time to time, in which the various State boards of health meet the surgeon general for the purpose of exchanging information and inferences as to some notable feature of the public health situation, are likely to prove in the highest degree useful.

It appears from Dr. Currie's review that in a period of a little less than three years, from March 6, 1900, to December 11, 1902, ninety-three cases of plague occurred in San Francisco, eighty-nine of which proved fatal. During the period indicated the greatest length of time noted in which there were no cases of the disease was ninety-two days, and the next greatest seventy-two days, while on three occasions there were intermissions of fifty

days. Five such long interruptions of the epidemic, together with the fact that in a period of nearly three years the whole number of cases was only ninety-three, also the virtual restriction of the outbreak to "Chinatown," seem to indicate that a frank admission of the existence of the disease at the outset would have been followed by a resort to such radical measures for its extinction as could hardly have failed of their purpose. In that case there would have been no suspicion that the recent outbreak at Mazatlan—had it nevertheless occurred—was traceable to California.

But the people of San Francisco chose to deny that there was any plague among them. This was a short-sighted policy at best, as they must now begin to realize, when misgivings concerning commercial intercourse with their city have proved to be so serious as to have led to the calling of the Washington conference. It is amazing that they maintained their denial for so long a time in spite of the resolute course pursued by the officers of the Marine Hospital Service in demonstrating its untruthfulness. That bureau had no grudge against San Francisco, and the people of that city had no better reason for attacking Surgeon General Wyman than have certain newspaper correspondents now for intimating that his recent visit to San Francisco occasioned such a change of heart in him as to lead him to the intentional suppression of plague reports on his return to Washington—an innuendo as silly as we know it to be baseless. We believe that the United States Public Health and Marine Hospital Service has done its full duty in the matter of the plague in San Francisco, and we have perfect confidence that it will continue to perform it.

ASTIGMATISM CURED BY OPERATION.

A case is reported on another page by Dr. Bull, of Paris, in which a complete tenotomy of the external rectus for the correction of an exophoria produced the unexpected result of curing a progressive myopic astigmatism against the rule, or, as Dr. Bull prefers to call it, "inverse" astigmatism, where the greatest curvature, or the shortest radius of curvature, of the cornea is in the horizontal meridian. If this astigmatism had been measured by the retinoscope alone, the relief obtained might rea-

sonably have been ascribed to relaxation of an irregular spasm of the ciliary muscle, particularly as the degree of astigmatism appeared to be inconstant, but the ophthalmometer showed that the astigmatism was produced by the difference in the curvatures of the vertical and horizontal meridians of the cornea. Three days after the operation the ophthalmometer showed that this difference in the curvatures of the two meridians of the cornea had disappeared, while at the same time the subjective astigmatism had gone and the vision of the eye had risen to normal. Because of this record the astigmatism and poor vision before the operation cannot be ascribed to hysteria any more than to ciliary spasm, and the conclusion is necessary that some corneas have their form easily influenced by the tension of the external ocular muscles. A corollary to this is that when a surgeon has to deal with such a cornea he may be able, not only to cure an astigmatism by an operation on these muscles, but also to produce an astigmatism or increase one already present by an incautious interference.

Dr. Bull's observation opens the way to investigations which may prove of essential service in some obscure conditions. If an ætiological connection between progressive astigmatism, or the position and relative tension of the ocular muscles, and glaucoma can finally be demonstrated, he will be entitled to the credit at least of having made the first suggestion, and it is to be hoped that the results of the investigations he proposes to make may be as brilliant as the result he obtained from the operation he has described. At the same time it is to be hoped that this operation will be tried conservatively and its limitations clearly defined before it is brought into general use, for "such an operation for the cure of astigmatism, should be undertaken only in very exceptional cases"; while the damage which may be done by incautious or unskilled interference with the muscles of the eye has been demonstrated to be very great.

COMPULSORY HOUSE CLEANING.

According to press reports, a new legal holiday has just been established for the State of Utah. The first Monday in October has been set apart for the purpose of making it compulsory on all persons occupying premises of whatever description,

dwelling houses, offices, stores, theatres, etc., thoroughly to cleanse and disinfect such buildings. The law is to be enforced by city councils, town boards, and county commissioners, and the penalty for non-compliance with its provisions is fixed at fifty dollars. The purpose of the law is undoubtedly a good one, but unless the cleaning and disinfecting are carried out by the sanitary authorities themselves, we fear that it can have but little salutary effect. Those folk who appreciate the importance of such sanitary measures would scarcely need the impetus of legislation to cause them to attend to them, while those who do not will, we fear, content themselves with the "lick and a promise" which so often does duty for the schoolboy's ablutions. And that, we imagine, would be of no public service at all. Perhaps, however, the measure may prove of some value from an educational point of view.

QUERULOUS PARANOIA.

Hermann Pfister (*Allgemeine Zeitschrift für Psychiatrie und psychisch-gerichtliche Medizin*, lix, 5; *Wiener klinische Wochenschrift*, January 8th) has dignified with the name of paranoia chronica querulatoria (Querulantenwahnsinn) a state of morbid "cantankerousness" which led a certain subject of the disorder into many an unpleasant situation. It is to be hoped that this particular form of psychopathy will not become extensively prevalent.

"OPTOMETRY."

From present indications the "optometry bill," providing for a State board of "optometrists" to pass on the qualifications of all persons other than licensed physicians who may desire to fit or sell glasses, will again be presented to the New York State legislature. The utter absurdity of this oft repeated attempt to dignify with the State's seal of approval ignorant or unqualified men in the performance of functions which should be intrusted only to skilled oculists, is apparent to all physicians. Legislation in this direction will be approved by intelligent men only when it purposes to place in the hands of the licensed practitioner of medicine the correction of eye defects, whether by glasses or otherwise, and of eye diseases the first symptoms of which may be the precursor of some general disease unrecognizable by the laity. We predict cavalier treatment for the "optometry" bill at the hands of the New York State legislature.

News Items.

Society Meetings for the Coming Week:

MONDAY, February 9th.—New York Academy of Medicine (Section in General Surgery); New York Academy of Sciences (Section in Chemistry and Technology); New York Medico-historical Society (private) anniversary; New York Ophthalmological Society (private); Gynecological Society of Boston; Burlington, Vt., Medical and Surgical Club; Norwalk, Conn., Medical Society (private); Medical Association of the Greater City of New York; Society of Medical Jurisprudence.

TUESDAY, February 10th.—New York Academy of Medicine (Section in Genitourinary Surgery); New York Medical Union (private); New York Obstetrical Society (private); Buffalo Academy of Medicine (Section in Medicine); King's County, N. Y., Medical Association; Rome, N. Y., Medical Society; Medical Society of the County of Rensselaer, N. Y.; Newark, N. J., Medical Association (private); Trenton, N. J., Medical Association; Clinical Society of the Elizabeth, N. J., General Hospital and Dispensary; Northwestern Medical Society of Philadelphia; Practitioner's Club, Richmond, Ky.; Richmond, Va., Academy of Medicine and Surgery.

WEDNESDAY, February 11th.—New York Pathological Society; New York Surgical Society; American Microscopical Society of the City of New York; Society of the Alumni of the City (Charity) Hospital; Society for Medical Progress, New York; Pittsfield, Mass., Medical Association (private); Philadelphia County Medical Society; Lenox Medical and Surgical Society (private).

THURSDAY, February 12th.—Society of Medical Jurisprudence and State Medicine, New York; Brooklyn Pathological Society; Medical Society of the County of Cayuga, N. Y.; South Boston, Mass., Medical Club (private); Pathological Society of Philadelphia; Church Hill Medical Society of Richmond, Va.; New York Academy of Medicine (Section in Pediatrics); New York Academy of Medicine (Section in Otolaryngology).

FRIDAY, February 13th.—New York Academy of Medicine (Section in Neurology); Yorkville Medical Association, New York (private); Brooklyn Dermatological and Genitourinary Society (private); German Medical Society of Brooklyn; Medical Society of the town of Saugerties, N. Y.

SATURDAY, February 14th.—Obstetrical Society of Boston (private).

Medical Examiners for Public Schools.—In the Massachusetts Legislature a bill has been introduced providing for the introduction of medical examiners in all the public schools of the State at the expense of the State.

The Army Medical School to be Opened to Medical Officers of Militia.—It is understood that arrangements are in progress to allow of the instruction of militia medical officers at the Army Medical School, in Washington, D. C.

The St. Joseph Academy of Medicine has recently been organized in St. Joseph, Mo., the following officers being elected: Dr. J. W. Heddens, president; Dr. J. B. Reynolds, vice-president; Dr. W. L. Kenney, secretary and treasurer.

Summer Medical Courses at Columbia University.—Beginning with the forthcoming summer, the university trustees have decided to arrange summer courses of medical study. The faculty of the College of Physicians and Surgeons will, it is understood, take charge of the courses.

A Scarlet Fever Serum.—An associated press cable has been received to the effect that Professor Baginsky, of the Emperor and Empress Frederick Children's Hospital, of Berlin, announces that a discovery of a serum against scarlet fever has been made by Dr. Aronson. Good results have already been obtained, and Professor Baginsky believes that the serum will prove to be a specific for this disease.

Medical Society of the District of Columbia.—The following officers have been elected for the ensuing year: President, Dr. George M. Kober; vice-presidents, Dr. D. K. Shute and Dr. B. G. Pool; treasurer, Dr. C. W. Franzoni; corresponding secretary, Dr. Thomas C. Smith; recording secretary, Dr. F. P. Morgan; librarian, Dr. E. L. Morgan; board of censors, Dr. H. B. Deale, Dr. Francis R. Hagner, Dr. John T. Moran, Dr. D. O. Leech, and Dr. Joseph S. Wall.

Detroit Veterans Dine.—A somewhat unusual organization exists in Detroit under the name of the Quarter Century Medical Club, one of the requisites of membership being, as the name implies, an experience of twenty-five years as a practitioner of medicine. The club held its sixth annual banquet on January 29th, Dr. Henry Cleland being master of ceremonies, and Dr. Justin E. Emerson and Dr. A. E. Carrier acting as toastmasters.

Plague Refugees from Mazatlan.—The local press publishes telegrams from the Pacific Coast to the effect that a large number of refugees from Mazatlan have arrived in the United States. Several parties, including a number of Americans have reached San Francisco, after undergoing quarantine. These refugees state that the natives are terror stricken and that prices of food in Mazatlan have risen to an almost prohibitive degree.

Atlanta Board of Health.—Dr. T. D. Longino, an alderman of the city of Atlanta, and chairman of the Sanitary Committee of the City Council, has been elected president of the Atlanta Board of Health, to succeed Dr. W. C. Jarnagin, whose membership in the board has expired. This is the first time in the history of the board that an ex-officio member has been elected president, Dr. Longino's membership being based upon his position as chairman of the Sanitary Committee of the Council.

Unfavorable Action on the Municipal Hospital Project at Washington.—The Health Commissioners of the District of Columbia recommended that Congress appropriate the sum of \$250,000 for the erection of a municipal hospital, and that some \$19,000 be appropriated each for the Garfield and the Providence Hospitals. The appropriations committee of the House have acted unfavorably on all three of these recommendations, having stricken them out of the Appropriation Bill.

The New York Academy of Medicine.—A meeting of the Surgical Section will be held on Monday evening, February 9th. After the presentation of patients, Dr. Samuel Lloyd will read a paper on McGraw's Operation for Gastroenterostomy, and Dr. William Seaman Bainbridge will present a paper

on Peri-duodenal Abscess Secondary to Ulcer of the Duodenum with a Report of a Case. Dr. W. S. Thomas will show a self-holding retractor for use in general surgery, and Dr. Frederick Griffith will exhibit a coring instrument for operating on varicose veins.

The New Army General Hospital.—The Secretary of War has recommended that an appropriation of \$200,000 be made by Congress for the establishment in the District of Columbia of a general army hospital as a part of the equipment of the Army Medical School. It is proposed that the new hospital should be a main base hospital, and so arranged as to be capable of rapid expansion to meet any temporary emergency. The hospital besides serving a useful purpose in connection with instruction at the Army Medical School would doubtless be in effect a school of instruction for the hospital corps.

A Hospital Needed for Contagious Diseases of the Eye.—At a meeting of the Medical Society of the County of New York held on January 26th, Dr. Walter Eyre Lambert discussed the question of hospital facilities and urged the necessity for the erection of a hospital in which it would be possible to isolate cases of contagious diseases of the eye, and thus avoid the spread of such affections as trachoma. Referring to the temporary hospital located in the old Gouverneur Hospital, he stated that from October 20th up to January 1st, 3,791 cases of contagious diseases of the eye had been treated, the majority of which had been trachoma. According to Dr. Lambert, out of the 6,932 children excluded from attendance at school, 5,571 were suffering from trachoma. Curiously enough the larger proportion of these sufferers were not among the poorer class, but among the children of well-to-do parents. In an inspection of thirty-six schools 57,450 children were examined. Six thousand six hundred and ninety were found to have some contagious disease of the eyes, 2,326 having trachoma.

St. Louis Medical Society of Missouri.—The following was the programme of the meeting held on Saturday, January 31st: Report of a Case of Puerperal Septicæmia with Pelvic Abscess, by Dr. Walter B. Dorsett, discussion opened by Dr. C. Fisch and Dr. R. B. H. Gradwohl; Corneal Fistula, with Presentation of Specimen, by Dr. James Moores Ball, discussion opened by Dr. C. Barck and Dr. F. L. Henderson. The following are proposed amendments to by-laws:

Move to amend section 1, under article 1 of the by-laws of the St. Louis Medical Society of Missouri, after "character," at the end of the second line in said section, which reads: "And must have resided in this city or its immediate vicinity for at least one year as regular practising physicians prior to the date of making application," and in lieu thereof the following words: "Shall be a resident practising physician of this city or its immediate vicinity."

Move to amend section 3 of article 12, entitled Committee on Elections. In section 3, after "shall," which reads: "Hold a meeting on the Tuesday preceding the first regular meeting in each month," and in lieu thereof the following words: "Meet Tuesday of each week, at such hour as the Committee may determine."

The Bellevue Scandal.—Charges have been brought against seven of the nurses and attendants in the alcoholic ward of Bellevue which have attracted a great deal of attention through the publicity given the charges by the daily press. The complainant in the case is a patient who was in the ward at the time when the alleged abuses occurred. He states that a man about sixty years of age was treated in the most shameful and brutal manner by certain nurses whom he afterwards identified. The charges are thought to be groundless by the hospital authorities, but the most rigid investigation is being made.

Research Work at Rush Medical College.—It is reported that one of the special objects had in view by the officials of the University of Chicago in securing consolidation of the Rush Medical College with the University, is the carrying out of a comprehensive system of original research in medicine. It is understood that Mr. Rockefeller has intimated that when the consolidation is completed he will make a very liberal endowment for the purpose of carrying out research work under the auspices of the college, and that some \$7,000,000 will be devoted to the foundation of an institute for research work alone.

A Decrease in the Number of Licenses Granted.—The annual report of the New York State Board of Medical Examiners shows that the number of candidates for medical licenses reached its high water mark in 1898, when 869 applicants appeared. There has been a steady decrease since, only 685 applicants for license appearing in 1902. Since the establishment of the board, 7,034 candidates for license have been examined, of whom 5,528 or 78.5 per cent. have been successful. Dr. William W. Potter was elected president of the board for the ensuing year and Dr. Maurice J. Lewi, secretary, and Dr. George R. Fowler and Dr. Lewi were appointed a question committee.

To Exempt Hospital Property from Taxation.—A bill has been introduced by Mr. McCabe in the Senate of New York Legislature to exempt from taxation all real estate from which no income is derived, and personal property situated within any city of the first class and belonging to any incorporated medical society of any county, which county is wholly or partly within such city, provided that the property is used for the purposes of the society and not otherwise, and provided that such exemption should not exceed \$150,000 in New York or Kings County, and not exceed \$50,000 in any other county in the State. The bill has been referred to the Committee on Taxation and Retrenchment.

The Phipps Institute.—When Henry Phipps announced his intention of endowing an institute for the study of the prevention and cure of tuberculosis, in the city of Philadelphia, it was found that under an existing statute his intention of locating the institute in the densely populated portion of the city where it would be of the greatest service was illegal. A bill has been passed in the legislature of the State of Pennsylvania revoking the statute in

question, and thus making it possible to carry out the intention of the founder of the institute. It is understood that some portion of the fund set aside for the study and cure of tuberculosis by Mr. Phipps will be expended in the erection and conduct of a sanitarium in or near Pittsburgh. Dr. Lawrence F. Flick, who will have charge of the Phipps Institute in Philadelphia, recently made an address upon the subject in the city of Pittsburgh, in which such a possibility was adverted to.

Vacancies in the State Service.—The State Civil Service Commission announces the next general examination to be held on February 28, 1903. Examinations are to be held for autopsy physician in the State hospital service at Ward's Island, physicians in State hospitals and institutions, regular and homœopathic schools, and veterinarian, and woman officer in reformatory institutions for women and children. Persons desiring to enter these examinations must file applications in the office of the State Civil Service Commission in Albany before noon of February 23rd. Application blanks and information regarding salaries and requirements of examinations may be obtained by addressing the Chief Examiner of the Commission at Albany.

An Examination of Candidates for the Medical Corps of the Army.—We are requested by the Surgeon-General of the Army to announce that examination of candidates for appointment in the Medical Corps of the Army will be resumed by the Army Medical Board in Washington, on April 20th. Classes will be invited to appear on April 20th, and on each Monday thereafter so long as is necessary. Full information as to method of application, nature and scope of examination, etc., will be furnished by the Surgeon General's office upon request of those interested. Applicants from civil life are restricted in age to twenty-nine years, and hospital training or professional experience in private practice is expected of all candidates. There are at present thirty-five vacancies to be filled.

The College of Pharmacy Declares Against Substitution.—At a recent meeting of the New York College of Pharmacy the following resolutions were adopted:

Whereas, The substitution of one article when another is called for, or of an article of one brand when another is ordered, involves an act of deception and an abuse of the confidence of physician or patient, and an act of injustice toward the manufacturer of an article so specified; and

Whereas, The general commission of such acts is destructive of those mutual relations of confidence between manufacturer, pharmacist, physician and patient upon which the highest success of medical practice depends; and

Whereas, Such practices appear to be increasing at the present time, and threatening serious professional and commercial difficulties; therefore, it is

Resolved, That the College of Pharmacy of the City of New York publicly condemns all acts of substitution, whether in prescription work or in ordinary trade; that it declares such practices to be violations of just dealing, opposed to the principles of professional ethics and subversive to good morals; and it is further

Resolved, That we exert our utmost influence, both as individuals and as an institution, to discourage such practices and to promote professional and commercial confidence.

A Symposium on Tuberculosis.—At a stated meeting of the New York Academy of Medicine held on Thursday evening, February 5th, at 8 p. m., there was a symposium on tuberculosis, of which the following is the programme: The Practical Recognition of the Tubercle Bacillus in the Sputum, by Dr. Charles Fitzpatrick, of the bacteriological division, New York City Board of Health; The Sanatorium Treatment of Tuberculosis, by Dr. Herbert M. King, of the Loomis Sanitarium, Liberty, N. Y.; The Treatment and Care of Consumptives at their Homes and the Urgent Need of Local Sanatoria, by Dr. S. A. Knopf, of New York; Discussion by Dr. Edward G. Janeway, the Hon. Homer Folks, commissioner of charities, Dr. Stephen Smith Burt, Dr. Beverly Robinson, Ernst J. Lederle, Ph. D., president of the Board of Health of New York City; Dr. Henry P. Loomis, Dr. Alfred Meyer, Dr. Hermann Biggs, and others.

A German Commission on Hypnotism.—The Department of Education of the German Government appointed a commission about a year ago consisting of Professor Mendel, Dr. Gock, Dr. Munter, and Dr. Aschenborn to investigate the subject of hypnotism as a therapeutic agent. This commission has recently submitted its report, and according to the cabled advices the report declares hypnotism cannot produce organic changes nor cure epilepsy or hysteria, but it can be used helpfully in some instances, by removing symptoms through suggestion. No good physicians would leave out of account the influence of suggestion upon patients, but hypnotic suggestion may intensify disease, when laymen apply it who do not know when to use it and when not to do so. The influence of hypnotic suggestion diminishes in proportion to popular knowledge of it. It is most powerful when regarded by a subject as marvellous and supernatural. The commission also notes that hypnotism is less used than formerly.

The New York Medical College and Hospital for Women opened its new wing on January 28th through the exertions of the Hospital Guild, whereby the debt on the institution has been paid off, and an effort will now be made to raise the money to pay the mortgage incurred for the building of the new wing. It is also the desire of the guild to establish free beds for self-supporting women, and an earnest effort to obtain the necessary funds will be made this year. The hospital, which is situated in West One Hundred and First Street, although a small one, is complete in its equipment. The operating theatre on the fourth floor is well appointed. On the second floor is an electricity room, supplied with static and other apparatus. A roof garden, opening off the fourth floor, will be a boon to convalescent patients during the hot months. There are forty-five women students in the medical school at present.

Literature for Hospitals.—It is probable that not so many people are acquainted with the excellent work done by the Hospital Book and Newspaper Society, as could be wished. During the past year this society has distributed for use of the inmates of hospitals in New York 18,942 books,

31,023 magazines, and 54,001 papers, not including nearly 250,000 papers and magazines collected from the society's boxes. Besides the hospital wards of New York, there are innumerable private institutions and missions capable of absorbing almost any quantity of printed matter. At present the society sends to about 250 places, scattered among twenty-seven States and Territories, not including Cuba, Puerto Rico, the Philippines, China, and other army and navy stations. Travelers who are in ignorance of the fact that boxes are provided for the reception of discarded reading matter, throw away quantities of paper bound books, newspapers, and magazines, which are usually light and entertaining in character, and the society would be glad to get them. Besides reading matter, contributions of money are gratefully received. The cost of distribution is heavy, notwithstanding the liberality of express companies. Many boxes go to isolated settlements in the West and South, and to distant schools and missions. The treasurer of the society is Mrs. Fordham Morris, No. 45 East Thirtieth Street. Reading matter should be sent to the office, No. 105 East Twenty-second Street.

Bubonic Plague Inquiry by the New York State Legislature.—A resolution has been adopted by the Assembly of the New York State Legislature concerning bubonic plague as follows:

Whereas, The recent conference of representatives of State Boards of Health at Washington revealed the alarming spread of the bubonic plague on the Pacific Coast, and the lamentable lack of effort on the part of the health authorities of the afflicted section to stamp out the disease; and,

Whereas, The conference determined that unless speedy measures be taken by the Pacific Coast States, it will be necessary for the Federal authorities to take cognizance of the spread of the malady, and that action on the part of the health authorities of the States of the Middle West and the Atlantic Coast will soon be imperative; therefore, be it

Resolved, That the Commissioner of Health of the State of New York report to the Assembly the part taken by him in the Washington conference and the plans adopted or proposed to be adopted to prevent the introduction of the bubonic plague into this State.

The Craig Colony Prize of \$200 has been awarded to Dr. Julius Donath, of Buda Pest, Hungary, for his paper on The Presence of Cholin in Epilepsy and its Significance in the Production of the Convulsive Attack. The award was made by a committee of the New York Neurological Society, consisting of Dr. Pearce Bailey, and Dr. Christian Herter, and Dr. George W. Jacoby. This prize of \$200 has been offered annually by Dr. Frederick Peterson for the best original essay on the *Ætiology*, *Pathology* and *Treatment* of Epilepsy, subject to the following conditions: First, that the paper must show original research work; second, that the subject matter of the essay shall not have been before published; third, that all manuscripts submitted shall be in English and shall be sent to Dr. Peterson, at 4 West Fiftieth Street, New York City, before September 30th, the successful manuscript becoming the exclusive property of the Craig Colony; fourth, each essay submitted must be accompanied by a sealed envelope containing the name and address of the author and bearing on the outside a motto or device, which is also to be inscribed upon the essay.

Typhoid Fever in Philadelphia.—During the month of January 1,303 cases of typhoid fever have been officially reported in the city of Philadelphia.

Fourteenth International Medical Congress at Madrid.—It is believed that a considerable number of American physicians will attend the fourteenth International Medical Congress, to be held in Madrid, April 23 to 30, 1903. As all those who wish to attend the congress have a common objective point, it is thought that they can be associated to advantage in one or more excursion parties. In this way the social features of the trip will be enhanced, and each individual will be surrounded by those who are personally congenial. By such association better accommodations can be secured and at a considerable reduction in price. Additional security will also be attained, as parts of the trip which include comparatively unfrequented routes of travel, will be under the charge of a traveling conductor who is thoroughly conversant with the language and customs of the countries visited. As there will, doubtless, be some divergence as to choice of routes depending on individual inclination and previous opportunities of foreign travel, several returning routes have been selected, the itineraries of which, although separate from a portion of the journey, have been arranged that the principal points are visited together. The party will sail from New York city, on April 11th, on the twin-ocean steamer, *Princess Irene*, North German Lloyd, direct to Gibraltar. Tickets for the round trip, including hotel and sight-seeing, \$265, \$375 and \$550, according to the tour selected. It is important that all who contemplate taking this trip should register at once, so that reservations for hotel in Madrid may be satisfactorily arranged. Final arrangements will be in the hands of the well-known conductors, Thomas Cook & Sons, which insures perfect and complete service in all details. Full information and copies of Itinerary may be obtained by addressing either of the last named undersigned: W. W. Keen, Walter Wyman, Nicholas Senn, C. A. L. Reed, Howard A. Kelly, A. Vander Veer, John B. Murphy, Joseph Mathews, Robert T. Morris, Lucien Howe, Charles H. Hughes, W. F. Southard.

Ramon Guiteras, 75 West Fifty-fifth Street, New York City; Charles Wood Fassett, Krug Park Place, St. Joseph, Mo.

Official News.

Infectious Diseases in New York:

We are indebted to the Sanitary Bureau of the Health Department for the following statement of cases and deaths reported for the two weeks ending January 31, 1903:

DISEASES.	Weekend'g Jan. 24.		Week end'g Jan. 31	
	Cases.	Deaths.	Cases.	Deaths.
Typhoid fever.....	59	5	34	9
Scarlet fever.....	250	17	264	15
Cerebro-spinal meningitis....	0	0	0	0
Measles.....	158	7	164	8
Diphtheria and Croup.....	391	46	361	60
Small-pox.....	1	0	3	1
Tuberculosis.....	285	168	248	163
Chicken-pox.....	99	0	129	0

Public Health and Marine-Hospital Service:

Official List of Changes of Station and Duties of Commissioned and Non-commissioned officers of the Public Health and Marine-Hospital Service for the Seven Days ended January 29, 1903:

GEDDINGS, H. D., Assistant Surgeon-General. Detailed to represent the service at meeting of Ohio Health Officers at Columbus, Ohio, January 29-30, 1903.

SPRAGUE, E. K., Passed Assistant Surgeon. Granted leave of absence for six days from January 15, 1903, under provisions of paragraph 181 of the regulations.

FOSTER, M. H., Assistant Surgeon. To report to chairman of board of examiners at San Francisco, Cal., February 16, 1903, for examination to determine his fitness for promotion to the grade of passed assistant surgeon.

LUMSDEN, L. L., Assistant Surgeon. To report to chairman of board of examiners at San Francisco, Cal., February 16, 1903, for examination to determine his fitness for promotion to the grade of passed assistant surgeon.

WARREN, B. S., Assistant Surgeon. Granted leave of absence on account of sickness, for one month from February 1st.

HALL, L. P., Pharmacist. Granted leave of absence for seven days from January 9, 1903, under the provisions of paragraph 201 of the regulations.

Boards Convened.

Board convened to meet at Washington, D. C., for the physical examination of an applicant for position in Revenue Cutter Service. Detail for the board: Assistant Surgeon-General W. J. PETTUS, chairman; Assistant Surgeon B. S. WARREN, recorder.

Board convened to meet at the Marine Hospital, San Francisco, Cal., February 16, 1903, for the examination of Assistant Surgeons M. H. FOSTER and L. L. LUMSDEN to determine their fitness for promotion to the grade of Passed Assistant Surgeon. Detail for the board: Passed Assistant Surgeon W. G. STIMPSON, chairman; Passed Assistant Surgeon C. H. GARDNER, Passed Assistant Surgeon H. S. CUMMING, recorder.

Army Intelligence:

Official List of Changes in the Station and Duties of Officers serving in the Medical Department of the United States Army for the week ending January 31, 1903:

FARR, CHARLES W., First Lieutenant and Assistant Surgeon. Granted three months' leave of absence from March 1, 1903.

KEEFER, FRANK R., Major and Surgeon. Granted leave of absence for one month and fifteen days, from February 10, 1903.

Naval Intelligence:

Official List of Changes in the Medical Corps of the United States Navy for the week ending January 31, 1903:

BLACKBURN, T. C. Appointed Acting Assistant Surgeon from January 23, 1903.

BROWN, H. L. Appointed Acting Assistant Surgeon from January 23, 1903.

COCKE, P. L. Appointed Acting Assistant Surgeon from January 23, 1903.

DABNEY, V. Appointed Acting Assistant Surgeon from January 23, 1903.

DUNCAN, G. F. Appointed Acting Assistant Surgeon from January 23, 1903.

HAWKE, J. A., Medical Director. Retired from active service, having reached the age of sixty-two years.

HIGH, W. E. G., Assistant Surgeon. Ordered to the Naval Training Station, Newport, R. I.

KAINES, A. W., Acting Assistant Surgeon. Ordered to the *Gloucester*.

MEARS, J. B. Appointed Acting Assistant Surgeon from January 23, 1903.

McMURDO, P. F. Appointed Acting Assistant Surgeon from January 23, 1903.

ROSENBLEUTH, J. C., Passed Assistant Surgeon. Resignation accepted to take effect on January 23, 1903.

ROSSITER, P. S. Appointed Acting Assistant Surgeon from January 23, 1903.

STONE, M. V., Assistant Surgeon. Detached from the Naval Training Station, Newport, R. I., ordered home, and granted sick leave for two months.

TAYLOR, J. S., Assistant Surgeon. Ordered to report to the Chief of the Bureau of Medicine and Surgery of the Navy Department for duty.

WINSLOW, G. F., Medical Director. Retired from active service upon his own application after forty years' service.

Public Health and Marine-Hospital Service Health Reports:

The following cases of smallpox, yellow fever, cholera, and plague were reported to the surgeon-general during the week ending January 31, 1903:

Smallpox—United States.

Location.	Dates.	Cases.	Deaths.
California—Los Angeles	Jan. 4-17	6	
California—San Francisco	Jan. 11-18	8	
Colorado—Denver	Jan. 10-17	9	
Illinois—Chicago	Jan. 17-24	11	1
Illinois—Galesburg	Jan. 17-24	1	1
Indiana—Evansville	Jan. 18-24	1	6
Indiana—Indianapolis	Jan. 10-17	37	
Indiana—South Bend	Jan. 17-24	5	
Kentucky—Lexington	Jan. 17-24	4	
Louisiana—New Orleans	Jan. 17-24	2	
Maine—Aroostook Co.; Presque Isle included	Jan. 20 150 to 400 cases.		
Maine—Biddeford	Jan. 17-24	10	
Massachusetts—Boston	Jan. 17-24	5	3
Massachusetts—Cambridge	Jan. 17-24	1	
Massachusetts—Chelsea	Jan. 17-24	1	
Michigan—Grand Rapids	Jan. 17-24	21	
Missouri—St. Louis	Jan. 18-25	17	
Nebraska—Omaha	Jan. 17-24	6	
New Hampshire—Manchester	Jan. 10-24	7	
New Hampshire—Nashua	Jan. 17-24	1	
New Jersey—Camden	Jan. 17-24	1	
New Jersey—Newark	Jan. 17-24	8	
New York—New York	Jan. 17-24	1	
Ohio—Chillicothe	Jan. 17-24	1	
Ohio—Cincinnati	Jan. 16-23	8	
Ohio—Cleveland	Jan. 17-24	14	3
Ohio—Dayton	Jan. 17-24	5	
Ohio—Hamilton	Jan. 17-24	2	
Pennsylvania—Erie	Jan. 17-24	9	
Pennsylvania—Johnstown	Jan. 18-25	2	
Pennsylvania—McKeesport	Jan. 17-24	5	
Pennsylvania—Philadelphia	Jan. 17-24	13	2
Pennsylvania—Pittsburgh	Jan. 17-24	23	4
Pennsylvania—Reading	Jan. 19-26	1	
South Carolina—Charleston	Jan. 17-24	3	
Tennessee—Memphis	Jan. 17-24	8	
Wisconsin—Milwaukee	Jan. 17-24	3	

Smallpox—Foreign.

Austria—Prague	Dec. 27-Jan. 3	9	
Belgium—Antwerp	Dec. 27-Jan. 3	6	3
Belgium—Ghent	Dec. 21-Jan. 3		3
Canada—Amherstburg	Jan. 17-24	2	
Great Britain—Birmingham	Jan. 3-10	1	
Great Britain—Dublin	Jan. 3-10	1	
Great Britain—Glasgow	Jan. 9-16	1	
Great Britain—Leeds	Jan. 3-10	3	
Great Britain—Liverpool	Jan. 3-10	59	6
Great Britain—London	Dec. 27-Jan. 10	5	
Great Britain—Manchester	Jan. 3-10	6	
Great Britain—Sheffield	Dec. 27-Jan. 10	4	
Russia—Odessa	Dec. 27-Jan. 3	4	
Russia—St. Petersburg	Dec. 27-Jan. 3	18	5
Straits Settlements—Singapore	Dec. 6-13		2

Yellow Fever.

Colombia—Panama	Jan. 12-19	6	2
Mexico—Tampico	Jan. 10-17		2

Cholera.

Egypt—Alexandria	Dec. 28-Jan. 4	9	6
Java—Batavia	Dec. 6-13	1	1

Plague.

India—Karachi	Dec. 13-20	25	13
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Births, Marriages, and Deaths

Married.

BROOKS—WHITE.—In Chicago, Illinois, on Monday, January 26th, Dr. George Warren Brooks, of Hannah, North Dakota, and Miss E. Marie Louise White, of Port Huron, Michigan.

DE ROUTON—MORRIS.—In Baltimore, Maryland, on Wednesday, January 28th, Dr. Martin J. J. Marlier de Routon and Miss Fannie Rowe Morris.

LA BARRE—REYNOLDS.—In Baltimore, Maryland, on Monday, January 26th, Dr. John Pollard La Barre and Miss Elizabeth Reynolds.

SOCH—HARRIS.—In St. Louis, Missouri, on Monday, January 19th, Mr. Charles A. Soch and Miss Martha Goulde Harris, daughter of Dr. John Harris.

WILLIAMS—MARTIN.—In Lisbon, Ohio, on Wednesday, January 28th, Dr. Charles Dickens Williams, of Cleveland, and Miss Anna Martin.

WORCESTER—BLAKESLEE.—In Kansas City, Missouri, on Wednesday, January 28th, Dr. John Worcester, of Birmingham, Alabama, and Miss Bessie Blakeslee.

Died.

BREWER.—In Baltimore, Maryland, on Saturday, January 24th, Dr. Marbury Brewer, in the seventy-second year of his age.

COVERT.—In New York City, on Monday, February 2d, Dr. Archibald E. Covert, in the thirty-second year of his age.

DICKERMAN.—In Springfield, Illinois, on Friday, January 23d, Dr. Edward T. Dickerman, in the thirty-sixth year of his age.

JEFFRIES.—In Warsaw, Virginia, on Sunday, January 25th, Dr. Sydnor Jeffries, in the eighty-eighth year of his age.

LEMEN.—In Denver, Colorado, on Wednesday, January 21st, Dr. Harrison Augustus Lemen, in the sixty-third year of his age.

MORRIS.—In Baltimore, Maryland, on Thursday, January 29th, Dr. John Morris, in the seventy-ninth year of his age.

MURPHY.—In Peoria, Illinois, on Thursday, January 22d, Dr. John Murphy, in the eighty-sixth year of his age.

RICHARD.—In East Orange, New Jersey, on Saturday, January 31st, Dr. Herman T. Richard, in the sixty-ninth year of his age.

RIDGE.—In Camden, New Jersey, on Saturday, January 31st, Dr. James M. Ridge, in the seventy-sixth year of his age.

TERRETT.—In Natchitoches, Louisiana, on Friday, January 23d, Dr. Burdette Atkinson Terrett.

WOMBLE.—In Baltimore, Maryland, on Friday, January 30th, Dr. Pembroke M. Womble, in the seventy-sixth year of his age.

WYMAN.—In Boston, Mass., on Friday, January 30th, Dr. Morrill Wyman, in the ninety-first year of his age.

Obituary.

MORRILL WYMAN, M. D., LL. D.,
CAMBRIDGE, MASS.

This aged physician, known and honored by more than one generation of physicians and revered by the countless individuals in whose families and among whose friends his professional activity had been exercised, died on January 30th, after a brief illness. He was ninety years old, and is said to have been the oldest practitioner of medicine in Massachusetts. Although no specially notable advance of our art may have been achieved by him, he was such an excellent "all-round" physician that his fame will endure for a long time to come.

Pith of Current Literature.

PRACTICE OF MEDICINE.

Vaccination Rashes and Complications. By G. Pernet, F. R. C. S. (*Lancet*, January 10th).—*Local abnormalities or irregularities in the development of the vaccine vesicles.* Extra vesicles sometimes occur, due to restlessness on the part of the child. Bullæ may form instead of vesicles, due to impotent lymph; they leave no scars, and vaccination should be done over again with a good lymph. Vesicles may be retarded in their development—instances of delays of two months, one year, and even fourteen years have been reported. The author has never seen a case of "relapse of vaccination," but he has seen secondary inflammations of the vaccinated area due probably to staphylococcus infection. Hypertrophic scars may develop on vaccinated areas, but not keloid.

2. *Incidental exanthematic eruptions.* These are usually urticarial or erythematous and are in most cases evanescent, but they may also be vesicular and even bullous. Impetigo contagiosa bullosa occasionally occurs—also the so-called vaccine lichen. Erythema multiforme may also ensue, no doubt as the result of a toxæmia. A more important but uncommon eruption is generalized vaccinia; it is uncertain whether it arises from self-inoculation or is conveyed through the blood. Vaccinia gangrenosa and purpura are very unusual conditions. Morbilliform and scarlatiniform rashes also sometimes occur, but they give no trouble.

3. *Diseases inoculated with vaccinia at the time of the operation.* Syphilis, tuberculosis, and leprosy are the three diseases which are said to be inoculated with vaccine virus. Now that calf lymph is in general use, inoculation of syphilis or leprosy *via* the lymph is a thing of the past. Indeed as regards leprosy it is improbable that the disease has ever been transferred from one person to another by means of vaccination. As regards tuberculosis, it is very rare in calves, and further it is not yet settled whether bovine tuberculosis is transmissible to man. But all possible precautions should be taken to ensure the healthfulness of vaccifer calves.

4. *Diseases of a septic nature which find a nidus in the wounds subsequently to the operation.* Vaccinia may be complicated with erysipelas due to streptococcal or staphylococcal infection. Furunculosis, cellulitis, and even septicæmia and pyæmia have been observed. A very rare complication is tetanus.

5. *Diseases excited in subjects specially predisposed to the same.* Vaccination has occasionally started attacks of psoriasis and eczema—but it is far from being the cause of the same.

6. *Accidental vaccination,* in the great majority of cases, occurs as a single lesion, giving rise to much surrounding redness, together with swelling and tenderness.

7. *Horse pox, or grease, and sheep pox in man.*

8. *Effects of intercurrent diseases on vaccination and vice versa.* Vaccinia has often been noted to have cured eczema; eczematous children are made no worse by vaccination. In measles and scarlet fever the areola around the vaccine vesicle is delayed.

9. *Vaccination as a mode of treatment.* Nævi can sometimes be cured by vaccinating upon them but the scarification must be very light. Whooping cough, influenza, pneumonia, and pulmonary tuberculosis are all said to have improved after vaccination.

In conclusion the author urges the necessity of scrupulous cleanliness and good lymph.

A Case of Mucomembranous Colitis Treated with Methylene Blue.—Dr. Tullio Cecchetelli-Ippoliti (*Gazzetta degli ospedali e delle cliniche*, December 14th) reports a case of mucous colitis which was treated successfully by means of methylene blue. The patient was a woman aged thirty-four years, who had been suffering from chronic colitis with stools containing strings of mucus and shreds, for three years. She had undergone various forms of treatment without avail and had become markedly cachectic. These cases are referred by some to disturbances of the nervous system, and by others to fermentation and the products of bacterial action in the intestines. Methylene blue seemed to the author a remedy that acted as a sedative to the nervous system and was acknowledged as an efficient antifermentative and antiseptic, and he therefore used it in this case. The patient was placed on milk diet, with the addition of broths, and alkaline mineral waters, and was given two enemata daily of a one-per-cent. solution of methylene blue. Four pills, each containing a centigramme of methylene blue, were also administered daily. In twenty days a marked improvement was noted, and *hydrastis canadensis* was prescribed to counteract the tendency to hypersecretion on the part of the intestinal mucosa, that remained. Cold baths, massage, and the administration of iron completed the cure. No more mucus or shreds were passed, and the patient succeeded in regulating her bowels by means of some bland laxatives.

A Case of Anuria without Uræmia.—Dr. Polidoro Licci (*Gazzetta degli ospedali e delle cliniche*, December 28,) reports the following case: A young man, aged twenty-four years, was admitted to the hospital as an emergency case, after having swallowed six tablets of mercuric chloride, each containing about one gramme of the active substance. The patient was given albumen water and his stomach was washed out, but he developed an intense glossitis, stomatitis, and pharyngitis, followed by the appearance of ulcers on the affected mucosæ. He also had intense pains in the abdomen, showing that the same condition must have been present in the stomach and intestines, and for a number of days he had intense diarrhœa with bloody and mucous discharges. From the beginning there was an absolute absence of urination. During the next few days he gradually improved under milk diet, rectal alimentation, alkaline drinks and mouth washes of potassium chlorate. Dry packs were given and were followed by mild diaphoresis, but there was no urination until the fifth day, when about two ounces were passed, containing a large amount of albumin and casts. On the following day he seemed better, but toward noon was taken with violent pains in the stomach and vomited several times some bloody

brownish fluid. He then became restless and delirious, and had contractions of the muscles of the extremities. After seven hours he became calm, but continued to vomit bloody fluid until he began to collapse, and on the following day he died after a period of prostration. For seven days this patient had had absolute anuria, and the manifestations of the effects of the caustic poison. The hæmatemesis was due, without doubt, to the rupture of some vessel in the stomach as the result of an ulceration. The author, in commenting on this case, believes that such instances tend to throw light on the pathogenesis of the syndrome known as uræmia. It is noteworthy that none of the text-books mention the possibility of anuria persisting for some days without any uræmic symptoms. On the other hand, all the books speak of the marked diminution in the amount of urine noted in cases of uræmia. It may be remembered that Maragliano and others have described cases of uræmia in which there was a normal, or even an increased, amount of urinary secretion. These facts all tend to destroy the conception so long held and so firmly established, of the connection between uræmia and anuria.

Bence-Jones's Albumosuria, with Report of Three Cases. By Dr. J. M. Anders and Dr. L. N. Boston (*Lancet*, January 10th).—The authors report three cases of albumosuria, all occurring in men. In one of the cases there were accompanying lesions of the bones (myeloma). The urine in all three cases gave the usual reactions for albumose—a proteid precipitated by warming but redissolved on boiling, and precipitated by hydrochloric acid. The authors have collected thirty cases of albumosuria from the literature; these together with their own cases, making thirty-three in all, they have carefully reviewed, arriving at the following conclusions: Albumosuria is a condition which manifests itself after the age of thirty years, males being affected in 80 per cent. of the cases. In 15 per cent. there is a history of an accident inflicting rather severe traumatism. Primary lesions of the bones, which should be regarded as multiple myeloma, figured in 80 per cent. of the cases. Of these the bones of the chest, vertebræ, and pelvis suffered most destruction. An extreme grade of anæmia is often present, considered by the authors to be secondary to the myeloma. Experimentally, albumosuria results from the administration of pyrocin. The disease may be persistent, transitory, or remittent. In certain cases the albumosuria was present when the disease was well advanced, while in others it disappeared when the disease was at its height. Polyuria occurs quite often. The albumosuria is not dependent on any known pathological changes in the kidneys themselves. Pain is an almost constant feature, being referred to as bone pains, neuralgia, lumbago, etc. At times it is dull and constant, again cramp-like, lancinating, and momentary. Pressure over the painful bones intensifies it. Cramps of the lower limbs are common. Headache is present in 70 per cent. of the cases. Hand in hand with rapid and progressive emaciation are noticed pallor, anæmia, and gastrointestinal symptoms, as nausea, diarrhoea, and constipation. In 67 per cent. of all cases, deformities of the bones of the

skeleton were apparent during life. Pathological fractures occurring without apparent cause are a common complication. Tachycardia, palpitation, and dyspnoea are prominent symptoms. Failing sight is an early and progressive symptom, examination showing sclerosis of the vessels and retinal hæmorrhages. All three of the authors' cases showed a well-marked leucocytosis, the anæmia being of a moderate grade. Pneumonia is a common cause of death. The duration of the disease is usually less than two years. In conclusion, Bence-Jones's albumose when present in the urine is invaluable as a diagnostic feature in cases of obscure multiple myeloma—it differentiates them from cases of sarcoma, carcinoma, etc. Where the albumose has persisted for some time its disappearance signifies approaching danger and probably an early fatal issue.

The Diffusibility of Scarlet Fever Virus. By Dr. J. Sutherland (*Lancet*, January 10th).—The author calls attention to the extremely low diffusibility of scarlet fever virus. While the disease is intensely contagious, and children exposed to direct infection from a desquamating case almost never escape, yet transmission of the virus by a healthy person almost never occurs. The author reports an epidemic of scarlet fever in which 224 cases occurred in 132 households. Classifying the cases as to isolation, the following results were obtained: (1) In 10 families there was no isolation, and in every instance other children contracted the disease. (2) In 40 families the patients were either the only children or the only susceptible ones. (3) In 34 families there was a well-intentioned attempt at isolation. But sooner or later in each instance care was relaxed, healthy children were allowed in the room with the patient, and were infected in consequence. (4) In 48 families isolation proved preeminently successful, although susceptible children lived in each house. In each instance the woman of the house performed all the household duties, both for the patient and the other members of the family, passing constantly to and fro between the infected and non-infected apartments. Nevertheless, in not one of these houses did transmission of the disease occur; so that the author concludes that a healthy nurse or attendant on a case of scarlet fever does not in ordinary circumstances carry the infection of scarlet fever, even from one room to another. It may be due to the weight of the scale of skin containing the virus, it may be the rapid drying or devitalizing of the virus, or it may be some cause or condition as yet unsuspected.

The Prophylactic Treatment of Enteric Fever by Inoculation.—Dr. Walter C. Stevenson (*Dublin Journal of Medical Science*, December) asserts that if, with safety and facility, an individual can be placed in the condition of one who has convalesced from an attack of typhoid fever with his powers of resisting it greatly increased, the object of introducing a prophylactic treatment of typhoid will have been achieved. This immunity is brought about during the course of the disease by the stimulation of the toxins of the typhoid bacilli, causing the production of a condition antagonistic to the germs of

that disease. It is easy to obtain for the purpose of this treatment typhoid toxines, seeing that a broth culture must abound in them. They are sterilized by heating to 60° C. and a certain quantity of carbolic acid is then added. The culture is standardized; the dose is usually one cubic centimetre for the first injection, and from one and a half to two cubic centimetres for the second. The method of administration is by a sterile hypodermic needle, the fluid being injected into any part of the body, preferably where the tissues are lax, as in front of the axilla or in the skin of the abdomen. At first, in this treatment, one large dose of typhoid vaccine was used. It was then found that the bactericidal power was decreased for a period of two or three weeks. This was followed by a positive phase of increased bactericidal power. The undesirable negative phase is now obviated by giving an initial small dose when there is a very short or no "negative phase." Then, after ten days, a larger dose is administered and a still greater bactericidal power will be gained.

The symptoms produced by this treatment are trivial. Of seventy cases of inoculation carried out by the author on board ship only one patient took to bed for one day and a half. His evening temperature was 101° F., and was 99° F. the following morning. In another case, it caused vomiting about three hours after inoculation. The symptoms were mostly local. The immunity brought about by typhoid vaccine seems to be similar to, but more certain than, that produced by long residence in a locality where enteric fever is endemic. Inoculation does not prevent the disease, but statistics show that the percentage of cases among those who have been so treated is very considerably less than among those who have not, though all were equally exposed.

In conclusion, it is reasonable to expect, and ascertained facts so far as they go prove, that this system of treatment is a satisfactory one for the prophylaxis of enteric fever. But discretion is necessary in practising it in the presence of an epidemic where an overdose of vaccine would for a short time lower the power of resisting this disease.

An Improved Method for the Microscopical Diagnosis of Intermittent Fever. By R. Ross, F. R. C. S. (*Lancet*, January 10th).—The author's method is as follows: The finger is pricked with a lancet, and a large drop of blood, amounting to twenty cubic millimetres, is taken on the glass slide and spread out with the needle over an area the size of an ordinary cover glass. It is then allowed to dry, and as soon as the film is perfectly dry a quantity of one-per-cent. aqueous eosin solution, sufficient to cover the film, is laid upon it with a glass rod. This is allowed to remain on the film of blood for a period up to about a quarter of an hour, the period being inversely proportional to the strength of the staining solution. As the film of blood has not been fixed the solution of eosin will take out the hæmoglobin of the dried corpuscles and, at the same time, will stain the residual mass consisting of the stromata of the corpuscles, leucocytes, blood plates, and parasites. After the required time has elapsed the solution is washed off by a very gentle stream of water, and replaced by a weak solution of methy-

lene blue, the same as is employed in the Romanowsky method. The blue is allowed to remain only a few seconds, the time being inversely proportional to the strength of the solution. Next, the blue is washed off very gently in its turn, and the specimen dried. It may be mounted in Canada balsam or water, or examined without a cover glass by placing a drop of cedar oil directly upon the specimen. The specimen will contain no hæmoglobin and will consist only of the transparent stromata of the corpuscles, the leucocytes, blood plates, and parasites. Twenty times the amount of blood used in an ordinary preparation will be found disposed over the area covered by the cover glass. If the Romanowsky stains are efficient, the smallest parasites will be found scattered over the field as small blue rings with a crimson dot within or upon the ring. If the preparation has not been overstained the pigment of pigmented parasites will also be visible.

The Treatment of Hay Fever. By Lorenzo B. Lockard, M. D. (*Boston Medical and Surgical Journal*, January 15th).—The treatment of hay fever falls into two divisions: preventive and palliative. By the preventive treatment, from 60 to 80 per cent. of the cases will be rendered immune. By the palliative a large majority will be given complete relief. A practical cure will have been obtained when all local sedative measures can be withheld without the occurrence of a relapse. (a) Preventive treatment. This is both (1) local, and (2) constitutional. (1) Local treatment resolves itself into correcting all deformities and in cauterizing lightly, with the galvanocautery, those parts of the nasal mucous membrane that are known to be particularly sensitive. (2) Constitutional treatment. This should be begun at least four weeks before the expected attack. The aim should be (a) To increase the elimination and to decrease the production of uric acid. (b) To correct any existing neurosis. (c) To remove local and constitutional abnormalities. The first of these objects is obtained by the regulation of the diet and the administration of alkalies, lithia, and sodium salicylate. The second, by various hygienic measures, by the administration of general nerve tonics, and, in highly nervous patients, by sedative nerve mixtures, such as chloretone, immediately preceding an expected attack. The removal of local or constitutional abnormalities need not be discussed, as it is a matter which is well understood. Attention to the treatment as outlined above will render immune from 50 to 80 per cent. of the ordinary cases. (b) Palliative treatment. Occasionally operative intervention, even at the beginning of an attack, may be followed by brilliant results. This, however, is very rare, but if nasal obstruction cannot be relieved by ordinary means, one should not hesitate to use the cautery or some operative measure. Nitromuriatic acid in five drop doses and lemon juice will at times be of great service. Locally, adrenalin chloride, followed by an oily spray, will give good results. If the hydrorrhœa persists it can often be controlled by atropine, morphine, caffeine and five grain doses of suprarenal gland. For the eyes smoked glasses, instillations of adrenalin, or a simple wash of boric acid and camphor water will be all that is

required. Nasal masks are worse than useless. The author has tried various other drugs and general measures and records his experience with them. In conclusion we must remember that in the production of this disease we recognize three factors: (a) A neurosis; (b) some lesion or hypersensitive condition of the nasal mucous membrane; (c) the inhalation of pollen or certain odors. "Completely remove any one of these three factors and the disease will be mastered; as we cannot materially reduce the number of inspired pollen, we direct our efforts to the first two—the neurosis and the nasal condition."

Two Cases of Perforation in Typhoid Fever, in One of which an Operation was Performed. By James Hendrie Lloyd, A. M., M. D., and Thomas L. Coley, A. B., M. D. (*Philadelphia Medical Journal*, January 17th).—The importance of making an early diagnosis of the occurrence of perforation in typhoid fever is shown by the following statistics. Perforation occurs in 3 per cent. of all cases of typhoid, and in 30 per cent. of fatal cases. By surgical intervention there is hope of saving at least one-third of these cases. The diagnosis, however, is often most difficult. After consulting about twenty standard text books the authors are of opinion that no description of the condition so far given, can be of any great value in deciding if any particular case has a perforation or not. "It is doubtful whether perforation *per se* presents a single constant symptom apart from the acute peritonitis which is always the immediate result of such a complication." The two cases reported both ended fatally, and both illustrate the extreme difficulty of reaching a correct decision in time. The paper was read before the Philadelphia County Medical Society and the discussion it evoked is appended to the article.

SURGERY AND ANATOMY.

Subdural Interposition of Rubber Tissue without Removal of the Gasserian Ganglion in Operations for Tic Douloureux. By Robert Abbe, M. D. (*Annals of Surgery*, January).—Six years ago Dr. Abbe, having been prevented by excessive hæmorrhage from completely removing the Gasserian ganglion in a man of forty-six years of age, and fearing a recurrence of symptoms if only the resection of a small portion of the nerves was accomplished, attempted to prevent regeneration of the nerves by interposing a small piece of rubber tissue between the ganglion and the foramina of exit. This measure has proved so far successful that the man to-day is in perfect health. Since then Dr. Abbe has operated on five cases in which he has used this method, and he believes that it has been practically proved that the interposition of rubber tissue is a permanent barrier to the reunion of divided intracranial nerves and that this procedure will render unnecessary in a great majority of cases the extensive destruction of the Gasserian ganglion. The extreme gravity of the extirpation operation makes a careful consideration of this newer method a matter of much importance. One must consider (1) The nature of the disease. The author believes that the disease of the nerve will

nearly always be found located anteriorly to the Gasserian ganglion. (2) The question of the regeneration of the nerves. From a consideration of the experiments of Ballance and Stewart the author believes that if the nerve regeneration can be prevented for the first few months it will not after that occur at all. (3) The value, safety, and durability of the interposed non-conductor. In six cases in the past six years Dr. Abbe has used rubber tissue, and the results have always been successful; he therefore believes that the value of this substance is now established. The new operation proposed is much simpler and much less dangerous than the old one and the technics is given. Dr. Abbe believes he has demonstrated (1) that the operations upon the ganglion have been carried to an unnecessary degree of severity; (2) that resection of one-fourth or one-half inch of the nerves anterior to the ganglion and within the cranium, with the interposition of rubber tissue, can be relied upon for perfect cure, up to six years at least, with probability of permanency as great as by any method; (3) that it is a simple, speedy, and safe method, and thereby fulfils the highest aims of the best surgery.

Constriction of the Small Intestine by a Gangrenous Appendix. By Dr. G. L. Gulland and Dr. D. Wallace. (*British Medical Journal*, January 10th).—The authors report the case of a boy, aged eleven years, who, after eating some green apples, had an attack of diarrhœa. This was succeeded by obstinate constipation, pain in the right iliac region, and vomiting that soon became fæcal. The abdomen was distended and the patient presented all the signs of acute intestinal obstruction. Upon opening the abdomen it was found that, as the result of some long past inflammation, the tip of the appendix had become adherent, forming a ring. The diarrhœa caused by the apples gave rise to increased peristalsis, by which a loop of intestine had been forced through the appendicular ring and become strangulated. In doing so it had twisted the appendix, and shut off its blood supply, so that it became gangrenous. No perforation had occurred and there was only a slight amount of peritonitis. The patient did well for twenty-four hours, when the vomiting returned and he died shortly afterward.

Two Erroneous Surgical Decisions in Intestinal Perforation from Typhoid Fever. By John B. Roberts, M. D. (*Philadelphia Medical Journal*, January 17th).—Dr. Roberts's cases are the same two that are reported in a separate paper in the same issue of the journal in which his appears. Having been the surgeon called in consultation on the cases, he discusses them from the surgeon's point of view. From a careful study of these two cases of bowel perforation he concludes: (1) That the occurrence of pain and the increased rate of pulse and respiration are probably the most valuable early diagnostic symptoms of perforation. (2) That the count of leucocytes seems to have little value, unless it is hereafter proved that a count of the multiform nuclear leucocytes has diagnostic value. (3) A sudden fall of temperature is not a necessary accompaniment of perforation.

A Second Case of Successful Operation for Perforation in Typhoid Fever. By A. A. Bowlby, F. R. C. S. (*Lancet*, January 10th).—The author reports the case of a boy, aged ten years, suffering from typhoid fever. He went through the first attack without complications, but had a relapse. On the fourteenth day of the relapse he had a sudden severe attack of pain, his temperature fell from 102.6° F. to 98° F., the pulse rate rose to 140, and the patient became collapsed. The abdominal wall was hard and rigid. Two hours after the symptoms of perforation first appeared, the abdomen was opened: A perforation was found in the small intestine, about two feet from the ileo-cæcal valve. The bowel was not adherent, nor could any induration be felt in its walls. The perforation was quite small—about the size of a pin's head. The bowel was wiped clean, the opening closed with five Lembert's sutures, the peritonæum mopped out, and the wound closed. The patient did well, but his convalescence was delayed by the occurrence of several epileptic attacks. The author has already recorded a similar case of operation for typhoid ulcer. In that case, also, the patient was operated on during a relapse in the sixth week of the disease and recovered. The two cases are typical of a special class in which perforation takes place after the fever is over and the patient is in relatively good condition. The symptoms of perforation are marked and readily recognized, and the intestine is not adherent, indurated, or matted down, as is usually the case when perforation occurs early in the disease.

Intravascular Antisepsis. By Dr. J. M. Fortescue-Brickdale. (*Lancet*, January 10th).—The author reports the results of two series of experiments undertaken (1), to determine the toxicity of various antiseptic substances when injected into the veins of rabbits; and (2), to discover if any of them exerted an influence on the course of an artificially produced septicæmia. The conclusions reached were as follows: First series. (1) That perchloride of mercury, oxycyanide of mercury, and protargol cannot be injected intravenously into rabbits in sufficient strength to produce an antiseptic effect lasting over several days. (2) That a mixture of chinosol and formic aldehyde is too toxic, even in minute doses, to be of any use for practical purposes. (3) That chinosol or formaldehyde can be injected intravenously so as to produce a solution which would have an inhibitory action *in vitro*. (4) That sodium taurocholate can be injected in small doses, but that toxic effects manifest themselves after a few days.

Second series. (1) That rabbits injected daily with non-toxic doses of oxycyanide of mercury, formaldehyde chinosol, protargol, or sodium taurocholate are not thereby protected from the usual effects of the previous inoculation of virulent anthrax; and (2) that chinosol and formaldehyde in large toxic doses so depress rabbits infected with the pneumococcus, that they die sooner than an untreated animal.

Generally, then, it may be said that, at present, there is no experimental evidence which would warrant the assumption that the course of septicæmia

in animals can be influenced favorably by the intravenous injection of antiseptic substances, and that the only result to be obtained by pressing such a treatment beyond the maximum non-toxic doses is to hasten the death of the animal. In view of the results described in this paper, and those obtained by former investigators it seems useless to continue trying to apply clinically a method which, while by no means free from special dangers and difficulties, is at present unsupported by any experimental evidence, either as to its present advantages or future prospects.

Observations on Cases of Appendicitis. T. Carwardine, M. S., Lond., F. R. C. S. (*Bristol Medical-Chirurgical Journal*, December) bases his observations upon twenty-eight cases of operation for appendicular inflammations at the Bristol Royal Infirmary. The suppurative variety is one that often gives rise to the greatest anxiety, and to the need of valor on the one hand, and of discretion on the other. It is quite impossible to adopt any definite rule or to formulate a fixed creed for surgical action. Each case has to be judged on its merits and the best guide is the formation of a mental picture of the processes which are taking place in the abdomen. The suppuration may place the patient in the greatest jeopardy within two days of the onset of an attack, or allow the patient to be comparatively comfortable at the end of a week or ten days. Moreover, there is often a delusive subsidence of the symptoms after the first few days, which may act as a trap for the unwary—the fall of temperature, the softening of the pulse, the diminution of prominence, pain and tenderness, which accompany the reduction of tension in an abscess when its area is increased. This is also frequently accompanied by the appearance of resonance over an area previously dull; not the normal resonance, but the deceptive resonance of gas formation in the abscess cavity. As a rule, with these deceptive signs there is a quickening of the pulse, but not always so. Nor is the diagnosis of the presence of gas excluded by the patient having a normal temperature. Pyrexia is in reality a somewhat accidental phenomenon, depending on an excess of thermogenic organisms over others which have been isolated and found to produce a subnormal temperature.

In these suppurative lesions the author employed simple drainage, and the amount of pus varied from a drachm or two to half a pint. In no case was it possible with any degree of safety to remove the appendix, and in only one case has it caused any subsequent trouble.

A Rare Localization of Anthrax.—Dr. B. Bauer (*Chirurgia*, December) describes a case of anthrax which was noteworthy on account of the localization of the pustule. Anthrax is regarded as a curse by the Russian peasant, for not only does he lose the diseased cattle, which are usually the origin of the infection, but he exposes himself to the disease in removing the hide of the animal, which he tries to save in order to sell it for whatever it may bring. Fortunately, the Russian moujik is quick in diagnosing the "sibirka," and very readily applies for medical aid. Blacksmiths make a

practice in Russian villages, of cauterizing the pustules by the application of red hot nails, and deaths from anthrax are quite rare. The ordinary localities of the pustules are on the exposed parts of the body, the hands, feet, neck, and face. The following case was therefore remarkable: A peasant aged twenty years entered complaining of a painful swelling on his penis. About a month before he had noticed a "pimple" on the genital organ near the root. The scrotum became enlarged to three times its normal size and a local physician diagnosed a malignant pustule. Carbolic acid was injected and antiseptic compresses given, and although the severe pain began to disappear, the skin of the scrotum became gangrenous, so that gradually the testicles were completely exposed. Five head of cattle had died on the patient's farm during the preceding summer, and the hides had been removed and hung in the barn. On admission, a broad ring of granulation tissue was found extending around the penis, and a large area of raw surface upon the scrotum. The granulations were scraped and three flaps from the side were transplanted to cover the defects. The result was almost perfect, a small strip of granulating surface having remained, which gradually cicatrized.

Foreign Bodies in the Œsophagus.—Dr. M. S. Tcheremoukhine (*Chirurgia*, December) reports two cases of foreign bodies in the œsophagus, and reviews the latest literature of the subject. He concludes as follows as regards the treatment of these cases: A foreign body in the œsophagus is to be regarded as sometimes dangerous to life, and every such case should be regarded as a serious one. All foreign bodies should be removed from the œsophagus in one way or another. If cautious attempts to extract it or to push it down into the stomach fail, the foreign body should be got at by œsophagotomy, if located above the sixth or seventh dorsal vertebra, and by gastrotomy if below this point. If the body is of such a nature that attempts to push it down or to extract it would prove dangerous, as in the case of needles, pins, glass with sharp edges, etc., then œsophagotomy should be resorted to without these preliminary attempts. The sooner the operation is performed after the body is swallowed, the more probability of success. The Röntgen rays are useful in locating the foreign bodies in the œsophagus, and the best method is that of Röntgenoscopy, which at the same time enables us to push down a body and to observe its progress. The x rays are also useful in determining the position of the body with reference to the operation to be chosen in removing it, and in diagnosing the presence of a foreign body in cases with inexact histories.

Remarks on a Second Series of Fifty Cases of Recurrent Appendicitis Treated by Operation. By Dr. F. A. Southam. (*British Medical Journal*, January 10th).—Of the 50 cases of recurrent appendicitis here reported, 39 were in men and 11 in women. Twenty-three of the cases occurred in persons between twenty and thirty years of age, the decade in which appendicitis is most common. In 14 cases the patients were under twenty years of

age. In two instances the patients were only ten years old. In 5 cases there had been only one distinct attack; in 10, two well-marked attacks, and in the remaining 35, three or more attacks. In almost every case the lumen of the appendix was completely or partially occluded. In most cases the walls were distinctly thickened, but in a few in which the appendix was distended with fluid, they were extremely thinned. In three cases collections of pus were found shut off in the distal end of the appendix, which was dilated into a small cyst. In 6 cases fecal concretions were present. In no instance was any foreign body found. In 11 cases localized suppuration had taken place outside of the appendix. In four of these cases there had been no indication of the presence of pus previous to operation. In 2 cases there had been a previous operation for appendicular abscess in which the appendices had been left in. They illustrate the advisability of removing the appendix in all instances of suppuration—in recurrent as well as in first attacks—if this can be done without breaking down protecting adhesions. In many of the cases where marked appendicular lesions were found, there had been an absence of any signs or symptoms during the quiescent period between the attacks. In every case the patients made a successful recovery from the operation.

OBSTETRICS AND DISEASES OF WOMEN.

Heart Disease and Pregnancy.—Dr. Giovanni Morelli (*Gazzetta degli ospedali e delle cliniche*, December 14th) has studied the indications for the interruption of normal pregnancy in women with heart disease, and reports a series of cases pertinent to the subject. Maragliano, in 1883, stated that in his opinion every pregnancy which was endangering life as a result of the presence of an associated disease which was unfavorably influenced by labor, should be artificially terminated. It is a question whether normal labor is in all cases of heart disease necessarily fatal, and again whether operative intervention in such cases, before labor sets in, is not a dangerous procedure. In all cases the individual must be studied, each patient by itself, so that her resistance and ability to defend herself against strains on the heart can be estimated. The author reports six cases of heart disease in pregnant women. One of these patients died in the second month of pregnancy, one had aborted, two had premature labors, and two bore children at term and recovered from the puerperium. All suffered from grave disturbances of the heart, and all except one presented changes for the worse during labor. This may depend upon the exertions required for the expulsion of the child, or on the lowered blood pressure following the birth, a lowering which tends to raise the pressure in the veins, and so further embarrass the right heart. This lowering of the blood pressure is capable of producing, even in a normal heart, a relative insufficiency. Furthermore, the increased disturbances of the heart's action in labor may be due to the diminished resistance of pregnant women against intoxication. Heart disease exercises a bad influence upon pregnancy, so that abortions and premature labors occur in such women as

a means of Nature to prevent further catastrophes. On the other hand, pregnancy has a bad influence upon the course of heart disease, and labor may have a fatal effect on the heart. The treatment should be hygienic, medicinal, or obstetrical (premature labor, abortion), according to the nature of the case and the condition of resistance offered by the patient.

Vaginal Cæsarean Section in Cancer of the Cervix When Diagnosticated at the End of Pregnancy.—Dr. F. K. Veber, (*Roussky Vrach*, December 14th) concludes as follows as regards the indication for Dührssen's vaginal Cæsarean section in cases of cancer of the cervix diagnosticated at the end of pregnancy, basing his conclusions on the study of a series of cases which he reports: (1) In cases in which cancer of the cervix is diagnosticated at the end of pregnancy, in which the new growth is in the first stages of development, the pelvis not being contracted, and the soft parts yielding, a vaginal Cæsarean section should be regarded as the operation of choice. (2) The fact that the child has reached its full development, at term, should not be regarded as a contraindication to the operation. (3) The nearer we are to the end of pregnancy, the more probability is there that the child will remain alive. (4) Bleeding from the veins cut at the amputation of the cervix is best arrested by simple pressure upon the venous trunks situated on either side of the uterus by means of a wad of gauze. (5) The resection of the lower part of the cervix should be as extensive as possible.

The Surgical Treatment of Puerperal Eclampsia and the Prevention of Convulsions. By Douglas H. Stewart, M. D. (*Medical Record*, January 17th.)—Dr. Stewart holds peculiar views with regard to the ætiology of eclampsia, and the treatment he recommends, varies accordingly from that usually employed. Puerperal eclampsia has two causes: One, intrarenal, due to diseased kidney; the other extrarenal, due to pressure upon renal veins, inferior vena cava, or ureters. He considers that this last set of causes, by increasing the pressure within the kidneys, gives rise to "pressure urine," which is not a true excretion but a leakage containing a reduced amount of solids. Both the ætiological causes given above have the same final result; that is, they load the blood with waste products. With regard to prognosis Dr. Stewart holds: (1) That early albuminuria foretells late hæmorrhage, convulsions, and nephritis. (2) That more than a faint trace of albumin before the third month justifies terminating the pregnancy. With regard to this, however, he is open to conviction. (3) That albumin before the seventh month usually indicates post-partum danger, and if it occurs in the last two months it usually indicates trouble during or after labor. The treatment recommended follows: (a) Diet. Allow chicken and fish, and, if vegetables are freely taken, an exclusive milk diet will rarely be needed. (b) Certain cases of albuminuria recover upon emptying the bowel of hardened impacted fæces. Other cases recover upon having the urethra dilated up to 32 French. (c) Venesection. The kind of venesection advised is of a mild but persistent type.

As a minimum one may start by drawing off four ounces of blood and then applying a leech every other day. "Frequent small blood-letting is not depressing . . . and it stimulates the blood making organs . . ." (d) Saline injections. " . . . with diet, fresh air, exercise, frequent small venesections, a free urethra and rectal irrigations we may eliminate the causes, and I almost believe that puerperal eclampsia need only occur in neglected cases." In an emergency, and if convulsions have set in, the author empties the uterus by a method peculiar to himself. The last part of the paper is devoted mostly to the elucidation of the pressure theory of eclampsia: "(1) It (eclampsia) is most common in male pregnancies; this is attributed to the larger size of the male head. (2) It is most common in first pregnancies; here my own, and, so far as I know, my unsupported theory is that the reason is purely mechanical and a question of intensity of pressure." This theory is supported by the following facts: (a) That from 90 to 96 per cent. of all cases of eclampsia occur in primiparæ; and (b) that sixty-six per cent. are male pregnancies. That is, the majority of all cases occur in women whose abdominal walls are producing great pressure on the uterus, either because they are rigid and unelastic, as in the case of young athletic primiparæ, or because the uterus itself is so large that the muscles of the abdomen have been stretched to the limit, as may occur in male pregnancies. The author of the paper would like to see the pyramidal muscles cut, in order to relieve the tension and see what happens, even a partial multiple cutting of the rectus would be interesting, though this is a notoriously elastic muscle. But, "at present it is easier and safer to remove pressure by emptying the uterus."

MATERIA MEDICA, PHARMACY, AND THERAPEUTICS.

A Preparation Derived from an Extract of Nerve Tissue which is Antagonistic to Strychnine, and its Application to the Treatment of Nervous Diseases, Especially to Epilepsy.—Dr. Giuseppe Zanon (*Gazzetta degli ospedali e delle cliniche*, December 7th) was induced to study the effects of an extract of nerve tissue in convulsive disorders of the nervous system, particularly in epilepsy, by the results of the researches of Serstmann Paul (1892) and of Babes, Takaki, Wassermann, etc. The preparation used was an extract of sheep's brains which was called cerebrine. Sciallero found that this extract, as prepared in the laboratory of the author (Genoa), was capable of protecting animals from fatal doses of strychnine, and the author therefore tested it in neurasthenia, tics, insomnia, convulsive attacks of undetermined nature, and epilepsy. The results obtained by the author, and by his associates Biamonti, Lorenzola, and Lanza, justified the expectations which the preliminary experiments on animals had aroused. It was found that this cerebral extract was an efficient remedy in a number of nervous affections. For the present the results obtained, especially in epilepsy, are on a modest scale, but further researches will show more definitely the full value of the extract in question. There is no question, whatever the mechanism of

its action may be, that the cerebral extract mentioned exercises a beneficial action on affections and disturbances of the nervous system, that it has cured inveterate and rebellious cases without the assistance of other remedies, and as such may take the foremost place among remedies used in nervous diseases. In a series of cases in which bromides had been of no avail, the effect of the extract on epilepsy was particularly noteworthy. It was found that there was an increase in the frequency of the attacks during the first week after the injections of this extract were begun, but after this temporary change for the worse the attacks diminished in frequency and severity. Of seven patients thus treated, there was one in whom the attacks disappeared almost completely (from an average of eighteen attacks a month to three attacks in five months). In two cases the attacks diminished by two-thirds, one was considerably improved, while one remained stationary, and two seemed to get worse in spite of the treatment.

The Action of Cocaine on Intestinal Absorption.—Dr. Alfredo Baldacci, and Dr. Guido Guidi, of Pisa, (*Riforma Medica*, December 2nd) call attention to the fact that no one has determined the action of cocaine, a true paralyzant of protoplasmic activity, on the absorption-powers of the intestines. They proceeded as follows in order to determine the action of cocaine on intestinal absorption: They isolated a loop of gut, tied it at the extremities with ligatures, and in its middle, so as to make two chambers of equal dimensions, and injected a solution of cocaine into one chamber and an indifferent fluid into the other. After a certain interval of time they introduced into each of these intestinal chambers the same amount and quality of an absorbable material, the presence of which could be recognized and the quantity of which could be estimated with comparative ease. Such materials are glucose, strychnine, etc., and fat. They then observed which of the two chambers absorbed the injected substance more quickly. Their experiments were performed on rabbits and dogs, and are given in full. They conclude that, while in some cases the differences between the power of absorption manifested by the cocainized and the normal tract of intestines were very slight, the results were sufficiently constant to warrant generalizations. It may be said that the application of a cocaine solution to the mucous membrane of an intestine impedes all the processes of absorption more or less markedly. It remains to be seen if by increasing the dose of the cocaine and the duration of its action, the absorption-power of the intestine can be completely abolished or suspended. It must be noted, moreover, that the inhibition of absorption holds good for fatty substances as well as for soluble substances, like glucose, but the exact cause of this inhibition in the case of fats must be determined later. The general conclusion from these experiments is that the absorption-power of the intestines is not due to purely physical conditions, but to a specific activity on the part of the intestinal epithelium.

DISEASES OF CHILDREN.

Diphtheria Antitoxine in the Infectious or Bacterial Bronchopneumonia of Childhood. By Joseph O'Malley, A. C., M. D. (*American Medicine*, January 17th).—The various forms of bronchopneumonia are first discussed, and then G. Sims Woodhead's theory of the action of antitoxines is given. The author then quotes from the literature and shows that antidiphtheritic serum has been used quite extensively within the past two years in the treatment of the following diseases: Scarlet fever, pneumonia, malaria, etc., and with reported good results in a good many cases. Three cases of bacterial bronchopneumonia occurring in the author's practice, in which he gave the diphtheria antitoxine with very good results, are reported. The following conclusions are drawn by the author: "I believe we have in antidiphtheritic serum a most valuable therapeutic agent for a class of cases otherwise beyond ordinary therapeutic aid; particularly in those cases of bronchopneumonia which so often cause a fatal complication in the bacterial diseases of childhood, such as measles, influenza, whooping cough and scarlet fever."

A Case of Hypertrophic Stenosis of the Pylorus in an Infant; Recovery without Operation. By Dr. H. W. Gardner (*Lancet*, January 10th).—The author reports the case of a baby who, for the first seven weeks of his life, was perfectly healthy. Diarrhœa then developed and the child began to lose flesh and strength. Vomiting set in and the diarrhœa changed to constipation. At the end of the third month a soft, ill-defined tumor could be felt in the region of the pylorus. The child was taken from the breast and fed on whey and barley water. It began to improve and gradually recovered, the dietary being gradually extended and increased. The case presents all the characteristics of those described by Cautley and Dent, under the name of "congenital hypertrophic stenosis of the pylorus," viz., (1) vomiting; (2) constipation; (3) wasting; (4) visible gastric peristalsis; (5) an ill-defined pyloric tumor. The noteworthy points about the case are: (1) The affection was not congenital, the child being perfectly healthy for seven weeks after birth. (2) The disease was caused at first by there being something wrong with the mother's milk. The milk possessed some irritating quality which caused the diarrhœa, vomiting, and finally spasm of the pylorus. The spasm persisting brought about muscular hypertrophy of the pylorus and a palpable tumor. (3) Improvement only began when the pylorus was given complete rest by the exclusion of everything irritating and undigestible from the dietary. (4) Recovery was accelerated by a cold and cough which the child contracted, though the child was reduced in weight and strength thereby. (5) The ultimate recovery of the child without any operation.

PHYSIOLOGY AND PATHOLOGY.

The Agglutinating Properties of the Tubercle Bacillus in the Presence of Various Serums and the Diagnostic Importance of These Reactions.—Dr. Arcangelo Ilvento (*Riforma medica*, November 10th and 14th) found that the degree of agglu-

tionation of the blood serum of tuberculous subjects, except in one case, corresponded to or even exceeded the limit set by Arloing (1:10). The degree of agglutination found in the pleuritic fluid of persons suspected of tuberculosis was also in correspondence with the limits set by Courmont, namely from 1:20 to 1:5. The serum of non-tuberculous pleurisy does not agglutinate cultures of the tubercle bacillus. The serum of tuberculous subjects in whom the diagnosis has been positively made by finding the bacilli, agglutinates in mixtures of 1:50 and in 1:100. The fact that the serum agglutinates in high dilutions, 1:100, and that the exudate agglutinates in low dilutions, 1:5, allows the use of the agglutination reaction in the diagnosis of tuberculosis. The degree of agglutination effected by the serum of man or lower animals is an index to the relative immunity possessed by the organism in question.

Experimental Researches Concerning Segmenting Myocarditis.—Dr. Giuseppe Giacomelli (*Riforma medica*, November 3d, 4th, and 5th) concludes an experimental and anatomopathological study of myocarditis as follows: Fragmentation and disintegration of the myocardium are most often found in selfintoxications, in acute poisoning, *e. g.*, with chloroform, mercury, etc. These changes are far more frequently seen after poisoning than after infections. Mechanical action, or violent contractions of the heart produced by means of the electric current do not produce myocardial segmentation. If the application of the faradaic current is preceded by experimental poisoning, the heart does not show segmentation of its tissues. The importance of fragmentation and disintegration as heart lesions is greater than that of fatty degeneration of this organ, and there is no connection as a rule between the segmentation and the degeneration of the heart fibres.

The Bacteria of Ice Cream.—Henrietta M. Thomas, student at the Woman's Medical College of Baltimore, contributes to the *Maryland Medical Journal* for January the results of some painstaking investigations, made at the request of Dr. Henry Lee Smith, of Baltimore. Certain cases pointing to ice cream as the channel of infection, enforced by the fact that the ice cream months are also largely the typhoid months, led to research in that direction. It was carried on in the bacteriological laboratory of the department of health, by permission and with the assistance of Dr. William R. Stokes. The author found the number present in 1 c. c. to vary from 378,000 to 36,600,000. Dr. H. W. Conn and Dr. W. M. Esten (The Ripening of Cream. *Stow's Agricultural Station Report*, 1900) found that in sweet cream collected for ripening the number of bacteria ranged from a figure too small to be ascertained in the dilution used to 36,000,000. From this it would seem that the number of bacteria in ice cream is practically the same as that in fresh cream. That this is the case is rather remarkable when we consider the unsterilized substances which have been added, and that the mixture has been put into unsterilized cans. It may, however, be partly

accounted for by the fact, according to experiments made by Dr. Prudden, that there are varieties of bacteria which are reduced by freezing.

The author did not find *Bacillus typhosus*, but this does not at all mean that it cannot be found. Her researches were only continued for a little over two months, during which time she procured specimens of ice cream or of hokey-pokey from about twenty-five different places in the city. In these samples she found many bacteria which she did not identify and some that she did. Of these last there was one which, in its morphology and in its growth on the various nutrient media, resembled the *Streptococcus lanceolatus* or pneumococcus of Fraenkel. It was not, however, pathogenic to either guinea pig or rabbits when injected in quantities of 3 or 5 c. c.

She also found a streptococcus which was not pathogenic upon injection into a guinea pig. The *Bacillus coli communis* was omnipresent. In one instance when she injected hokey-pokey into the abdominal cavity of a guinea pig the animal died within twenty-four hours. At the autopsy he was found to have had general peritonitis. The only organism that she could recover was the colon from the blood of the liver.

Tetrads, lemon yellow, cream, and dark cream were not unusual in her specimens. One closely resembled the *Micrococcus tetragenus aureus* which was found by Boutron in human milk, only in this case indol was formed, which the tetragenus aureus does not form. She also found a lemon yellow motile bacillus, and in two cases she recognized yeast cells. Twice, water bacilli were present—in one instance the *Bacillus amulatus*, and in the other the *Bacillus arborescens*, which looks as though the ice cream had been contaminated by water.

In one instance was isolated what she believed to be the gas bacillus, or *Bacillus aerogenes capsulatus*. After injection into a rabbit, it was recovered from the blood of the heart and lungs, but was unable to obtain a pure culture. With reference to snowballs, which, of course, contain no milk, the number of bacteria in them seems on the whole to be rather less than in ice cream, but the finding of the colon bacillus indicates that the ice used in these particular snowballs was contaminated, and therefore unfit for such use.

Her observations thus far have led her to the conclusion: First, that cheap ice cream is extremely poor in fat, and that even in specimens from good confectioners the percentage is not high. Secondly, that the number of bacteria in ice cream is not materially higher than that found in fresh cream, though it is slightly higher. Thirdly, that the kinds of bacteria found in some of her specimens indicate either that the cows from which the milk was obtained were infected, or that the handling of the ice cream was very careless, thus rendering it unsuitable for food. Both of these causes of contamination can and ought to be obviated. Thoroughly clean handling of ice cream is of as great importance as is that of milk, and the sooner doctors insist that ice cream given to their patients be only from entirely trustworthy sources the sooner will this care be given.

Letters to the Editor.

AN APPARENT INJUSTICE TO A PHYSICIAN.

154 East Thirtieth Street,

NEW YORK, JANUARY 23, 1903.

To the Editor of the NEW YORK MEDICAL JOURNAL:

Sir: In your issue of January 10th, I notice a letter signed A. R., headed An Apparent Injustice to a Physician, in which Dr. A. R. describes a case which he attended in which, a servant being injured, the employers promised to pay Dr. R. for his services, but when he presented his bill they refused to pay. Dr. R. sued in the district court and the judge gave decision against the doctor. Although I am not fully conversant with the laws of this State, I being a New Jersey attorney, and having no New York law books handy, still I should like to give Dr. R. and the readers of the *New York Medical Journal* the desired information, and think that they will find it correct, as the law in regard to these matters seems to be nearly the same in all States.

The Statute of Frauds, so called, was passed in the reign of Charles II (1677), and has been nearly entirely adopted in all of the United States. One of its provisions is that when one person has promised to pay for services rendered to another, such promise must be in writing to make it good in law. To apply the statute to the case in hand, the services were rendered by Dr. R. to the servant of Mr. and Mrs. M. and not to Mr. and Mrs. M.; their promise to pay for such services rendered to the servant, therefore, not being in writing, is to be considered a *nudum pactum*, that is to say, a promise which does not hold good in law.

As to Dr. R.'s criticism of the judge who decided against him without giving the grounds of this decision, Dr. R. should not blame the judge for this. The lawyer whom Dr. R. employed ought to have known the grounds for the decision and told the doctor beforehand how the decision would be likely to be, and why. The decision was evidently given, not on account of a matter of fact, but on account of a matter of law. Had the judge given an explanation in this case to Dr. R., he would most probably have been obliged to criticize Dr. R.'s lawyer for his apparent deficiency in legal knowledge or put the doctor's lawyer to the necessity of telling the doctor that he, the lawyer, knew from the beginning that the doctor had no case. While I do not wish to stand up as the defender of all district court judges, yet they are very often blamed by lawyers for decisions which could not possibly have been different and just at the same time. There are a great many lawyers who practise in the inferior courts who are like necessity in that they know no law, and then they accuse the poor district court judge of partiality because he decides cases against them which they ought never to have brought into court. My advice to Dr. R. and all other physicians is this: Whenever you attend anybody for any medical or surgical case, do not take anybody else's assurance that he will pay for it or will be good for your bill, except he gives it to you in writing.

ALFRED W. HERZOG, M. D.

ANTERIOR TRANSPLANTATION OF THE ROUND LIGAMENTS FOR DISPLACEMENTS OF THE UTERUS.

NEW YORK, January 25, 1903.

To the Editor of the NEW YORK MEDICAL JOURNAL:

Sir: Dr. A. H. Ferguson, in his article on Anterior Transplantation of the Round Ligaments for Displacement of the Uterus (*New York Medical Journal*, January 17th) says that at the annual meeting of the American Medical Association at Denver, in 1899, he presented a preliminary report on an operation entitled as above stated, and it was published in the *Journal of the American Medical Association* for November 18, 1899. He adds further: "On the 21st of August, 1897 (*Centralblatt für Chirurgie*), Dr. Carl Beck, of New York, published his operation, Eine neue Methode der Hysteropexie, which he had then performed four times, but no data were given in his cases. It consisted in suspending the uterus by one round ligament at the lower angle of a median abdominal incision. I mention this in order to prevent confusion of his method with that described by me," etc.

Dr. Ferguson is courteous enough to admit that I advised suspension of the uterus by the round ligaments two years before he did so. He is in error, however, by stating that in the German publication I advised suspension by one round ligament only. for in it I say distinctly that in retroversion both ligaments must be suspended and that in prolapsus uteri one ligament may suffice. Dr. C. A. von Ramdohr, who carried out this method, reported on the success of his cases before the New York Obstetrical Society in November, 1897. Shortly afterward (1898) my method was the subject of a graduation thesis at the University of Paris under the auspices of Poirier, Berger, Guyon, and Albaran. Garrigues's *Diseases of Women* also contains a short description thereof.

I have later on (*American Journal of Obstetrics and Diseases of Women and Children*, Vol. XLII, No. 3, 1900) described the principles of my original operation (August 21, 1897), as well as my new modification, which consists in incising the internal margins of the rectus muscle on both sides, as in my operation for inguinal hernia (*Medical News*, September 16, 1899), liberating a few muscular fibres, hanging the ligament over them, and uniting the flaps. Then the ligaments ride transversely upon muscular fibre.

I trust that Dr. Ferguson will, after a thorough study of the literature, see that the principles of the method which he calls his own are identical with mine, published two years before his, and that he has only slightly modified them by placing the round ligaments outside of the peritonæum through a stab wound in the rectus muscle.

CARL BECK, M. D.

An Anti-tuberculosis Society Formed in Chicago.—Preliminary steps have been taken looking towards the formation of a society for the prevention and spread of tuberculosis in the city of Chicago. Those interested in the movement include many more prominent in charity organization work, as well as several well known physicians.

Book Notices.

Variola, Vaccination, Varicella, Cholera, Syphilis, Whooping Cough, Hay Fever. By H. IMMERMAN, TH. VON JÜRGENSEN, C. LIEBERMEISTER, H. LENHARTZ, G. STICKER. Edited, with Additions, by JOHN W. MOORE, M. D., F. R. C. P., Professor of the Practice of Medicine in the Royal College of Surgeons of Ireland. Authorized Translation from the German, under the Editorial Supervision of ALFRED STENGEL, M. D., Professor of Clinical Medicine in the University of Pennsylvania. Philadelphia and London: W. B. Saunders & Company, 1902. Pp. 3 to 682. (Price, \$5.)

The second of the series of volumes that are to constitute a translation of the monographs of Nothnagel's *System of Practical Medicine* shows the same careful preparation which marked the first volume of the series. It is under the special editorship of Dr. John W. Moore, of the Royal College of Surgeons of Ireland. It contains the articles *Variola*, by Immermann of Basle; *Vaccination* by the same author; *Varicella*, by von Jürgensen, of Tübingen; *Cholera Asiatica* and *Cholera Nostras*, by Liebermeister, of Tübingen; *Erysipelas* and *Erysipeloid* by Lenhartz, of Hamburg; and *Whooping Cough* and *Hay Fever* (Bostock's "Summer Catarrh") by Sticker, of Giessen.

A review of these monographs, which are the work of eminent authorities in the fields assigned them, was given when their articles appeared in the original edition. Dr. Moore's editing consists of explanations of some of the doubtful statements and the relation of some of his personal experiences, extending over more than thirty years of active work in these diseases. While these interpolations are not very numerous, they greatly add to the value of the original.

The Study of the Pulse, Arterial, Venous, and Hepatic, and of the Movements of the Heart. By JAMES MACKENZIE, M. D. (Edin.), Burnley. New York: The Macmillan Company. Edinburgh and London: Young J. Pentland, 1902. Pp. xx-3 to 325. (Price, \$4.50.)

Many authors have written on this topic, yet notwithstanding, our knowledge of many features of circulatory disturbances, especially of pulse irregularity, is, to say the least, very chaotic. It may be alleged that an inquiry on many of these topics must concern itself with features that have an academic rather than a clinical interest. Such a criticism would be true. However, the author of this monograph boldly acknowledges that much of what he has written does not lead to definite conclusions, partly because we lack information, and partly because he had not the time to follow out its pursuit.

The book contains a thorough and painstaking inquiry into all the important factors concerned in the mechanism of the circulation in health and disease. The first part deals with the arterial pulse and the movements of the heart, the determination of the value of symptoms, instrumental methods of examination, the interpretation of a sphygmogram, the movements of the heart in health and disease,

the factors concerned in the production of a pulse, evolutionary changes in the pulse, arterial pressure, pulse irregularities and their clinical significance, tachycardia, bradycardia, and the pulse as influenced by respiration. The second part discusses pulsations in the veins and in the liver, the conditions giving rise to them, their differences, and their clinical significance. The third part is devoted to the consideration of the venous and liver pulses in irregular action of the heart.

The author, who is thoroughly familiar with the subject he discusses, pays the work of Von Frey, Tigerstedt, Gibson, Broadbent, and others, the tribute they deserve, and brings to bear to his aid a wide personal clinical experience. There is no doubt that his inquiry is of such a nature that it is deserving of more than an ordinary perusal.

BOOKS RECEIVED.

Surgical Anatomy and Operative Surgery. For Students and Practitioners. By John J. McGrath, M. D., Professor of Surgical Anatomy and Operative Surgery at the New York Post-Graduate Medical School, etc. With 227 Illustrations, including Colors and Half-tones. Philadelphia: F. A. Davis Company, 1902. Pp. xiv-559. (Price, \$4.)

Atlas and Epitome of Human Histology and Microscopic Anatomy. By Dr. Johannes Sobotta, of the University of Würzburg, Bavaria. Edited, with Extensive Additions, by G. Carl Huber, M. D., Junior Professor of Anatomy and Director of the Histologic Laboratory at the University of Michigan. Authorized Translation from the German. With 171 Illustrations on 80 Lithographic Plates, and 68 Text Illustrations. Philadelphia and London: W. B. Saunders & Company, 1903. Pp. 5 to 248. (Price, \$4.50.)

Atlas and Epitome of Diseases of the Mouth, Pharynx, and Nose. By Dr. L. Grünwald, of Munich. Second Edition, Revised and Enlarged. Authorized Translation from the German. Edited, with Additions, by James E. Newcomb, M. D., Instructor in Laryngology, Cornell University Medical College, etc. With 102 Illustrations on 42 Lithographic Plates, and 41 Figures in the Text. Philadelphia and London: W. B. Saunders & Company, 1903. Pp. 5 to 219. (Price, \$3.)

Book on the Physician Himself and Things that Concern his Reputation and Success. By D. W. Cathell, M. D. The Twentieth Century Edition. Being the Eleventh Edition Revised and Enlarged by the Author and his Son, William T. Cathell, A. M., M. D., Baltimore. Philadelphia: F. A. Davis Company, 1902. Pp. 411. (Price, \$2.50.)

The Practical Medicine Series of Year Books. Comprising Ten Volumes on the Year's Progress in Medicine and Surgery. Under the General Editorial Charge of Gustavus P. Head, M. D., Professor of Laryngology and Rhinology, Chicago Post-Graduate Medical School. Volume III. The Eye, Ear, Nose, and Throat. December, 1902. Chicago: The Year Book Publishers. Pp. 5 to 321. (Price, \$1.50.)

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A Textbook of Pharmacology and Therapeutics, or the Action of Drugs in Health and Disease. By Arthur R. Cushny, M. A., M. D., Aberd., Professor of Materia Medica and Therapeutics in the University of Michigan, etc. Third Edition, Revised and Enlarged. Illustrated with Fifty-two Engravings. Philadelphia and New York: Lea Brothers & Company, 1903. Pp. 5 to 756. (Price, \$3.75.)

International Clinics. A Quarterly of Illustrated Clinical Lectures and Especially Prepared Articles on Medicine, Neurology, Surgery, Therapeutics, Obstetrics, Pædiatrics, Pathology, Dermatology, Diseases of the Eye, Ear, Nose and Throat, and other Topics of Interest to Students and Practitioners. By Leading Members of the Medical Profession throughout the World. Edited by Henry W. Cattell, A. M., M. D. Volume IV. Twelfth Series. Philadelphia: J. B. Lippincott Company, 1903. Pp. viii-317.

Miscellany.

Report of the Committee on Conference of the Medical Society of the State of New York Submitted to the State Society at its Annual Meeting in 1903.—At the last meeting of the Medical Society of the State of New York your president, in his inaugural address, after considering the reciprocal relations of the State and county societies and the relations of the Medical Society of the State of New York to the national profession, concluded as follows: "A thorough study of this subject leads me to the conclusion that the unification of the regular profession is demanded, not only by the profession, but by the thinking public, and that a reorganization can readily be brought about if reason shall prevail. *This must be accomplished without the loss of identity or individuality of this time-honored society, with dignity, and without the sacrifice of principle.*" He insisted that the time had come for a final effort, which should have for its object the gathering of the profession of this State under a single banner, upon a liberal platform, and with representation in the American Medical Association.

His recommendations seemed justified because of the encouragement received by the reorganization upon a broad platform of the American Medical Association; because it had become evident that the national body appreciated the injustice done to the Medical Society of the State of New York by its excommunication during so many years; because of a growing desire for amalgamation by individual and influential members of the profession of this State, representing over thirteen thousand consistent and conscientious workers, who failed to find any underlying principle of sufficient importance to justify the existing division; because of the influence which would be gained in the settlement of vital questions affecting the public welfare; and, finally, because of the undignified and hopeless position of a noble profession divided against itself without reason and justice.

It was recommended that the Medical Society of the State of New York appoint a committee of five to confer with an equal number representing the New York State Medical Association for the purpose of formulating a plan which should have for its object the reorganization of the regular profession of this State in a body in affiliation with the American Medical Association. The committee to report the result of its labors at the next meeting of the Medical Society of the State of New York.

"In the event of failure of the New York State Medical Association to appoint such a committee, or if the committees should fail to agree upon a plan of reorganization, the committee appointed by the Medical Society of the State of New York shall have full power, if it deems it expedient, to represent this society before the American Medical Association, and the secretary of this body shall, if the majority of the committee desires, provide the individual members with credentials of delegates to the American Medical Association. The

method of election or appointment of the committee, representing this society, shall be decided upon by the committee to which the president's inaugural address shall be referred, and shall be ratified, as are all recommendations, by a vote of the society."

The committee on the president's inaugural address gave these recommendations its unqualified approval and suggested that the gentleman from whom it emanated be the chairman of the committee and empowered to associate with himself four representative members of this society.

The society having by vote approved the recommendations, the president became chairman of the committee on conference, and appointed as his associates Dr. Abraham Jacobi, of New York city; A. Vander Veer, of Albany; A. M. Phelps, of New York city, and George Ryerson Fowler, of Brooklyn. The untimely death of Dr. Phelps was mourned by the committee. Dr. Phelps entered upon the deliberations with great earnestness, showing a desire to do all in his power to bring about the union of our State profession. He was present at two of the meetings held in New York and took an active part at these joint conferences. The chairman of your committee appointed Dr. Frank Van Fleet as Dr. Phelps's successor, and since the death of the latter, Dr. Van Fleet has been active on the committee.

On the 5th of February, 1902, Dr. F. C. Curtis, secretary of the Medical Society of the State of New York, sent the following communication to the president of the New York State Medical Association:

Albany, N. Y., February 5, 1902.

Dr. Alvin A. Hubbell,

President of the New York State Medical Association,
Buffalo, N. Y.

Dear Sir:

At a recent meeting of the Medical Society of the State of New York, held in Albany, January 28th to 30th, the following recommendation contained in the inaugural address of the then president, Dr. Henry L. Elsner, of Syracuse, and indorsed by the committee upon recommendations in the inaugural address, was adopted:

"That the Medical Society of the State of New York appoint a committee of five to confer with an equal number representing the New York State Medical Association for the purpose of formulating a plan which shall have for its object the reorganization of the regular medical profession of this State, which body shall be in affiliation with the American Medical Association, and that the committee report the result of its labors at the next meeting of the Medical Society of the State of New York."

I trust that the purport of this action of our society is clear, and that it may meet with a response from the association of which you are president. I am dear, sir,

Yours very respectfully,

(Signed) F. C. Curtis, secretary.

To which a supplement was added, dated—

Albany, N. Y., February 7, 1902.

Dr. A. A. Hubbell,

President of the New York State Medical Association,
Buffalo, N. Y.

Dear Doctor:

I would add to my letter of the 5th inst., reporting to you the action of the Medical Society of the State of New York in proposing to appoint a committee on conference with one to be appointed by the association of which you are president, that the following committee has been appointed:

Dr. Henry L. Elsner, of Syracuse;
 Dr. A. Jacobi, of New York;
 Dr. A. Vander Veer, of Albany;
 Dr. A. M. Phelps, of New York;
 Dr. George Ryerson Fowler, of Brooklyn.

Yours very truly,
 (Signed) F. C. Curtis, secretary.

At the council meeting of the New York State Medical Association held on February 7, 1902, the following, introduced by Dr. Ferguson, was adopted:

Whereas, The Medical Society of the State of New York appointed a committee to confer with a similar committee from the New York State Medical Association, with the view to a union of the two organizations, and notice of such creation of a committee having been officially given to our president, together with the request that a corresponding committee be appointed by us; therefore, be it

Resolved, That this council (being the executive board of the association) appoint for the purpose of conference in question a committee of five, consisting of Dr. E. Eliot Harris, as chairman, and Drs. William H. Biggam, Emil Mayer, Parker Syms and Frederick Holme Wiggin, to which committee the president is added as a member *ex officio*. Seconded by Dr. Gouley, and carried unanimously.

The following letter was received by Dr. Curtis, bearing date of February 8, 1902:

Frederick C. Curtis, secretary,
 Dear Doctor:

The action of the Medical Society of the State of New York, as set forth in your communication of the 5th inst., has been referred by me to the council of the New York State Medical Association, and it has appointed the following committee of conference:

E. Eliot Harris, chairman, 33 West Ninety-third Street, New York City.

Frederick Holme Wiggin, 55 West Thirty-sixth Street, New York City.

Emil Mayer, 25 East Seventy-seventh Street, New York City.

Parker Syms, 50 West Forty-seventh Street, New York City.

William H. Biggam, 1197 Dean Street, Brooklyn, N. Y.

You will kindly inform your committee of this appointment and state that our committee is now ready to act in accordance with the purposes proposed, and may be addressed through the chairman, Dr. E. Eliot Harris.

Yours of the 7th, announcing the committee of the State society, is received, and I have sent the names to Dr. Harris.

Yours truly,
 (Signed) Alvin A. Hubbell,
 President, New York State Medical Association.

Upon receipt of this letter Dr. Curtis informed the chairman of your committee of the appointment of a committee by the New York State Medical Association, whereupon the chairman wrote the following letter to Dr. E. Eliot Harris, chairman of the association committee:

Syracuse, N. Y., February 2, 1902.

Dr. E. Eliot Harris,
 33 West Ninety-third Street, New York City.

My Dear Doctor:

Dr. Curtis, the secretary of the Medical Society of the State of New York, advises me of your appointment as chairman of a committee to represent the State association at a conference with a committee composed of State society men.

As I have the honor to be chairman of that committee, I thought it would be wise to write to you concerning the time of our meeting. Beginning on the 13th of March our medical college closes for twelve days, during which time it would be convenient for me to give the required time for this work.

I note that your entire committee is composed of New York men, and as a majority of our men live either in New York or near that city, the meetings in all probability had better be held there.

Will you kindly let me know at your earliest convenience whether the dates included above would be agreeable to you and to the others of your committee?

With many kind regards, I am,

Sincerely yours,

(Signed) Henry L. Elsner.

In answer the following letter was received:

February 24, 1902.

To Dr. Henry L. Elsner,

Chairman, Committee on Conference,
 Medical Society of the State of New York.

My Dear Doctor:

Your letter of the 21st of February was this day received. Our committee had already considered favorably the question that all communications between the two committees should be in writing, addressed to the respective chairmen, and that each committee could meet by itself to discuss all subjects pertaining to the work in hand, and its written views [be] sent to the chairman of the other committee.

It seems to me that this manner of proceeding will not only be time-saving, but will surely be much more desirable in every other particular than by the transactions of these affairs in joint session.

Therefore permit me to suggest that your committee, through you, send to me the propositions which our committee is to consider.

Yours very respectfully,
 (Signed) E. Eliot Harris, chairman.

After consultation with all the members of the committee on conference, representing the Medical Society of the State of New York, your chairman sent the following reply:

Syracuse, N. Y., March 5, 1903.

Dr. E. Eliot Harris,

Chairman, Committee on Conference,
 Medical Association of the State of New York.

My Dear Doctor:

In reply to your letter, bearing date of February 24th, addressed to me as chairman of the committee on conference of the Medical Society of the State of New York, in which you make the statement that your "committee had already considered favorably the question that all communications between the two societies should be in writing" and that each committee should "meet by itself to discuss all subjects pertaining to the work in hand, and that its written views" should be "sent to the chairman of the other committee," and in which you lead the committee of the Medical Society of the State of New York to conclude that there shall be no conference, but simply correspondence between the two committees through the respective chairmen, I would say that the committee representing the Medical Society of the State of New York was appointed to *confer*, not to *correspond* with a similar committee representing the New York State Medical Association. The committee which I represent feels that the methods of deliberation can only be settled by a joint meeting of both committees in conference, where both sides may be permitted to express themselves freely, and where each side may take into consideration the views of the other, and where both, prompted by a liberal spirit, shall be willing to reach such conclusions as may result from such deliberation. Under no other conditions can the purposes for which we were appointed be accomplished, and the committee which I represent must refuse to act in any other way.

Awaiting an early reply, I am, for the committee,
 Yours very respectfully,

(Signed) Henry L. Elsner, chairman.

To which the following answer was received:

March 9, 1902.

Henry Elsner, M. D.

Chairman of the Conference Committee of the Medical Society of the State of New York.

My Dear Doctor:

I have the honor to acknowledge receipt of your letter of March 5th, in which you say "that the committee repre-

sending the Medical Society of the State of New York was appointed to confer and not to correspond, and the committee which I represent must refuse to act in any other way."

While the committee of the New York State Medical Association believes the method of proceeding already suggested by this committee will not only be time-saving, but will surely be desirable in every other particular, nevertheless this committee, in the interest of a united profession in one State medical body, will be glad to meet the committee of the Medical Society of the State of New York at such time and place as may be agreed upon by the two chairmen.

I am, for the committee,

Yours very respectfully,

(Signed) E. Eliot Harris, chairman.

The chairmen of the respective committees arranged for a joint meeting in the city of New York, on March 19, 1902. At this meeting Dr. Henry L. Elsner was made chairman of the joint conference. It was understood by both committees that each was acting without power and that all questions must finally be referred to the respective State bodies for ultimate action and ratification. All the members of both committees were present, and the following proposition of the committee on conference from the New York State Medical Association to the committee on conference of the Medical Society of the State of New York for the union of the two bodies was presented:

Proposition of the committee on conference of the New York State Medical Association to the committee on conference of the Medical Society of the State of New York, for union of the two State bodies, presented March 19, 1902.

Two years ago, the New York State Medical Association, founded in 1884, was reorganized under a charter granted by the legislature. Its plan of reorganization is based upon those of several other State medical associations, and has been regarded by the committee on reorganization of the American Medical Association as a proper basis for the organization of the American medical profession in the different States.

The Medical Society of the State of New York, formed under a law of 1806, was changed materially in 1813, after which nearly all the important privileges granted have been repealed by many subsequent acts of the legislature, so that the basis of its existence is, to-day, so involved as to be little understood.

Therefore, in the spirit of meeting what we believe to be an honest desire to unite the regular medical profession in this State, we propose that the New York State Medical Association and the Medical Society of the State of New York be reconstituted, by an act of the legislature, into a State medical body to be known as the New York State Medical Society, of which all members in good standing in both bodies shall be charter members. The reconstituted State medical body shall be representative in this State of the American Medical Association, by virtue of acceptance of the constitution and by-laws of the American Medical Association.

(Signed) E. Eliot Harris, chairman.
William H. Biggam,
Emil Mayer,
Parker Symms,
Frederick Holme Wiggin.

To which the committee answered as follows:

The committee of the Medical Society of the State of New York acknowledges the receipt of the communication from the committee on conference of the New York State Medical Association and begs to reply as follows:

Proposition of the committee on conference of the Medical Society of the State of New York to the committee on conference of the New York State Medical Association for union of the two State bodies, presented March 19, 1902.

In the spirit of meeting what we believe to be an honest desire to unite the regular medical profession in this State,

we propose that the New York State Medical Association and the Medical Society of the State of New York be reorganized by legal union into a single State medical body, to be known as the Medical Society of the State of New York, of which all members in good standing in both bodies shall be charter members. The reconstituted State medical body shall be the representative in this State of the American Medical Association by virtue of acceptance of the constitution and by-laws of the American Medical Association, adopted in 1901, except Chapter XV.

(Signed) Henry L. Elsner, chairman,
A. Jacobi,
A. Vander Veer,
A. M. Phelps,
G. R. Fowler.

It will be noted that the committee representing the Medical Society of the State of New York made use of the words, "legal union," believing that whenever the two societies unite their interests and become a single body, such unification must of necessity follow by *legal means* and in accordance with the laws of the State of New York, which laws your committee believed they would be unable to interpret without the advice of counsel. In reply to this communication the committee representing the New York State Medical Association, submitted the following in writing:

To the Committee on Conference of the Medical Society of the State of New York, acknowledging the receipt of, and in response to, its reply to the proposition submitted by the committee on conference of the New York State Medical Association:

The plan of organization of the New York State Medical Association being acceptable to your committee, we will recommend that the reorganized State medical body be known as the Medical Society of the State of New York, and the term legal union be understood to mean applying to the legislature for a new charter.

(Signed) E. Eliot Harris,
William H. Biggam,
Emil Mayer,
Parker Symms,
Frederick Holme Wiggin.

It will be noted that the committee of the association believed that "legal union" necessitated application for a new charter. Upon this point, the committee representing the Medical Society of the State of New York had taken no legal advice. However, your committee insisted that under no circumstances would any action be taken which would for one moment interrupt the existence of the Medical Society of the State of New York.

Your committee in its answer to the association committee at the second session of our joint conference, on March 19, 1902, added the words, "except Chapter XV," because it was held by the association committee that Chapter XV of the by-laws of the American Medical Association included the original code of medical ethics. Chapter XV of the by-laws of the American Medical Association, published in 1901, reads as follows: "These by-laws shall be in effect and force after the close of the annual meeting of 1901, provided, that the sections shall elect delegates during the session for 1901; and provided further, that nothing in these by-laws shall be construed to repeal the rules of the association governing the relation of members to each other and to the association."

The third session of both committees was held in the city of New York, at the Academy of Medi-

cine, April 18, 1902, at 3 p. m. There were present Drs. Harris, Biggam, Mayer, Syms and Wiggin representing the association and all the members of the committee representing the State society. At this meeting it was still held by the committee representing the New York State Medical Association that in order to make *legal union* possible, the reorganized society must of necessity apply to the legislature for a new charter. The association committee at this time and at all other times since its appointment has impressed the committee representing the State society as being in earnest and equally anxious to bring about the union of the profession of this State under one banner, and at this time assured our committee that, in the event of reorganization, the reorganized society, including the association members, would celebrate our one hundredth anniversary, in 1906, in a manner befitting a body with a history such as ours and a record to which all members in the reorganized society might point with just pride.

At this meeting methods of reorganization were considered and a method of reorganization was suggested which had for its basis the reorganization of the regular profession of this State in the Medical Society of the State of New York, which would entitle every member of a county society to membership in the State society and in the American Medical Association. At this meeting was also considered the advisability of divorcing the business and ministerial affairs of the State society from the scientific, and referring these to a governing body, very much after the method now followed by the American Medical Association. At both of these meetings the individual members of the committee representing the Medical Society of the State of New York agreed among themselves and in joint session that it would not be advisable for the Medical Society of the State of New York to send delegates to the meeting of the American Medical Association to be held in June, 1902. The minutes of the meetings were signed by the respective chairmen of the committees as an attest to the correctness of the report of the proceedings as they related to the principal matters discussed without binding either society in any way.

Your committee realizing the great responsibility reposed upon it, deemed it expedient to take legal advice that it might learn from a recognized authority what measures were necessary to bring about *legal union*, and for that purpose your chairman consulted the Hon. Charles Andrews, ex-chief judge of the Court of Appeals of the State of New York, and adds to this report the opinion of this learned counsel. It is as follows:

The following memorandum has been made on consultation with me and has my approval:

The act of 1885, chapter 379, enables the Medical Society of the State of New York to change its by-laws and create membership upon such a scheme as the society shall approve, without application to the legislature. Chapter 379 of the act of 1885 reads as follows: "Section I. The Medical Society of the State of New York shall have the full power to elect such a number of permanent delegates or other members, as may be provided for by the constitution and by-laws of said medical society; said medical society being hereby empowered to regulate and control its own membership." "Section II, All acts and parts of acts inconsistent with this act are hereby repealed." The Medical

Society of the State of New York may amend its constitution and by-laws without further legislation by incorporating into its membership all members of the county societies. Therefore, the New York State Medical Association, if it shall so determine, may abandon its present organization, and its members may become members of the Medical Society of the State of New York on a change being made by that society in its conditions of membership. The transfer of the property of the association may, under the authority of the legislature being obtained, be transferred to the Medical Society of the State of New York. It would seem that if this consolidation shall take place, it is as important to the members of the association as it is to the society, that it shall be done without abandonment of the charter of the Medical Society of the State of New York, so as to preserve the continuity of the society, which for almost one hundred years has existed under its original charter.

In all such societies, it is generally deemed one of its most important possessions to be able to trace back its history to the earliest possible time, and all the members of the consolidated body will be equally interested in being connected with the early charter of the State society.

If the Medical Society of the State of New York were compelled to seek a new charter, this society would be obliterated and a new society would take its place. The only legislation necessary is that affecting the association and its rights of property.

Therefore, in answer to the questions referred to me by Dr. Henry L. Elsner, chairman of the committee on conference of the Medical Society of the State of New York, I answer as follows: "Question I, In order to bring about amalgamation of two bodies organized and chartered as are those which we seek to amalgamate, is it necessary for us to apply for a new charter?"

To this question, I answer, "No."

"Question II, If we reorganize these societies under a new charter, do we cease to exist? In other words, is there a moment of suspended animation?"

I answer this question in the affirmative.

"Question III, If we need not apply for a new charter, must we still go before the legislature to amend our constitution that amalgamation may take place, or has the State society, under its present charter, power to take in the association and change its method of organization to correspond with such changes as are finally agreed upon by both bodies?"

To this question, I answer, that it is not necessary to go before the legislature to amend your charter. Legal union may follow whenever the Medical Society of the State of New York shall, by vote, change its conditions of membership.

Respectfully,

(Signed) Charles Andrews.

Dated, Syracuse, N. Y., December 17, 1902.

At the meeting of the American Medical Association, held at Saratoga, June, 1902, Dr. E. E. Harris, of New York, offered a code of medical ethics, which was referred by that body to a committee of five. Section 2 of Art. IV of this proposed code reads as follows:

"The good of the patient being the sole object in view any physician having a license to practice medicine conferred by a medical board authorized by the State may be aided in consultation."

Your committee would also call your attention to Section 3 of this same Art. IV.

"No physician who indicates to the public that his practice is based on a sectarian system of medicine shall be entitled to professional fellowship or to recognition in medical bodies."

The constitution and by-laws of the American Medical Association adopted at an adjourned meeting of that association, held in Chicago immediately after the Saratoga meeting, no longer contains Chapter XV of the original by-laws. However,

your committee has the assurance of the president of the American Medical Association and the committee representing the New York State Medical Association, that the old code of ethics of the American Medical Association is still in existence. This information was given to your committee at the meeting of the joint conference held in New York at the Academy of Medicine, on October 3, 1902, when the members of the association once more asked your committee to subscribe to the by-laws of the American Medical Association.

Considering the radical action taken by the Medical Society of the State of New York over twenty years ago, your committee could not consistently take this step, nor could it suggest to your body submission to a code which changed conditions and the spirit of the times must of necessity efface.

At a meeting of the joint conference held in the city of New York on December 19, 1902, the conference was honored by the presence of Dr. Frank Billings, the president of the American Medical Association, who journeyed from Chicago that he might be present and use his influence in favor of immediate amalgamation. Dr. Billings assured your committee that the old code was still in existence and unchanged. Dr. Billings also assured us, at the same time, that the code of ethics of the American Medical Association would not be considered binding upon State organizations.

Your committee, in spite of the argument in favor of immediate amalgamation earnestly made by Dr. Billings, and the assurance by him and the representatives of the State association, in affiliation with the American Medical Association, that dropping Chapter XV from the by-laws of the American Medical Association did not eliminate the original code of ethics of the American Medical Association, could not consistently withdraw its objection, and assured both the president of the American Medical Association and the committee representing the New York State Medical Association that the Medical Society of the State of New York was anxious to unite the profession upon a broad and liberal platform, one which it had reason to believe from the encouraging statements made by President Billings and the association committee the American Medical Association would adopt at its meeting to be held in New Orleans, in May, 1903, after which all matters of detail and recommendations to the respective bodies might be promptly and easily made.

In the unification of two powerful State bodies, like the association and the society, the method of organization becomes a perplexing question, requiring careful deliberation. Your committee feels that, before final recommendations as to the method of organization of the reorganized society can be made, it must come into possession of further data. The will of the profession must be learned and given consideration. We ask for the power which shall bring us in contact with the individual members of county societies, that we may gather such information as shall, after mature consideration, lead to the formulation of a plan of reorganization. Among the plans of organization thus far suggested, we might mention, First: The scheme by which all members of county societies become mem-

bers of the State body, thus abolishing entirely the delegate system. This reorganized State society to have its various district branches, and a governing body, to which shall be referred all matters of business including all ministerial functions.

Second: Reorganization of the State society which shall extend to the existing members of the New York State Medical Association permanent membership with a continuance of our county societies and the delegate system.

Third: A plan which shall grant to the individual members of county societies the privilege of permanent membership in the State body, not making such permanent membership in the State body obligatory.

Fourth: A proposition will in all probability be presented to the American Medical Association at its coming meeting, by which all members of county societies shall, for a single fee paid to the treasurer of the respective county society, become members at the same time of the State and national bodies.

The proposed scheme toward which the American Medical Association has been lending its influence tends toward unification of the profession of the entire country, and has for its object the extension of its influence and the enrolling in that body, through the county societies, of all regularly educated physicians of this country.

These are a few of the suggestions concerning reorganization which have occurred to your committee. The question requires further thought, and we believe that much valuable information can be gained by a thorough canvass of the State.

At the meeting held in the city of New York, on December 19, 1902, your committee with all its force objected to the resolution which was presented by Dr. E. D. Ferguson, of Troy, and unanimously adopted by the New York State Medical Association at its recent annual meeting. It reads as follows:

Resolved, That the report of the committee appointed to confer with a committee representing the Medical Society of the State of New York, for the purpose of devising a plan for the union of the New York State Medical Association and the Medical Society of the State of New York, is hereby approved.

Resolved, That the plan presented at the joint sessions of the two committees by the committee representing the association, whereby the New York State Medical Association and the Medical Society of the State of New York be reconstituted by an act of the legislature into a State medical body to be known as the Medical Society of the State of New York, of which all members in good standing in both bodies shall be charter members, and the reconstituted State medical body shall be the representative in this State of the American Medical Association by virtue of its acceptance of the constitution and by-laws of the American Medical Association is hereby accepted by the New York State Medical Association as an expression of our sincere desire for a union of the medical profession in this State.

Resolved, That the committee is hereby continued for the purpose of cooperating with any committee from the Medical Society of the State of New York to secure a charter from the legislature at its next session, in 1903, which charter shall reconstitute the two State organizations into one State body, as set forth in the preceding resolution, but if the Medical Society of the State of New York shall fail to approve of such plan of union by a charter, to be secured at the approaching session of the legislature, in 1903, then this committee shall be considered as discharged, and the proposition of the association withdrawn.

Resolved, In case this committee should find occasion to apply to the legislature at its next session for the purpose of securing the said charter, it shall cooperate with the standing committee on legislation of this association.

Your committee could not consent to the time limit insisted upon; it objected to the spirit of the resolution, and believed that it was not in keeping with the earnest desire for harmony and unification so forcibly expressed at the various conferences with the committee representing the association. Your committee was assured by the association committee that its individual members would be ready to use their influence in favor of further conference after favorable action by the American Medical Association at its meeting in New Orleans.

The New York State Medical Association has, during the past two years, published a journal known as the *New York State Journal of Medicine*. During this time it has also published a *Medical Directory* of New York, New Jersey, and Connecticut. Both of these have entailed an enormous expenditure of time and money. The medical directory is a worthy publication and speaks volumes for the energy of those who have placed it before the profession of these states. These publications have been losing ventures financially. Thus it will be seen, by reference to the report of the treasurer of the New York State Medical Association, page 337 of the *New York State Journal of Medicine*, December, 1902, that the total expense of publishing the journal is as follows:

Total expense of publishing journal.....	\$3,051.73
Incidental expenses.....	93.29

Total	\$3,145.02
Total receipts	2,168.20

Total cost to the association.....	\$ 976.82
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The directory account is as follows:

Expense of publishing directory.....	\$4,967.54
Incidental expenses	651.97

Total	\$5,619.51
Total receipts, only	1,783.98

Cost to the association to date.....	3,835.53
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It will be seen therefore, that the loss to the association from the publication of the journal and directory is \$4,812.35.

The expense of the business office of the association during the year 1901 was \$5,693.18.

This included—

Rent	\$ 150.00
Salaries	3,799.84
Insurance	20.00
Office incidentals	1,723.34
	\$5,693.18

The committee feels that if reorganized, the society would not be able to bear these enormous expenses and could not therefore publish either the directory or the journal.

While we believe that an official directory of the medical profession of this State should be published annually, we are of the opinion that the work, with its associated responsibilities, might well be relegated to one of the many publishing houses ready and eager to undertake it, with facilities to make such a publication profitable.

The total expenditure of our State society, including the publication of our *Transactions*, an unbroken file of which to-day represents a possession of which any physician may well be proud, is in the neighborhood of \$3,000.

The expense of our business office, including the modest salaries of our treasurer and secretary are between \$500 and \$600.

Our committees expend about \$500.

The transactions cost, including postage, \$1,200.

Cost of the annual meeting, between \$400 and \$500.

Stationery, printing receipts, etc., between \$200 and \$300.

The income of the combined Medical Society of the State of New York and the New York State Medical Association, in the event of reorganization, would be insufficient to meet such expenses as would be necessitated by the publication of the directory and a monthly journal. It must be remembered that the receipts of the enlarged society would not equal the combined incomes of the present association and society, for there is a surprisingly large proportion of fellows affiliated with, and paying dues in, both bodies, who in the event of amalgamation, would pay but a single fee.

In reporting progress your committee wishes

I, To file its objection to any method of reorganization which shall in any way interfere with the life of the Medical Society of the State of New York. Therefore we are opposed to any legislative act in connection with the amalgamation of the medical profession of the State of New York. The opinion of Judge Andrews makes it clear that no such action is necessary.

II, Your committee having been assured that the old code of ethics of the American Medical Association is still in existence, does not feel that it is within its power to recommend that action be taken by the Medical Society of the State of New York, until the American Medical Association shall make it possible for the Medical Society of the State of New York to subscribe to its constitution and by-laws and written rules of order, consistently, without the sacrifice of principle.

III, The methods of gathering data which shall serve to formulate a plan of organization, ultimately to be presented to this body for approval, must be evolved after further conference and greater consideration than your committee has as yet been able to give to this important subject.

IV, The Medical Society of the State of New York cannot continue to issue the directory and the monthly journal, now being published by the New York State Medical Association, in the event of reorganization.

A consideration of this report must prove to your body that this committee is in the midst of its work; that the many perplexing questions connected with the unification cannot be decided at this meeting; that there are many matters of detail which still demand attention and further conference.

For these reasons we beg leave to report progress; ask that our report be received, and that further time be given to your committee on conference.

Respectfully submitted.

(Signed) Henry L. Elsner, chairman,
A. Jacobi,
A. Vander Veer,
George Ryerson Fowler,
Frank Van Fleet.

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Lectures and Addresses.

RUDOLF VIRCHOW.

AN APPRECIATION.*

By CHARLES A. L. REED, M. A., M. D.,
CINCINNATI,

FORMER PRESIDENT OF THE AMERICAN MEDICAL ASSOCIATION.

The object of this address, the invitation to deliver which is an honor for which I am profoundly grateful, is to express, in some measure, an appreciation of the life and labor of Rudolf Ludwig Karl Virchow, a deceased honorary fellow of the Medical Society of the State of New York.

In approaching this task we become at once impressed with the fact that the influences which develop greatness are subjects of speculative inquiry not less interesting and important than the momentous question of what constitutes greatness itself. When, therefore, we for any reason examine into the facts relating to the evolution of a given historic character, we at once think of the conditions and forces concerned in its production—we think of ancestry, of domestic surroundings, of scholastic opportunities, of personal associations, and of the forces that were at the time dominant in the social, political, and intellectual atmosphere. We are prone, also, as we turn to greatness itself, to measure it, not alone by the standard of its own time, not alone by the rule of personal achievement, but with reference to both its immediate importance and its final influences. Thus, as we glance over the vista of history, and our fancy nestles naturally enough about the most imposing figures of the ages, we discover, for instance, that we should like to know more of John and Mary Shakespeare, who blessed mankind with the Bard of Avon—the man of sympathy; and we yearn for an acquaintance with the farmer of Woolsthorpe and his wife who begat the illuminating genius of Newton—the man of mind. We feel, also, that, full as were the annals, we should like to know even more of the actual political forces of the Roman Empire, directly concerned in developing the world's greatest soldier and statesman; that, notwithstanding its rich literature, we should like to feel the sentient throbs of the Elizabethan epoch that made possible the world's greatest poet

and dramatist; that, voluminous as is the record, we should like to be more familiar with the trend of scientific thought during the century that followed and that produced the world's greatest philosopher. We search for the reason why each of these names has been engrossed upon the scroll of immortality, and as we search we discover that everywhere lies the unknown; that, in atom and planet, in germ and genus alike, is law, natural law, inherent and integral, whose essence is not and cannot be of the record; that these men have delved and found and revealed laws—laws of war, and statesmanship, laws of human emotion, laws of the natural universe—and that man is stronger and better and happier because they lived. We discover, furthermore, as we glance over that immortal scroll, that each name inscribed thereon has been placed there because its possessor, whether Pythagoras or Euclid, Copernicus or Kant, Gallileo or Herschel, Hippocrates or Harvey, whether Dante or Goethe, each has been recorded because each has torn away the veil and revealed somewhat of the law that was hidden; for the law is in all and of all, and he is the greatest among men who reveals the most of law unto man. In this spirit let us approach a discrimination of the great savant whose demise was the melancholy event in the medical, the scientific, and the political world during the last year.

The Second Peace of Paris had been signed but a few years, when, in 1821, Virchow was born in the little hamlet of Schievelbein in the flatlands of Pomerania. The Baltic breezes that swept inland on that fifteenth day of October were not, however, sufficient entirely to cool the political atmosphere of that northernmost Prussian province, or, for that matter, of the thirty-nine petty states that then comprised the German Confederation. Napoleon's exile had terminated with his death at St. Helena but six months previously, and Europe—Germany in particular—relieved of the depressing shadow of his overlordship, was busying itself with the always serious problems of reconstruction. The intellectual world was not less perturbed than was that of politics. The great universities, then as now, exercised a powerful influence upon the trend of events. It was in them that the battle for constitutional rights, as a remedy against the despotism of the petty princes, was waged with intensest vigor. A constitution had been granted and revoked in Wür-

* Delivered before the Medical Society of the State of New York, at Albany, January 28, 1903.

temberg; the Duke of Weimar had granted a constitution to his subjects, the celebration of which event at Jena had led to patriotic demonstrations, and to a revival of the influence of Luther's great struggle for liberty of thought. The movement thus engendered had become so formidable as to invoke the oppressive antagonism of the tyrannous Metternich and the promulgation of the infamous Carlsbad Decrees, which provided for the rigorous censorship of the universities and newspapers by government commission. Their provisions involved the suppression of any newspaper and the exile of any man who might express opinions inimical to the policy of the government. The same interference with free thought existed in Austria and in Lombardy. The students of the University of Turin had been massacred because they had appeared at the theatre in red caps. France and Spain were in a state of unrest, and among the countries of Europe—the people—from the Mediterranean to the Baltic, the effort was being made to conform human life to those inherent laws of the social fabric that most make for happiness. The effort to reduce these laws, natural, inherent laws, to definite terms; the effort to adjust habits and customs to new ethical rules and to new constitutional provisions, produced a state of mental activity and of moral daring in every part of Continental Europe. This, then, was the social, political, and intellectual atmosphere that prevailed in every German home, and even in the home of Karl and Johanna Virchow, as they rocked the cradle of him, the formal appreciation of whose long and illustrious life is the object of our solemn reunion at this hour.

The clamor against absolutism was heard in childish murmurs at the public school at Schievelbein, to which young Virchow went at a tender age. There, in the little town in which the Reformation had long been the dominant force; there, in the little school, beneath the shadow of the church, the synagogue, and the Castle of Malta—a combination that in its catholicity was almost prophetic—the youth encountered forces that were potent in fashioning his subsequent illustrious character. It is this fact that we, in free America, where the schoolhouse stands as the temple of rational belief, where it stands as the safeguard of the Republic, may take peculiar satisfaction.

The political agitations of the times, the little rivalries, the little hatreds, the fierce combats of the public schools, were not, however, sufficient to divert the youthful pupil from the successful prosecution of his studies; for we learn that he went, under age and with a particularly advanced knowledge of Latin, to the Gymnasium at Koslin, where he was a source of surprise to the directors. Here at Kos-

lin, again, was the spirit of the Reformation, with its inspiration of truth and liberty and its yearning for happiness. The fact was recognized even as far north as Pomerania that in the Rhenish provinces, previously ruled by French officials, there was a higher idea of human rights than obtained in the other provinces of the Confederation, especially under those ruled by the powerful house of Brandenburg. There was, therefore, a clamorous appeal for the recognition of all that was attractive and great in the principles of the French Revolution, and the outcry for a constitution embodying these principles came from no province with more emphasis than from Pomerania, and from nowhere in Pomerania with more insistence than from Koslin and from Schievelbein. The Revolution of 1830 had brought coveted charters of liberty to Brunswick, Hanover, Saxony, and Hesse-Cassel, while to Prussia it had brought only the farcical concession of a system of triennial provincial diets with merely consultative powers. In spite of these distracting influences, however, influences that are always alluring to the enthusiasm of youth, young Virchow passed from the gymnasium in 1839, first on the list of the *Abiturienten*. The independence by which industrious and ambitious youth refuses to be restrained within the confines of an arbitrary curriculum is always the prophecy of a broad manhood. The child, in this instance and by this rule, was, indeed, father to the man, for we find that he presented himself for his finals, not only in the required branches, which were difficult enough, but in Hebrew, which he had mastered from pure love of philological research. It was this same impulse that prompted him, during the succeeding few months, to master Italian without a teacher, just as, years later, we find him resting himself from his scientific labors by delving into the charms of modern Arabic poetry.

A few months after leaving the gymnasium, he set out for Berlin, a journey which, in those days, before the introduction of railroads, had about it more of adventure than is involved in the two hours' run of to-day. Of his career as a student in the Frederic Wilhelm's Institute, it is sufficient to say that he was an arduous student. In the faculty then were Dieffenbach, the foremost surgeon of the day; Schönlein, who had come from Zurich the same year, not only to join the teaching body, but to act as reporting counsel for the ministry and to serve as physician in ordinary to the King; Froriep, who was in charge of the Pathological Museum at the Charité, and who, in addition, served the government as medical counsellor; Caspar, who was also a medical counsellor, with a seat in the medical deputation for medical affairs in the ministry; but,

towering above all was the intellectual figure of Johannes Müller, the professor of physiology. He was an original genius, with daring, actually engaged in winnowing the wheat of demonstrable truth from the then prevailing chaff of egoistic opinion—to divorce a physical science from speculative philosophy. Prompted by the inspiration which he in turn derived from Bichat and the French school, this professor of physiology was busily engaged in retesting in the laboratory truths previously elaborated by Hallen, Whytt, Spallanzani, and Bichat himself. My fancy likes to dwell upon the almost dramatic moment when the shopkeeper's son from Schievelbein, the little keen-eyed, yellow-haired stripling of nineteen, was ushered into the presence of this, the great founder of the modern school of physiology. There was in that meeting an intellectual impact that resulted in the transference and the perpetuation of great thoughts, great methods, which, perfected by the pupil, led to still greater results. It was from this great professor that Virchow, during the next four years, was to derive those habits of investigation which, coupled with the spirit of daring, were to make him in turn the leading investigator in the realm of biological research. It must be remembered, however, that with all the social and political disturbances, Germany was at that time thoroughly impregnated with a wholesome ferment. It consisted of the spirit of rational investigation, and was infused by Liebig in chemistry; by Humboldt, who was promulgating his discoveries leading to the publication, five years later, of his *Cosmos*; and by Froriep, who was establishing his marvelous principles of education derived from Pestalozzi, which have since borne rich fruit the world over in every department of human instruction. It is not surprising, therefore, that, with these antecedent influences, with these present surroundings, with these dominating forces, and with his marvelous insight and industry, Virchow should make such a record as a student, that upon his graduation he should be given the assistantship to the prosector of the Charité Hospital. It was his first recognition, and it came with deserved promptitude. He was actuated at this time, as in his entire subsequent career, by the broadest principles of catholicity. During his student career, in addition to the prescribed lectures, he had gone into logic and psychology; in his busy energetic way he had mingled with the political organizations among the students, and there were already manifest tendencies which, a very few years later, brought him before the German public as a scientist, a philologist, a social reformer, and a democrat. Promotion came with undue delay. Froriep resigned as prosector in 1846, and Virchow was

elected to the succession. His work with Müller, however, had brought him in contact, not alone with that great man's scientific method, but with his habits of publicity, as a scientific writer. The *Archiv für Anatomie, Physiologie und wissenschaftliche Medizin*, long issued by Müller, soon found an imitator in the department of pathology in the periodical issued jointly by Virchow and Reinhardt, which, on the demise of the latter, Virchow continued to edit until his death. The political and economic conditions were fashioning themselves into the revolution of 1848 when Virchow, already in influential touch with the Prussian government, was delegated to investigate an epidemic of typhus fever which was then raging in Upper Silesia. The work was done with his characteristic thoroughness, transcending the prescribed limit of his instructions. He not only investigated the pathological and clinical phases of the disease, but entered freely into a discussion of the hygienic, economic, and social conditions underlying the epidemic. He even went so far as to indicate a number of social reforms, essential to the prevention of such epidemics, and tinctured his science with considerable democracy; his outspoken utterances in these particulars causing a distinct sensation in the ministry.

The trip to Silesia seems to have been a very important experience in Virchow's career. His previous tendencies as a reformer, in the direction of popular liberty, were now fully confirmed, and he became an active participant in the great revolutionary movement of that year. He unhesitatingly promulgated his platform as that of full and unrestricted democracy, on which theme he made violent speeches to the Berlin populace, by whom he was elected a member of the National Assembly. His political ambitions, however, were destined to be temporarily curbed by the fact that he was under the parliamentary age, and was, consequently, not permitted to take his seat. His energy, however, found a compensatory outlet, for, with Leubuscher, he founded a journal which they called *Die medicinische Reform*, through which he advocated the establishment of a ministry of health, and insisted, among other measures, that medical education should be made free. These suggestions, not originating with the government, were scarcely less distasteful to the Ministry than was his report from Silesia, or than were the political harangues which he continued to pronounce to the plaudits of his fellow burghers. He seemed at this time to be largely dominated by the spirit of iconoclasm, not, however, that form of iconoclasm which is merely an expression of the spirit of destruction, but that better iconoclasm by which the old gods are destroyed that newer and better ones may be erected. He in-

vaded the realm of theology, and proclaimed, not a mere agnosticism, but a positive disavowal of the existence of a hell, insisting that "only a benighted Mechlenburg pastor could be so foolish as to believe in a devil." The government, committed not only to the task of maintaining the national order, the national laws, but the national religion, looked upon the young orator as a dangerous polemic. He was compelled to resign his appointment as prosecutor for the Charité, where, in spite of all his political agitations, he had conducted epoch-making researches on leucæmia, embolism, thrombosis, phlebitis, and other phases of morbid anatomy. He had already become a teacher of ability, and his researches had attracted widespread attention. These facts, quite as much as the influence of his colleagues at the Charité, probably saved him from the decree of exile, issued at that time against many participants in the revolutionary movement. He was, however, banished from Berlin to Würzburg, where, in May, 1849, he accepted a chair in the faculty of the university. There was here less opportunity for effective participation in the political movements, and his energy found fuller exercise in the prosecution of his original researches and in the exercise of his philological tastes. During the seven years that he remained here he kept up his study of Italian and Arabic, and acquired a knowledge of English. His scientific researches at Würzburg embraced the subjects of phthisis, tuberculosis, typhoid fever, cretinism, hydronephrosis, adipocere, echinococcus of the liver, amyloid degeneration of lymphatic glands, and the corpuscles of bone, cartilage, and connective tissue, and he thoroughly investigated the anatomy of the nails and the epidermis. While *Die medicinische Reform* was discontinued shortly after he went to Würzburg, the young professor, instead, edited a *Handbuch der speciellen Pathologie*, and, in connection with J. Vogel, issued a manual of general pathology.

It seems from careful study of Virchow's career that it was at about this time that his observation of concrete facts had become sufficiently extensive to justify him in venturing upon important generalizations; for the little manual issued in connection with Vogel contained many of the fundamental principles which, a few years later, were elaborated into his famous *Cellularpathologie*, in 1859. He had been recalled to Berlin in 1856, under circumstances that invested the incident with the characteristic of a triumph. The chair of general pathology had become vacant through the resignation of his former teacher, Froriep. In all Germany there was none so able to fill it as the young democratic professor. He was sent for—but paused to consider. When his reply came it brought his acceptance,

based, however, upon the condition that an institute for practical work should be founded. His terms were accepted, not only in this, but in other particulars, and he at once entered seriously upon what must be recognized as his more distinctive life work. The museum at that time contained 1,500 preparations; at his eightieth birthday, as the result of his own individual labors, the number had increased to 23,000. In his work he was actuated by the view, expressed in his own words, that "the rôle of pathological anatomy as a dogmatic science is at an end; for each individual law we must have the proof, clearly recognized and carrying personal conviction." He insisted that the whole of the then existing system must be abolished, and that a new philosophy, based upon observation and experiment, must take its place. This new pathology, he insisted, must come about gradually, and not as the mental product of individual enthusiasm. It must be achieved as the outcome of laborious research by many competent investigators, and, when thus evolved, and thus only, could it be accepted as the basis of scientific medicine.

The engrossing character of Virchow's labors at the institute at this time, the absorbing enthusiasm involved in the promulgation of a new and revolutionizing philosophy, the exactions of editorial duty, all combined with the responsibilities of professional work, were not sufficient, however, completely to divert his attention from collateral and often apparently irrelevant studies, and from participation in the fierce political controversies that were then agitating the German people. William I had ascended the Prussian throne in 1858. There was some hope of relief from the oppressive measures of his predecessors, and this very hope stimulated the activities of the Democrats, or of the "*Demogogen*," as the party was appropriately designated by the conservatives. Virchow, notwithstanding his unpleasant experiences that had resulted in his banishment to Würzburg, immediately identified himself with the cause of popular liberty. In this he was actuated by a profound contempt for the reigning house, a contempt which, on occasion, found expression in his famous observation on heredity. "I know a family, a very exalted one," he was wont to say, "in which the grandfather had softening of the brain, the son hardening of the brain, and the grandson no brains at all," the reference being to the three Frederics, the immediate predecessors of the then reigning monarch. The work of the mere agitator, however, was not sufficient for one of Virchow's temperament, particularly to one who, after a previous election to the National Legislature, had been denied his seat on account of his youth. He was, in 1862, older by fif-

teen years, and, accordingly, offered himself as a candidate for the Prussian Chamber, to which he was duly elected. It was in the same year that Bismarck became Prime Minister, a coincidence which marked the beginning of an antagonism that continued throughout the political careers of the two men. Virchow speedily became the leader of the Radical party, and by his advanced views and cogent reasoning, and by his courageous insistence upon them, he speedily earned for his policy the opprobrious designation of "*Professorismus*" applied by the Iron Chancellor. While these debates were going on, the duties at the institute, at the Charité, and at the editorial office were not neglected, although there is ample testimony that Virchow was often tardy in keeping his appointments. The famous Schleswig-Holstein episode diverted for a time the attention of the legislature from internal to external affairs, and culminated in the war with Denmark in 1863. In this war, Bismarck, against Virchow's opposition, used Austria as the cat with which to pull the chestnuts from the fire, and then, three years later, again over Virchow's opposition, he proceeded to kill the cat. As a result of this war with Austria, in 1866, the Germanic Confederation of 1815 was terminated, and the North German Confederation took its place. It may be premised that Virchow, who, with all his democracy, was always a Unionist and a Nationalist, deprecated this segregation of the Germanic people. It was in the course of this long sustained opposition to the policy of the government that he, as chairman of the finance committee, a position which he held for many years, succeeded in defeating an appropriation for naval purposes that had been demanded by Bismarck, who, thereupon, challenged his successful antagonist to mortal combat. Virchow, with no disposition whatever to give the Herculean warrior an opportunity to exercise his professional skill, and with moral courage to stem the tide of sentiment in favor of duelling that still disgraces Germany—a courage vastly excelling mere physical bravery—declined the cartel, but continued his opposition. This opposition was carried along through the days of the Franco-Prussian war, but when the first shot had been fired, Virchow, always a patriot, and always the physician, took his son and joined the army, the two serving in the capacity of surgeons in the field. These men, father and son, did their full measure of duty, conspicuously upon the field of Metz, in alleviating the sufferings of their wounded compatriots. No sooner, however, had peace been concluded with the proclamation of William I as Emperor at Versailles, than Virchow resumed his wonted activities in science, in literature, in politics at Berlin. It was then that probably for the first

time in his political career he found himself *en rapport* with the leading features of Bismarck's policy, namely, the policy that involved the construction of the German Empire. It may have been this particular fact, quite as much as a general appreciation of Virchow's work, that prompted Bismarck, before his own retirement, under the present Emperor, to apologize publicly for many asperities which had characterized his previous attitude toward the great savant.

About this time the widened scientific view of Virchow, a view which had come to embrace the whole science of man, as comprehended in the then slumbering science of anthropology, began to be manifested in his contributions to literature. He was already accumulating facts which were to serve as the groundwork of ethnology; yet, in spite of all this, acting in his capacity as a member of the Town Council, a position which he held for more than forty years, he was not oblivious to the fact that the sanitary condition of Berlin was deplorable. He, accordingly, became responsible for the establishment of those enormous hygienic reforms that have banished typhoid fever and other zymotic diseases from Berlin, and that have rendered that city one of the most salubrious in the world. Archæology, also, was at this time engaging his attention, and in the midst of the preparation of his valuable work on *The Topography of Troy*, he, in 1878, retired from active political life, only, however, to be elected two years later to the German Reichstag. In this body, however, he was always rather an interested spectator than an active participant, and never aspired to the office of party leadership. It is not to be assumed, however, from this that Virchow's intellectual activity was by any means at an end, or even upon the wane. The twenty years following his election to the Reichstag were among the most fruitful, intellectually, of his entire life. He amplified in many particulars his teachings of cellular pathology. He delved more deeply than ever into the hidden mysteries of ethnology, producing, in 1882, his valuable work on *Old Trojan Graves and Skulls*. At the very pinnacle of scientific fame he kept himself *au courant* with the whole trend of scientific thought, delivering an address before an International Congress at Berlin, at Paris, at Moscow, or at Rome, laboring in an assemblage of scientists there, or in a hygienic congress there, or delivering a Croonian or a Huxley lecture in London. With his editorial labors always in hand, he still clung industriously to his old haunts in the Pathological Institute, in the Anthropological Museum, or in his ward at the Charité; for, be it remembered, Virchow was always a practical physician. It has been said of him that during these

years he knew no such thing as vacation, in the ordinary sense of the word, for it was his habit rather to find recreation in a change of occupation, such, for instance, as visiting Asia Minor, and, pick in hand, to assist his friend Schliemann in his wonderful archæological researches. In the midst of it all he was very much of a man on the human side, a little wiry man, but a little over five feet in stature, sprightly, congenial, loving, and lovable.

His domestic life has been described as ideal. The many Americans who were present at the Berlin meeting of the International Medical Congress will recall his active and wholesouled participation in the festivities of that occasion. He was given a *Festschrift* on his seventieth birthday, and again on his eightieth, on which later occasion, in particular, delegates were present from practically every country, and festivities were held simultaneously in practically every leading city of the world. On January 3, 1902, he sustained a fracture of the neck of the femur by falling from a tram car. He died on September 5, 1902, mourned by the civilized world. The municipality of Berlin, which he had faithfully and efficiently served as a councilor for so many years, accorded him the distinction of a public funeral, which, in the midst of universal mourning, was participated in by many officials from the political and scientific world.

This, then, was the man upon whose work we are called, at this hour, to pronounce a formal appreciation. It is rare, indeed, that the occasion arises to attempt, in even a desultory way, the estimation of a career that has resulted in the establishment of two distinct, although correlated sciences, and in the substantial advancement of human liberty. It would be quite out of the question in an address such as this to attempt a résumé of his doctrines in pathology, a mere enumeration of his contributions to which would involve the employment of more than twice as many words as I shall employ in your hearing. We may, however, arrive at some estimate of his work in this great department by pausing, for a moment, to consider the state of medical science or, more particularly, the conceptions of disease that obtained in Germany when Virchow was made the successor of Froriep at Berlin. It is true that Rokitansky had introduced many of the revolutionizing doctrines of Bichat at Vienna, but even Rokitansky was busying himself to an important extent in promulgating the purely dogmatic doctrine of crases. Oken, at Munich, was indulging in the glittering generality that life was the self-generation of individualized elements, that the principle of life was galvanism, and that vital force was galvanic polarity. Of him Agassiz declared that he constructed the entire universe out of his brain. Döl-

linger, of Würzburg, the father of the great theologian, belonged to the same speculative school which an historian has designated as the "Romanticist, or Teutomaniacs." At Berlin, Schönlein, who had been one of Virchow's teachers, and was yet his colleague, and who represented what was designated at the Natural History School, taught that disease was an entity, a sort of parasite, sojourning temporarily in the body, just as Paracelsus had once spoken of a "microcosm within a microcosm." Schönlein, more specifically, looked upon disease as a sort of equivocal infusoria, the existence of which he logically predicated, but never, of course, physically demonstrated. These infusoria, the existence of which was thus gratuitously assumed, were easily enough imagined to consist of genera and species, each producing different clinical phenomena—a sort of empirical prophecy of the germ theory which has since played so important a rôle in medical philosophy. It was against such theoretical doctrines, then dominant, that Virchow brought the evidence of the microscope and the revelations of the mortuary. He began in the truly scientific manner, which consists always, first, in the observation of concrete facts, next, in their classification, and, third, in their ultimate generalization. His labors at Würzburg, supplemented by those conducted under more favorable auspices, after his return to Berlin, enabled him to announce as the seminal doctrine of his philosophy—and I employ the words he subsequently used at the fiftieth Congress of German Naturalists and Physicians, namely, that the new science was based "chiefly on the recognition of the fact that the cell is actually the ultimate, proper morphological element of every vital manifestation—*omnis cellula e cellula*—and that we must not remove the proper action beyond the cell." In the early elaboration of this doctrine, taking up the work where Schwann and Schleiden had left it, he early proclaimed the importance of the nucleus to the maintenance and multiplication of the cell, and emphasized the fact that tissue growth implied cell multiplication, while the contents of the cell, and even of the material deposited outside of it, were of controlling importance to function. He taught, furthermore, and as a necessary corollary of the preceding postulates, that tissues varied in function according as they varied in cellular construction. He insisted upon the existence of an intercellular tubular system that supplemented the recognized circulatory systems in the work of ultimate nutrition. As a result of his investigation of the circulatory apparatus and of the blood, he taught that the walls of the blood vessels were impervious, and argued that blood, or even the nutrient elements of the blood, could not escape from them without

rupture of the wall, which rupture was, however, rarely, if ever, demonstrable. It would seem that in this doctrine, which I believe is as near an approach to empirical dogmatism as could be found in all his teachings, Virchow laid a logical foundation for the new doctrine of osmosis, that to-day promises to take both physiology and pathology largely into the realm of physics. He directed his arguments specifically against the then prevailing humoral pathology by insisting that the blood itself was not the proper and original cause of dyscrasie, as taught even by Rokitsansky, but that instead these dyscrasie had their origin rather in a disturbed metabolism, the toxic products of which were merely carried in the blood. These laborious studies of many phases of blood changes comprise the basis of our present accurate conception of the pathology of the circulatory medium. His study of inflammation, in the description of which he insisted that disturbed function should be added to heat, pain, redness, and swelling, as one of the cardinal indicæ of the phenomena, gave an accurate conception of the actual changes. His elaborate investigations of the nervous system resulted in the promulgation of doctrines whose parentage in the works of Brown and Haller is recognizable. His work on tumors, a distant application of the cellular doctrine, stands to-day as the fundamental classic of the subject. His investigation of tuberculosis resulted first in his classification of the diseases into neoplastic and inflammatory forms, but latterly he recognized the bacillary forms. It would be impossible, however, as I have before stated, to give even an accurate résumé of this extensive philosophy, the application of which to the entire phenomena of disease must stand as his crowning achievement. It is interesting to hear him recount, as he did in a lecture delivered in London, during the last years of his life, the general summarization of his work in the statement that "the law of continuity of animal development is, therefore, identical with the law of heredity, and this I was now able to apply to the whole field of pathological new formation." And it was especially interesting, in view of the ideas against which he had to contend, to hear him add with pardonable exultation: "I blocked forever the last loophole of the opponents, the doctrine of specific pathological cells from which types and ancestors were not forthcoming in normal life." The doctrines which he had thus established, and to which he thus alluded, became, early in their history, the actuating principles of the "Berlin School," which, sooner or later, embraced the names of Leyden, von Recklinghausen, Cohnheim, Waldeyer, Hoppe-Seyler, Kühne, Rindfleisch, Klebs, Liebreich, Friederich, in Germany; Simon, in Great

Britain; and, conspicuously, W. H. Welch, in the United States. The principles taught by this school are, by common consent, those upon which modern surgery and rational therapy alike are placed.

The position that must be accorded this doctrine in the light of further revelation of fundamental law cannot be foretold. Nothing could be further from the purpose of Virchow himself than the assumption that his doctrine of the infectiousness of disease was based upon observations that were made possible only by a later perfection in optics and by a later advancement in the technique of biological research. The most that can be said of the relation of the germ theory of disease to that of cellular pathology is that, without invalidating the important conclusions embraced in the latter, it left Virchow's recorded observations unimpaired and undisputed. The new doctrine of the ions, involving the principle of osmosis, may bring other and important supplementary facts which shall serve to show that the discoveries of Virchow comprised in the aggregate a single, but important link in the evolving chain of science.

The next phase of Virchow's character as a scientist relates to his work in the department of anthropology. This, the science of man in its broadest conception, can scarcely be said to have had more than a mere beginning before Virchow, beginning with his work in biology, was led into it by the widening circle of associated ideas. It may be said, indeed, no valuable contributions were made to the subject during the first half of the nineteenth century. Blumenbach, of Göttingen, had made his famous collection of skulls—his "Golgotha," as he called it—which was the basis of his own investigations, and which may be said to have been the starting point of systematic anthropological study. About the same time, that is, the last years of the eighteenth and the first years of the nineteenth century, Von Sömmerring, of Frankfurt, studied the eyes, not only with reference to their anatomical detail, but with reference to their ethnic significance, while Camper, of Holland, made a careful study of the facial angles. This was practically all that was done with the subject until Darwin issued his *Origin of Species*, in 1859; his *Descent of Man*, his first contribution to the subject of ethnology, did not appear until 1872. Long before the latter date, however, Virchow had taken up the subject at two points of contact. The first point of contact was developed out of his philosophy of cell genesis, the doctrine that all cells are derived from preexisting cells, which he promulgated in 1859, and which brought up, as a natural corollary, the question of variation of type. His antagonists—the believers in special creations—seized eagerly upon this dec-

laration as a refutation of the then rapidly growing materialistic philosophy, and as a vindication of their own ontological dogmas. If the cell is the vital unit, as Virchow declares, and if the individual is but the sum of cells, they urged, then variation in the individual can only occur as the result and commensurately with the variation in the constituent cells; if, they added, like cells always beget like cells, as Virchow declares, then the individual, the sum of cells, cannot vary from his cellular type; and, finally, they insisted, if all the cells in the individual have been derived through the generations from cells of the same type, then the original cells, at the beginning of things, must have been the products of a special and miraculous creative act. Unfortunately, however, for this specious logic, Virchow taught, in effect, that like cells beget like cells, only, however, under like circumstances, and that, as the circumstances varied, so did the cell type vary. This is, indeed, the point of departure from the standard of health, the very beginning of pathological phenomena. As a matter of fact, Virchow simply declined to discuss the origin of species until sufficient evidence to justify him in doing so could be derived from a careful research of the tissues. He recognized the mutability of the cells, and realizing, logically, that variations in type must begin in these vital units, he, without denying the truthfulness or affirming the falsity of Darwin's hypothesis, simply awaited the demonstration of the actual changes within the cell. It is an interesting fact, and one bearing testimony to Virchow's scientific acumen, that this very variation was reduced to a physical demonstration in 1900 by Professor Guyer, of the University of Cincinnati, whose investigations are recorded in his valuable contribution on Hybridism and the Germ Cell. It is also of striking interest, at this time, and one bearing testimony to the reliability of Virchow's deduction, not only that these observations of Guyer's, but Mendel's law, promulgated through an obscure periodical at Brunn, Austria, in 1865, seemed to cover the entire point. This law of Mendel, or, as I believe we should now call it, the Mendel-Guyer law, is in effect that, as a result of definite and demonstrable changes in the germ cell, the second and later generations of a hybrid possess every possible combination of apparent characters, and that each combination appears in a definite proportion of the individuals, the whole reduced to the terms of a definite equation. This law, revealed by observations in both the animal and vegetable world, seems to be one of general applicability, and one that is calculated to invest the conclusions of Virchow with an increased value.

The next point at which Virchow was brought

in contact with the general problem of anthropology or, more particularly, that of ethnology, grew out of his studies of cretinism and of the causes of variations in the growth of the skull. It was precisely this study of the pathological phases of craniology that enabled him to detect morbid changes in the celebrated Neanderthal skull, which, with its protruding supraorbital ridges, its low forehead, and its small cranial capacity, even the scientific world was too disposed to accept as the normal index of a racial type that had long since passed away. Virchow further insisted that, even if it were normal, the existence of a single skull was not sufficient evidence upon which to predicate the existence of an entire race, and that conclusions should be withheld until further evidence was secured. It was this cautious utterance, thoroughly characteristic of Virchow, that gave the theological polemics another opportunity falsely to proclaim that he was an antagonist of the doctrine of descent as promulgated by Darwin. It seems that the utterance seized upon for this particular misrepresentation occurred in an address delivered in 1877 before the German Naturalists and Physicians, and was to the effect that the hypothesis of Darwin ought not hastily to be given the force of law—that it ought not to be placed in the category of law—without first waiting to gather and accumulate all relevant facts. It was just this scientific discrimination between hypothesis and law, and just this conservative tendency in the consideration of demonstrated facts and in the formulation of conclusions based upon them, that gave to the judgment of Virchow the greatest possible weight in the scientific world. And it was this very weight which he himself, as late as 1900, with true scientific spirit, was disposed to deprecate; for he had spent his life in dethroning the power of personal influence and in establishing the regnancy of demonstrated truth.

His work in anthropology, however, considered from its positive side, was very great. He was always an organizer—a valuable weakness in a man of brains—and it was by this means that much of his work was brought to its full fruition. He organized, or at least assisted in the organization of, the German Anthropological Society and the *Berliner Gesellschaft für Anthropologie, Ethnologie und Urgeschichte*; he helped to found the *Museum für Volkstrachten* and the almost invaluable *Archiv für Anthropologie*. He, with his colleagues, gave serious study to the physical characteristics of the early Germans. This was supplemented by statistical investigation of the present distribution of the color of skin, eyes, and hair in Germany, the whole being reduced to cartographic representation. His descriptions of American crania, based upon Mor-

ton's great work, opened that mine of information to German thought. He was the friend and promoter of Schliemann, in whose archeological explorations he was at times a personal participant; he recorded the results of these labors in two books, *Contributions to the Topography of Troy*, and *Old Trojan Graves and Skulls*, each of which is recognized as a valuable contribution to the subject. Extensive, however, as were the researches and important as were his recorded observations, it does not appear that he considered either of them sufficiently extensive to warrant him in arriving at important general conclusions. He felt justified, however, in saying, as he did say, that physical types did not vary with variations in language and culture, and that different types might blend in the formation of a homogeneous people. This lesson was taught him by a study of the racial types in Germany, and is of extreme interest to us in the United States, where, at this present moment, we are in the midst of the greatest ethnic experiment in the history of the human race. In viewing the entire scope of Virchow's labors in anthropology, it must be concluded that he did not carry them to the point of even relative finality, that he did his labors in pathology; his researches, his discoveries in ethnology must be recognized as fundamental, their true significance remaining to be interpreted in the light of rapidly accumulating evidence. It is sufficient, however, for the perpetuity of his fame that, by common consent, he is recognized as the veritable founder of this new science, which promises so much for the interpretation of the racial types of men.

The third side of this great character was the human side, manifesting itself, not alone as a husband and father, but conspicuously as a citizen. He early showed that the prevalent opinion, that to be highly intelligent on one subject it was necessary to be correspondingly stupid on all other subjects, was but a vulgar notion, and he speedily demonstrated that the view point of the physician was eminently calculated to afford an intelligent insight into social, economic, and political conditions. I must, however, leave it to the political historian and to the public economist to tell what good has been accomplished in Germany in the last fifty years by the liberal movement, a movement that, for many decades, enjoyed the distinction of Virchow's leadership. A few things are certain: the hated Carlsbad Decrees could not be reenacted in Germany to-day; there is a greater freedom of thought and, what is more important, of expression in German universities than ever before; the offense of *lèse-majesté*, strange sounding to republican ears, has a less severe meaning in Germany than it had fifty years ago, and it is equally certain that, for the first time in history, the entire *Vaterland* has a reason-

ably liberal constitution, wrested from the tyranny of absolutism—a condition that leads to the hope, that the German people may some time enjoy the same beneficent government that to-day blesses the Great Republic. In the achievement of these results it cannot be denied that Virchow played a leading and an honored part.

What, then, are we to say in final review of this great man? His figure is that of a colossus, and it will require the perspective afforded by receding years to measure its relative height. Some things, however, we can now tell. He inherited honest blood; he responded in the fullest and in the best sense to the formative influences with which his early life was surrounded; he had the independence to defy personal dictum and to give allegiance only to demonstrated truth. He had the intelligence to discern and the human sympathy to appreciate that human happiness depended first and chiefly upon a knowledge of the laws underlying and governing human existence; he worked on independent lines and revealed laws of disease previously hidden; he, by his observations and deductions, and by the elaboration of rational methods, laid the foundation of modern medicine; he established the study of racial man as a science; he fought the battle for human liberty, and won for others the boon that he had always arrogated to himself. He added years to the generation of man, and brought happiness to his kind. Finally, let it be recorded that, above all, he lived faithfully to his ideals—and the greatest of these was Truth.

Original Communications.

RESIDUAL URINE.

By HENRY EWING HALE, M. D.,
NEW YORK.

A great deal is now being written about the treatment of prostatic hypertrophy. In a few words I wish to tell of a method of procedure which enables some patients to void what would otherwise be residual urine, thus avoiding cystitis and the necessity of catheterization.

Probably my method has been used by other physicians, but I have not seen or heard of it in the literature of the subject.

One cause of residual urine may be the hypertrophied middle lobe of the prostate, behind the internal orifice of the urethra. Thus the internal aspect of the base of the bladder is divided by a transverse dam into an anterior and posterior pocket. The former is drained by the urethra, while the latter is not so drained in the upright position. When such a condition is found the patient is directed to void his urine twice daily while in the knee-elbow posi-

tion. I have now a patient in his eighty-second year who, during the last thirteen months, has found this practice of great service.

Patients in whom the bladder wall has lost its tonicity derive no benefit from such directions. Its sphere of usefulness is limited to the earlier phases of the trouble.

150 WEST FIFTY-NINTH STREET.

THE ÆTIOLOGICAL SIGNIFICANCE OF HEBERDEN'S NODES.

By EDWARD M. MERRINS, M. D.,
NEW YORK.

"What are those little hard knobs about the size of a pea which are frequently seen upon the fingers, particularly a little below the top, near the point? They have no connection with the gout, being found in persons who never had it; they continue for life; and being hardly ever attended with pain or disposed to become sores, are rather unsightly than



FIG. 1.—Heberden's Nodes (Goldthwait).

inconvenient, though they must be some little hindrance to the free use of the fingers?"

To this question, which was asked a century ago by Heberden (16), concerning the nodes which have since borne his name, no perfectly satisfactory answer has yet been given. His doubts must have been of a twofold nature; first, as to their formation and the parts involved; secondly, as to their ætiology.

Upon the first point our knowledge is now clear. The nodules are due to an osteophytic enlargement of the tubercles of bone normally present on the bases of the phalanges, the second row sometimes being affected as well as the third; the morbid changes in the adjacent joint structures are indistinguishable from those of osteoarthritis, and the cystic swellings often seen upon the summit of the nodes are protrusions of the synovial membrane.



FIG. 2.—Heberden's nodes, showing osteophytic enlargement of terminal phalanges (Goldthwait).

Peculiar sensations, such as numbness and pricking, often accompany their development, and in some cases there is pain, though this is seldom severe. They may exist as isolated phenomena, but are generally associated with affections of other joints.

When we come to the pathological significance of the nodes, there is great diversity of opinion. Are they a positive indication of the gouty state, or do they constitute a form of rheumatoid disease? Are they never found in conditions other than the gouty and rheumatoid? Has not their diagnostic importance been greatly overrated? The attempt to answer these and other questions is worth making, if we can reach a better understanding of the confusing group of joint diseases known as "rheumatoid"; and further, by collating all the disorders in which the nodes occur, some common underlying factors that will bring us nearer to ascertaining the

true nature of the nodes themselves may be perceived.

(1) *Gout*. According to several well known authors, these nodes are a positive indication of the gouty diathesis. Opposed to this view, there are those following Charcot, who consider the nodes to be essentially a manifestation of rheumatoid disease, and deny that there is any connection whatsoever between them and gout. As they are certainly found in other than gouty patients, and are structurally quite different from the chalky nodules on the fingers formed by uratic deposits, it is evident that there can be no such connection as would make them dependent upon an excess of uric acid in the system. Consequently, their appearance in gout must be due to the same factors which produce



FIG. 3.—Gouty nodules (Lane).

them in other chronic diseases. It must be admitted that in this country, where gout is not as common as in England, or was not until quite lately, Heberden's nodes are found more often associated with rheumatoid disease. Among the twenty-seven patients with these nodes, referred to subsequently, only two were gouty, whereas nineteen were rheumatoid. Nor is the proportion of gouty cases with these nodes very large. Of the thirty-six cases of gout recorded by Fletcher,¹ only two showed Heberden's nodes.

(2) *Cancer*. Attention has been called by Charcot (6) to the not infrequent association, in women, of these nodes with cancer of the breast or uterus. Inquiry at the cancer hospitals here upon this point has been without result. In one case of rheumatoid

disease with Heberden's nodes which came under the writer's observation, the physicians at the sanitarium where the patient eventually died, gave cancer of the liver as the cause of death, but the physical signs of malignant disease were not absolutely certain, and no autopsy was made. Duckworth (10) records a similar case of cancer of the liver complicated, apparently, by the symptoms of rheumatoid disease, and with Heberden's nodes present on the fingers of both hands. Post-mortem examination in this case confirmed the diagnosis of cancer and proved the arthritic symptoms to have been gouty. Probably, in neither of these cases were the nodes due to cancer, and it would clear up a doubt if we knew for certain, that in Charcot's cases there were no other symptoms of arthritic disease, besides Heberden's nodes.

(3) *Autointoxication*. In his important work on this subject, Bouchard (4) states that bony nodules upon the fingers are often met with in patients suffering from chronic dilatation of the stomach. He distinguishes such nodes from Heberden's on the ground that his are found on the second phalanges, whereas the others are always found on the third. Elsewhere, he nullifies this distinction by his observation that Heberden's nodes are almost the necessary accompaniment of such disorders as gastric dilatation, dyspepsia, and enlargement of the liver.²

That toxins produced in the alimentary tract as the result of imperfect digestion or chronic gastric disease, may indirectly cause morbid osseous and cartilaginous changes seems certain. Thus, in one recorded case of severe rheumatoid arthritis there was found post mortem great gastric dilatation, caused by a kinking of the pylorus, which had become adherent to a chronically inflamed gall bladder, and the arthritic disease was rightly attributed to the systemic infection resulting from this condition. Probably, also, violent perturbations in the nutritive processes of the bones and joints may be caused by toxins of various kinds exerting a poisonous influence upon the spinal cord. Yet, strange to say, in the thousand cases of Heberden's nodes which Bouchard collects and analyzes there is not a single instance of rheumatoid arthritis, although in this disease both gastric and nervous troubles are very common. The associated disorders, in addition to those already mentioned, are eczema, acne, neuritis, syphilis, obesity, bronchitis, aortic disease, cholelithiasis, and nephrolithiasis. Evidently the nodes are very common in France, and are found in diseases which seldom or never produce them in this country.

(4) *Senility*. It is significant to note the incidence of these nodes at the extremes of life. In

¹ *Journal of the American Medical Association*, October 25, 1902.

² *Traité de Pathologie*, Tome. iii.

children they are of exceedingly rare occurrence. They have been seen a few times in children with congenital syphilis; a French writer (9) has observed them in four cases of rheumatoid arthritis; and Elliott (11) recently presented a boy with "alcoholic" arthritis, who showed Heberden's nodes. But while seldom seen in children, they are of frequent occurrence in elderly people, especially in women above the age of sixty years, and often without any other symptoms of arthritic disease. In fact, these nodes in the old are of little pathological significance; they appear to be of the nature of a senile change, the sign of a merely local degeneration. Perhaps their occurrence in these senile cases forms the basis for the belief that Heberden's nodes, when they appear alone, are a sign that none of the larger joints will be attacked, and that the patient will live to a good old age.

(5) *Rheumatoid Arthritis*. Unquestionably there is a very close connection between Heberden's nodes and this disease of many names, uncertain ætiology, and varied manifestations. Most writers follow Charcot in dividing its clinical types into three classes: (1) The general, or multiple progressive type; (2) The localized, or uniarticular type; (3) Heberden's nodes.

A more recent and better classification is as follows:

a. The fusiform type. Occurs most frequently in young women. The thickened and distended synovial membrane gives to the affected phalangeal joints their characteristic spindle shaped appearance, but the arthritic lesions are essentially of an atrophic nature. The cartilages and bones become ulcerated and eroded. Muscular atrophy is a marked symptom. Trophic disturbances are common. Deformity due to muscular contracture may be extreme. The term "rheumatoid arthritis" should be reserved for this type. These cases are not accompanied by Heberden's nodes.

b. The osteoarthritic type. Usually occurs at a more advanced period of life. The arthritic changes are principally hypertrophic, consisting of cartilaginous and bony outgrowths and ossification of the softer tissues, but ulceration of cartilage and eburnation of bone also occur. Deformity is mainly due to these osseous changes. The term "osteoarthritis" should be the exclusive designation of this type. It is in this form of rheumatoid disease that Heberden's nodes most frequently occur.

c. Heberden's nodes. The third type consists of those cases in which the nodes are a solitary abnormality, it being assumed that rheumatoid disease may exist in a very mild form, advancing as far as the affection of the phalanges, then becoming quiescent or even extinct. The formation of this

group seems unnecessary; for if such cases are not found associated with other disorders, they should be merged in the second group, as the arthritic lesions are of the same nature. Clinical experience also proves that, in many instances, after a long period of quiescence, perhaps lasting as in one case for fifteen years, the nodes are eventually followed by an osteoarthritis of the larger joints.

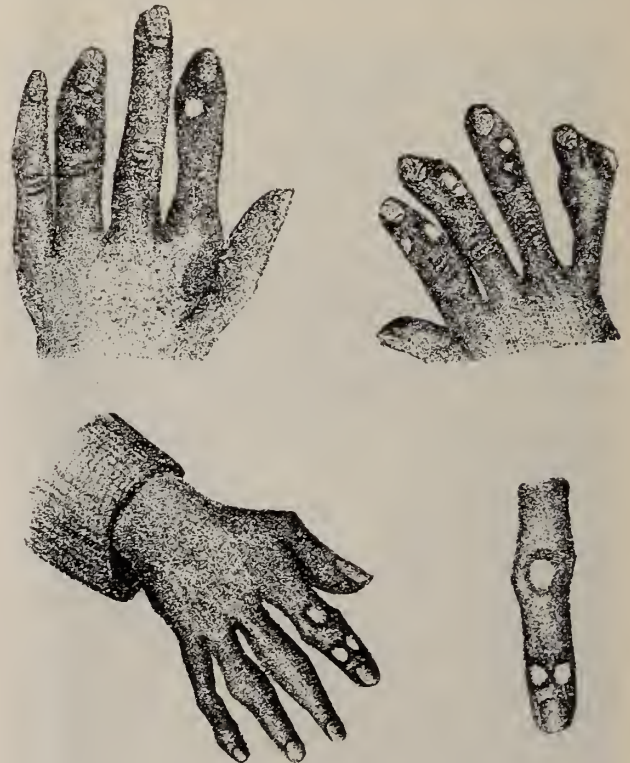


FIG. 4.—Heberden's nodes in gout and rheumatoid disease (Lane).

During the past year the writer has seen twenty-seven patients with Heberden's nodes. In nineteen of them the general disease was unmistakably osteoarthritis, several joints being affected besides the phalanges. Of the others, two patients were gouty, and in one the nodes were due to senile change. The remaining five were women in whom the nodes appeared about the time of the menopause. As osteoarthritis very often commences at this period and attacks the phalanges first, it is a question whether these cases should not be classified with the osteoarthritic group.

This experience coincides with the general opinion that nearly all cases of Heberden's nodes belong to the osteoarthritic type of rheumatoid disease. Yet, as the nodes are certainly found accompanying other disorders, they cannot be completely identified with osteoarthritis, unless we give this disease a much wider range than it has at present; or else regard osteoarthritic changes, wherever found, not as the products of a definite morbid process or distinct disease, but as lesions apt to occur whenever a joint

becomes injured or diseased from any cause, local or constitutional, a view for which there is much to be said.

(6) *Wear and Tear.* It has never been satisfactorily explained why these nodes should almost always occur in women. Of the writer's twenty-seven cases only three were in men. Bradford records that, among sixty-six old men in an almshouse suffering from rheumatoid disease, not one had Heberden's nodes, whereas in the women's department of the same institution, out of ninety-six cases twelve showed this affection of the hands.⁴ As women in music, needlework, and other feminine occupations habitually use the smaller joints more than men, may not this wear and tear have something to do with the production of the nodes? It is in favor of this hypothesis that of the writer's three cases just mentioned, one patient is a cigar maker by trade, compelled to use his fingers the whole day long, and another is a lawyer, who spends all his leisure time in bowling. It is also said that the affection is rather common among watchmakers. There is no novelty in this theory of excessive use being a cause of local joint trouble, for Arbuthnot Lane (18) the eminent English surgeon, goes so far as to contend that pressure or force applied in one form or another, is the chief, if not the sole, factor in the production of all the deformities and other joint changes in rheumatoid arthritis.

(7) *Allied conditions.* A brief reference to one or two other conditions may help to throw some light upon the whole subject. In certain cases of Raynaud's disease, as the result of local asphyxia, fibrous ankylosis of the phalangeal articulations takes place. In another malady, described by Hutchinson (17) under the name of "last joint arthritis," the terminal joints of all the digits become disorganized, and he believes this condition is due to a partnership between a proclivity to Raynaud's disease and inherited gout. If vasomotor disturbance is capable of causing such morbid changes in the joints, may it not in certain cases be partially responsible for the "last joint arthritis" of Heberden's nodes, particularly where this condition occurs in women at the menopause?

Reviewing the whole subject, what are the common underlying factors in such diverse conditions as gout, cancer, dilatation of the stomach, rheumatoid disease, congenital syphilis, and old age, sufficient to account for the production of these nodes? In the first place, there is in nearly all these conditions some mechanical, chemical, or toxic irritant in the system. Next, there is impaired general vitality, and the worse this is, especially if ac-

companied by disturbed innervation as in rheumatoid disease, the more frequent is the occurrence of Heberden's nodes. Lastly, we know that any abnormality of the circulation due to vasomotor disturbance, arteriosclerosis, or other cause, interferes with the nutrition of the tissues, and this bears most heavily upon the extremities, because they are peripheral and so at a disadvantage as regards the influence of cold and their supply of blood.

It seems reasonable, then, to conclude that Heberden's nodes are simply evidences of structural degeneration dependent upon one or more of the factors above mentioned, and may occur in any condition where such factors are present; but they are most likely to occur in those chronic diseases where morbid bony changes form the principal feature of the disease, as in gout and the osteoarthritic variety of rheumatoid disease. The presence of these nodes, therefore, may be a help to diagnosis, but they should never be regarded as conclusive evidence of any particular disease, nor are they of sufficient pathological importance to constitute a separate form of rheumatoid disease when they appear as isolated phenomena.

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33 WEST FORTY-SECOND STREET.

⁴ *American Medicine*, October 25, 1902.

ON THE LOCAL EFFECTS OF AURANTIA AND ITS TREATMENT.

By W. MOSER, M. D.,
BROOKLYN, N. Y.

Aurantia (aurantium, orange) is a coal tar dye used in the arts for various purposes, in the laboratory for staining tissues, and in recent years in a certain method of color photography. This powder or its solution may be handled with impunity, or its solution may, as in the case about to be reported, produce disagreeable results. These results, of course, depend upon the quantity of the solution handled and its concentration.

CASE.—Mr. C. P., while making a colored photograph in a case of xanthoma tuberosum having certain unusual clinical characteristics, to which I hope at some subsequent time to refer, had both his hands saturated in a concentrated solution of this yellowish amiline product, with the result shown in the accompanying photograph. The first effect noted was the production of small vesicles over the palmar, dorsal, and along the ulnar side of the forearm—where the solution had accidentally run down—and likewise between the fingers. In this stage the appearance was much like that produced by *Rhus toxicodendron* (ivy-poisoning).

The hands became swollen, but not much reddened. There was no burning sensation or pain, but intense pruritus. This itching was intolerable, and was the symptom above all others which required treatment. Vesiculation and pruritus continued for a few days, when, by a coalescence of the small vesicles, large bullæ formed, the hands presenting the appearance in this stage of a severe burn. These large blisters contained serum; in fact the subsequent process of healing was much like that of a severe burn, and in from ten days to two weeks the entire skin began to peel off. New skin formed and all was well. Considering the effect produced, the absence of pain seems remarkable.

The treatment consisted in keeping cloths (sterilized gauze is best) saturated with the following formula:

R	Creolini	3ii
	Extracti fluidi grindeliæ robustæ.....	3ss.
	Aquæ	3v.
M. ft. lotio.		

This formula I have used with good success in many cases of ivy poisoning, as recommended by Shoemaker, of Philadelphia.

Menthol in olive oil, which is useful applied locally in pruritus as well as in many painful affections, such as rheumatism, sciatica, and multiple neuritis, was not very effective in allaying the itching in this instance. It was used in the proportion of one drachm to the ounce. In rheumatism I would recommend two drachms to three ounces on flannel.

The severe pain of multiple neuritis will require even stronger applications. I have used menthol,

one drachm to the ounce, in olive oil in ivy poisoning, with fairly good results.

A weak solution of carbolic acid was first tried by the patient himself in the present case for some hours with unsatisfactory results. Although different skin diseases have been attributed to aurantia, I believe most will tally with this description;



Dr. Moser's Case of Poisoning by Aurantium.

and it behooves us to be a little careful in its indiscriminate handling. While there may be some doubt as to the dietetic effect of borax, I would strongly urge physicians not to include aurantia in their menu.

The yellowish discoloration of the skin produced by the dye disappeared in a few days.

Prophylaxis of Malaria.—M. Le Roy des Barres (*Gazette hebdomadaire de médecine et de chirurgie*, December 25th) says that the most logical and radical means of exterminating malaria is the destruction of the anopheles; but since this is often impossible and frequently incomplete, the next most sensible step is the relative isolation of those persons affected with the disease, especially where large numbers of persons are collected, as in hospitals. The mosquito netting is of some value, but is frequently useless, since the anopheles can get under the netting.

THE INFLUENCE OF THE MIND UPON THE BODY.

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"What's mind? no matter; what's matter? never mind; what's spirit? it is immaterial." This is *Punch's* system of philosophy, and we are not likely to discover in the history of thought any essential improvement upon it. Certainly there is no philosophic system more incontrovertible than this.

The manner in which the mind influences the body has been nearly as old a theme for speculation, no doubt, as the nature of mind itself. Nowadays, there is a trend in the opposite direction; the real, the important influence is held to be that of the body upon the mind, the body being itself acted upon by its environment. Until we have discovered the nature of mind, and what matter is, until we have explained these ultimates, we cannot positively adopt either position to the complete exclusion of the other. However, in common sense both are intelligible. Evidently these two factors are "conditioned" upon one another, and are essentially complementary. It is demonstrable that the mind impresses itself upon the body; and the present day psychologist has shown that the body reacts upon the mind. The former of these propositions is the thesis of this paper, which is made up of observations upon the manner in which the body is influenced by the mind, either toward health or toward disease.

It would be *à propos* to dip for a moment into the literature of the subject. Plato wrote, "Physicians cure the body with the mind, and the mind which is or has been sick, can cure nothing." Again: "the eye cannot be cured without the rest of the body, nor the body without the mind."

In Burton's *Anatomy of Melancholy* there is this, "Some are molested by phantasie; so some, again, by fancy alone and a good conceit, are as easily recovered. . . . All the world knows there is no virtue in charms, etc., but a strong conceit and opinion alone, as Pomponatius holds, which forceth a motion of the humors, spirits, and blood, which takes away the cause of the malady from the parts affected. The like we may say of the magical effects, superstitious cures, and such as are done by mountebanks and wizards. As by wicked incredulity many men are hurt (so saith Wierus), we find, in our experience, by the same means many are relieved. . . . Imagination is the *medium deferens* of Passions, by whose means they work and produce many times prodigious effects; and as the

Phantasie is more or less intended or remitted, and their humors disposed, so do perturbations move more or less, and make deeper impression." This was printed in 1651.

In his lectures on surgery, in 1786, John Hunter drew attention to the "animal magnetism" of Mesmer. He explained, on the principle of attention and expectation, the phenomena which he witnessed, resulting from Mesmerism. He stated, "I was asked to go to be magnetized, but first refused, because the spasm on my vital parts was very likely to be brought on by a state of mind anxious about any event. . . . and I feared it should be imputed to animal magnetism. But considering that, if any person was affected by it, *it must be by the imagination being worked up by the attention to the part expected to be affected*, and thinking I could counteract this, I went; and accordingly when I went I was convinced by the apparatus that everything was calculated to affect the imagination. When the magnetizer began his operations, and informed me that I should feel it first at the roots of my nails of that hand nearest the apparatus, *I fixed my attention on my great toe*, where I was wishing to have a fit of the gout; *and I am confident that I can fix my attention to any part until I have a sensation in that part*. Whenever I found myself attending to his tricks, I fell to work with my great toe, working it about, etc., by which means I prevented it having any effect upon me." In this statement of John Hunter (especially the words italicized) is contained the gist of the whole subject of purposive psychic influence over diseased conditions.

Johannes Müller stated, in 1838, "The idea of a particular motion determines a current of nervous action toward the necessary muscles, and gives rise to the motion independently of the will." Again, "Any sudden change in the ideas, though without emotion, and having reference to mere external objects, may incite involuntary movements." Again, "it may be stated, as a general fact, that any state of the body, which is conceived to be approaching, and which is expected with certain confidence and certainty of its occurrence, will be very prone to ensue, as the mere result of that idea—if it does not lie beyond the bounds of possibility."

Swedenborg, the mystic, wrote, "Nor can anything be turned over in the mind, that, if it please, may not be portrayed in the extremes, by means of the fibres; for instance, in action by the muscles. There is a likeness of the brain in every fibre. The fibres carry with them the animus of the brain. Cerebrum and cerebellum are universally present in the body by means of the fibres."

The *Autocrat of the Breakfast Table* relates, "I

remember a young wife who had to part with her husband for a time. She did not write a mournful poem; indeed, she was a silent person, and hardly said a word about it. But she quietly turned of a deep orange color with jaundice."

I consider that we should differentiate between mind and the mechanism in the body through which mind asserts itself. Mind permeates the whole organism through the brain and its nervous accessories. These latter are but the psychic machinery; they are not mind. This machinery is made up of nerve cells and nerve fibres emanating from the cells; and by means of the terminal filaments of these fibres the various parts of the body are intimately connected with the main nervous centres, chiefly those in the brain, where mind manifests itself most. This psychic machinery is divided broadly into two systems—the cerebrospinal and the sympathetic.

It is the cerebrospinal system which is concerned chiefly with conscious life. It concerns all voluntary movements, and through it pain is felt in greater degree. When we walk, or speak, or read, or take food into our mouths, or do any one of the infinitely various things characteristic of conscious life, we do it through the cerebrospinal system.

And under normal conditions the higher centres in the brain dominate the organism, being connected as they are by means of nerve fibres with sensory, motor, and all other centres. It is they which under normal conditions (such as result from inordinate excitement or hypnosis or undue suggestion) are held in abeyance and, as it were, put out of action. Their growth is coordinate with the progress of civilization. They represent the latest development in the evolution of living beings. They are such centres as are concerned with speech, memory, ideation, judgment, reason, and the like.

The sympathetic system has to do mainly with unconscious life. Its ganglia are distributed throughout the organism, but are chiefly in the thorax and abdomen. Through fibres emanating from these ganglia the sympathetic system controls the involuntary actions of the various organs, the work done by the heart, the lungs, the stomach, the liver, and so on. In the process of digestion, for instance, when the food is selected, taken into the hand and transferred to the mouth, and when the jaws close upon it, we act voluntarily under the guidance of the cerebrospinal system. Upon these acts, however, there follows a flow of saliva, by which the food is partly prepared for its reception in the stomach; the gastric juice proceeds to flow and to permeate the food; the absorbents of the stomach carry some of this food to the blood; and the mus-

cular coats of the stomach move onward out of it such food as has not been absorbed, so that it may be acted on further by the bile and the digestive juices excreted by the pancreas. All these latter movements are involuntary and are controlled by the sympathetic system.

The distinction is manifest in an anæsthetized person. Under chloroform all voluntary movements cease. The patient's arms lie limp and powerless beside him. He cannot raise them. When the knife is used he feels no pain. The cerebrospinal system has lost control; it is in abeyance. But the vital processes are going on just as before anæsthesia. The heart is beating, the lungs are respiring, the various organs secreting. The sympathetic system is alone carrying on the vital processes and maintaining life.

This distinction between these two systems is a very broad one. They are by no means absolutely separated from one another. Fibres connect cerebrospinal centres with sympathetic centres and *vice versa*. They are, as it were, two parts of an immense telegraphic scheme, the stations of both being intimately interrelated. And the gist of the whole matter of psychic influence over diseased conditions lies in the fact that our unconscious life, as directed by the sympathetic system, is constantly being affected through the cerebrospinal system by our conscious life and by the external world.

The condition of the organism resulting from shock exhibits well, though to an exaggerated degree, the phenomena we are considering. Shock may be defined as a disturbance of the functions of the nervous mechanism, by means of which the harmony of action of the great nervous centres, more especially of the sympathetic ganglia and through them of the various organs of the body, becomes deranged. Whether it results from sudden physical injury or from intense emotion, shock exhibits similar manifestations. The sufferer will become pallid and giddy, his heart will beat tumultuously, and he will gasp and catch his breath; following upon this there will presently come a sense of physical and mental depression. Or, if the shock is very great, the sufferer will become pale, cold, faint, and trembling, his pulse will be weak and fluttering, he will have a nausea and a cold sweat, his temperature will fall, his speech and thought will become feeble and incoherent, his mind will be depressed and disquieted, and his countenance will exhibit these disturbed mental conditions. In those possessed of unusual poise and fortitude these phenomena may not appear at once; in battle, for instance, or amid great excitement, an appreciable interval may elapse between the cause of the shock and the appearance of the symptoms due to it.

After the immediate shock other phenomena will present themselves. There will be headache, sleeplessness, and prolonged diminution of mental power, which has manifestly become weakened. Evidence that the sympathetic system has become involved will be seen in movements like those seen in sufferers from chorea; there will also be tumultuous heart action, panting, and dyspnoea under exertion.

To consider further how our mental states are "mirrored in the flesh," how our conscious life is constantly influencing our unconscious life. We may conveniently divide the mind into the intellect, the will, and the emotions. We need enumerate here only a few of the very many states of mind: Among the intellectual are reason, memory, judgment, imagination, association of ideas, and so on. We comprehend the term "will" sufficiently for our present purpose. Among the emotions are grief, despair, fear, terror, anger, joy, hope, pride, confidence, courage, love, hate, etc. Most of these mental states are combinations. Courage, for instance, is the physical trait strengthened by the intellectual force of reason, or by the belief in the justice of the cause which calls for the display of courage. In faith are combined the intellectual attributes of attention and expectation and the emotion of hope.

The following principles will be found to apply:

Thought strongly directed to any part of the body will increase its blood supply, and consequently its sensibility. These effects are especially conspicuous when thought is associated with a powerful emotion. When not directed to any special part an excited emotional condition induces a general abnormal sensitiveness, such as is manifested by intolerance of noise and light, irritability of the skin, etc. Thought strongly directed away from any part, especially when the thought is occasioned by strong emotion, lessens the sensibility of the part. The activity of the higher centres during deep intellectual occupation is likely to exclude consciousness of impressions made upon the body; and an absorbing emotion may produce the same result. There is no sensation excited by agents acting upon the body from without which cannot be excited also from within by emotional states. In the latter event the emotions affect the sensory centres; and the resultant sensations are referred by the perturbed mind to the point at which the nerve terminates in the body. Mental states may excite, pervert, or depress the sensory, motor, and sympathetic ganglia, and through them cause changes in sensation, muscular action, nutrition, secretion, and other processes in the various organs. Violent emotion may modify nutrition. Various forms of disease originating in perverted or defective nutrition may be caused primarily by emotional disturbance. And the emotions,

by causing a larger amount of blood to be transmitted to any organ, increase sensibility and warmth in it and so stimulate its function. And in the same way may the emotions produce inflammatory conditions.¹

I should like now to make some specific applications:

The biographies of literary men attest how excessive intellectual activity is apt to play fast and loose with the orderly working of the physical machinery. The poet, under the influence of the divine afflatus, will during many hours set down his inspirations, with no thought of rest, fearing, may be, lest the none too companionable muse take premature leave of him. Such fits of fine frenzy usually seize upon him at night. While they continue he is altogether oblivious to the demands of sleep and to the yearning of his body for food and drink; until the waning of the starlight and the coming of rosy-fingered dawn find him pale, trembling and exhausted. One of these much-to-be-envied creatures has somewhere written down his sensations during such a *séance*. He felt, until near the end, that his head was hot and feverish: presently, although the weather was very temperate, he began to feel the need of an overcoat; then, as he went on writing, his feet became cold; and then his ankles, and then his knees, so that he had to wrap a blanket about his legs; soon he had to rub his hands to keep them warm. Finally, the fever in his head left him; and then he was quite incapable of further thought.

Speaking prosaically and physiologically, his intellectual activity had at first produced an excessive determination of blood to the brain; and the rest of the body had become impoverished proportionately, first the periphery and then gradually the rest, until the brain itself was exhausted. When he had reached this point the blood could give no more material for his mind to work upon; it had itself become impoverished. Then he had to stop and recuperate. For even the most ethereal figment of the poet's fancy cannot find expression, unless there be present for his mind's assimilation carbon, hydrogen, phosphorus, and the rest of the necessary material elements. "*Ohne Phosphor kein Gedenke*" is a part truth which is, however, sufficiently truthful for our purpose. For mind and matter must combine if thought is to be expressed.

The emotion of fear is a conspicuous disturber of the bodily functions. A man afraid will start, his mouth will become dry, his face blanched, his eyes will stare, he will gasp for breath and presently he will be cold and trembling, and a clammy sweat will come over his body. At such a moment

¹ Practically abstracted from Dr. John Tuke's delightful book on *The Influence of the Mind upon the Body*.

it would be useless to offer him food. For the saliva would not come, and his stomach would rebel; nor would he be able to digest it, for the whole sympathetic system has been thrown out of gear by the fright. Such symptoms as these are felt by inexperienced men walking upon narrow planks high in the air; near the ground there would be no such sensations.

Dr. Spitzka has estimated that the mortality from wounds in a defeated army is in proportion to that among the victors as four to three or even as three to two.

The various circumstances of one's daily life constantly influence the economy. A hopeful frame of mind has a most salutary effect. On the contrary, disappointments of all sorts, of ambition, in business, one's personal griefs, depression, stress of poverty, and so on will produce all sorts of physical perturbation in one who has not a calm and equable temper to cope with them.

Love produces perturbations such as few have failed to experience. The lover cannot eat, cannot sleep. He grows wan and pale and haggard. His head is bent upon his chest and his respiration suffers from the general depression, until the unsympathetic sympathetic nerve rebels and requires that he fill his depleted lungs with fresh air. Thus he "heaves a sigh," if we may borrow a phrase from romantic literature. The cheeks of the young girl in love are suffused with blushes, her eyes sparkle, her hand trembles like the fluttering body of a little bird, her pulse beats quick, and altogether she is most delightfully beside herself. The pangs of despised love or the misunderstandings of people who love one another very much are most wofully baneful in their physical effects; it is the same in either case. The emotion is itself of all the most tremendous and soul pervading. One's every fibre is thrilled by it. Every latent, every dormant sensibility is stirred and vivified by it. When it is mutually controlled there is no happiness transcending that which it brings about. But when love, for one or another of a thousand reasons or for no reason at all, becomes discordant, and when the discordance disturbs one's normal equilibrium, there are no sufferings so cruel as the mental sufferings which are occasioned by its perversions. Thus men and women who may love each other most intensely come to visit upon one another the bitterest mental torture, which reacts upon the organism until physical chaos is the result.

Faith is from the medical man's viewpoint a state of mind most worthy of consideration; the term implies hope, expectation and attention, and the stimulus of prayer. To these factors are due the beneficent effects of faith in the treatment of dis-

ease. Undoubtedly through faith many functional diseases are cured; and so in their incipency are many organic diseases, when this factor is made an adjuvant. We cannot definitely determine how far faith is effectual, to what extent indeed it can influence the making of a blood cell, the production of a drop of lymph, of a nerve fibre, the beating of the heart, the digestion and assimilation of food, secretion, respiration, etc. But we do know that faith is of very limited application. It will not of itself cure organic or surgical disease that has obtained a firm foothold. And there are many diseases in which it were not only folly, but even ungodliness to depend upon faith alone. "If thine eye offend thee, pluck it out; if thy right hand offend thee, cut it off." Faith alone will not make these members whole and strong. And it is because the limitations of faith are so often disregarded or unrecognized that much bitter disappointment and much unnecessary and cruel suffering result.

All this is set down with considerable conviction for the reason that we are afflicted nowadays with quite an epidemic of so-called "faith-cures." There are literally hundreds of enterprises conducted by people who are either unscrupulous or of abnormal mentality or both; "Christian Scientists," mind healers, magnetic healers, metaphysical healers, medical clairvoyants, psychic scientists, occultists, esoteric vibrationists, venopathists, those who cure by means of astrological health guides, those who abuse the manipulations of hypnotism, those who claim the power to concentrate the magnetism of the air and to excite the vital fluids to normal action "by arousing the proper mental vibrations," those who treat absently by outputs of psychic force, etc. Daily does the press relate how the dupes of these people die from pneumonia, typhoid fever, diphtheria, and the like, because they believe that faith alone will make them well again. For the same reason some have suffered dreadful tortures from burns, when the mere application of a soothing lotion would have relieved them. And there are those who have let their little children die, with absolutely nothing to prevent their doing so but the incantations pronounced over their pain-racked bodies. This is no religion; it is sacrilege in the last degree detestable.

Finally, from a medical point of view, it is not the reasonableness of the faith which determines its influence; but the measure of it, the amount of one's belief. It is not what inspires one, but the extent to which one is inspired. In short, whenever "faith cures" are accomplished, it is through an improved condition of the unconscious processes of the body resulting from the elimination of anxious thoughts and the substitution of hope and trust

and a firm expectation of being restored. The power which works the cure results from these improved physical conditions; there is nothing occult or magical in the process. In much the same way do the pleasurable emotions help to restore health. The excitement of agreeable feelings, if definitely directed, the benign effects of sunshine, fresh air, and light, an æsthetic environment, flowers, pictures, rugs, tapestries and agreeable colors—pleasant sights, pleasant odors, and dishes well prepared and neatly served, are all most important adjuvants.

Music is a valuable therapeutic agent. I have a friend who can play on the piano; and he can do so extremely well. And on more than one occasion has he been of service to me in my professional work. One evening early in my career, while calling not far from my house, he played something very stirring. In the midst of a fortissimo passage, one of his listeners, an elderly gentleman, fell into a fit. With true fraternal instinct the pianist rushed to my house, found me in, and enlisted my services. Like a colleague famous in medical annals, I was "great on fits." Besides, the elderly gentleman had great recuperative powers; and so he got well. Let us pass over the question of the baneful effect of excitement upon the organism suggested in this incident, to relate another.

I took my musical friend to call one evening at the house of a patient, a sufferer from neurasthenia, a very persistent symptom of which was insomnia. She retired early, leaving her family to entertain us. Presently my friend found his way to the piano. He played for quite a while, mostly Chopin; and we listened with the utmost enjoyment. His fingers caressed the keys in delicious legato, and he interpreted appreciatively and reverently, like the true artist that he was, the plaintive harmonies, the melancholy phrases in sixths, and the soft, tender, heart-searching music characteristic of that composer. Before leaving I asked to see my patient again, and I was taken to her. I found her fast asleep, her respirations easy, her features composed and the faint suggestion of a smile playing about her lips. The next day I called again and learned that she had had an excellent night's rest. All that I had done for her had not proved so effectual as the sweet nepenthe in this player's touch.

I do not want to seem guilty of unethical advertising; so I will no farther seek to disclose the merits of my musical confederate. I am glad to express my sense of obligation to him. I know he would be ashamed to set up for a "healer"; all the same he is infinitely better qualified to treat the sick than any "faith-curist" I have come upon.

Therapeutical Notes.

A Chloroform Tæniacuge.—The *Nord médical* for January 15th gives the following formula:

- ℞ Croton oil.....1 drop;
Chloroform.....4 grammes (40 minims);
Syrup.....35 grammes (9 drachms).
M. To be taken at one dose, fasting, in the morning.

For Tubal Colic.—The *Gazette de gynécologie*, for January 13th recommends lavements, and opiated fomentations to the hypogastrium (from 10 to 15 drops of Sydenham's laudanum). Inunctions of the abdomen with the following:

- ℞ Extract of opium.....} of each 1 gramme (15 grains):
Extract of belladonna }
Petrolatum.....25 grammes (370 grains):
Neapolitan ointment.....5 grammes (75 grains).
M.

In addition, fly blisters to the painful spot, ice to the abdomen (flannel being interposed), saline purgatives, or enemata with a spoonful of glycerin may be used.

Dilatation of the cervix by laminaria tents or a metallic dilator.

Application to the cervix of a pledget of cotton soaked with

- ℞ Sydenham's laudanum.....2 grammes (30 grains);
Salol.....10 grammes (150 grains);
Neutral glycerin.....200 grammes (4 ounces).
M.

Suppository:

- ℞ Morphine hydrochloride...0.01 gramme ($\frac{1}{10}$ grain);
Cacao butter.....4 grammes (60 grains).
M.

Finally, very hot antiseptic injections.

For Secondary Syphilis.—The following pill has been highly recommended:

- ℞ Mercury with chalk 2 grains;
Dover's powder.....2 grains;
Extract of gentian q. s.

M. ft. pil. i. Mitte 200. One to be taken three times a day.

Hebra's "Asiatic Pill" for Psoriasis:

- ℞ Arsenous acid 5 grains;
Powdered black pepper 1 drachm;
Mucilage enough to make 100 pills.
One pill to be taken three times a day.

For Atonic Constipation.—The following was recommended by Dr. Grainger Stewart, of Edinburgh:

- ℞ Quinine sulphate 1 grain;
Powdered rhubarb 3 grains;
Mercury with chalk 2½ grains;
White sugar 1 grain.
M. ft. pulv. One powder to be taken three times daily.

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BELLEVUE HOSPITAL MALIGNED.

Some of the newspapers have lately paraded an absurd story of the ill treatment of a patient in Bellevue Hospital. Such stories make no impression on the well informed, but they frighten the poor, who, when in need of hospital treatment, have as a rule no other refuge than Bellevue. They are therefore cruel, and we greatly regret that in this instance one of the assistant district attorneys appears to have accorded some credibility to the tale, and one of our medical contemporaries treats it as possibly to be believed. The story is that a poor old man was horribly treated in one of the wards at night. Three nurses were on duty during the night, and each of the three is reported to have plunged the old man into a cold bath. Then—so the story runs—they dilated his anus, and, in turn, committed sodomy upon him. At each of these indignities the victim simply exclaimed "For God's sake, don't kill me!"

The story is that of a madman; there is absolutely no truth in it. When the old man was discharged from the hospital, his daughter expressly thanked the officials of the house for the kindness that had been shown to her father. Soon, however, the madman's story came to his ears, and he now seems to believe it, though he does not profess that it is supported by his own memory. The promulgator of the tale, a patient in the same ward, has since died, and the fact of his insanity has been revealed in indisputable form. The old man has been examined by an eminent surgeon agreed upon by the hospital trustees and the district attorney, and he has reported that, although the man's person

bears marks of some trifling bruises, such as might readily be inflicted by simply lifting him in his feebleness, his anus is rather tighter than is commonly met with. During the night when the outrages are said to have been committed, the ward was constantly lighted, and it was occupied by twenty or more patients. All of these patients who are now accessible and who were at the time in proper condition to observe what was going on—it was in the alcoholic ward—agree that no impropriety took place. It may safely be said that the tale was but the figment of an insane imagination, and it is very much to be regretted that it ever got into the newspapers. Not only do such unfounded reports frighten the poor away from the hospital: they also deter young men from attending its training school for nurses, lest they should incur odium at the very outset of their career.

THE TENEMENT HOUSES OF NEW YORK.

Last week, as is set forth in our news columns, the New York Academy of Medicine passed a resolution deploring any weakening of the present tenement house laws and urgently requesting the legislature to permit no changes to be made that would in any way decrease the amount of light and air available for the people living in such houses or take any backward step in regard to their sanitary condition. There is hardly a factor connected with the public health of New York more important than the condition of the tenement houses, but the author of the resolution, Dr. Knopf, did well to give prominence in the preambles to one disease, pulmonary consumption, for that is a curse concerning which the whole civilized world is now aroused. The universal determination is to make an earnest fight against this great engine of Death, and a legislative body that would knowingly play the part of the obstructionist—and the legislature of the State of New York has certainly now had the facts laid before it—would be sure to meet with popular condemnation. Doubtless there are hordes of people among our tenement house population—but exclusive, we believe, of all native Americans—who are more content to live in squalor than to seek suitable homes in the country; but once let these same people be convinced that disease and premature death follow almost surely in the wake of filth and

overcrowding, and they will resort to legislation with all the warmth manifested by the medical profession.

The people are rapidly being educated up to the point of demanding constant improvement in matters of sanitation, and it would be folly for legislators to complacently assume that opposition to being torn from their homes in the interest of the public health argued indifference to their own health and that of their families. It is certain that no retrogression will be tolerated by the people. Many of them may be hoodwinked for a time and made to fancy that the backward step is not really a matter of importance, but they will soon be undeceived, and then they will be all the more insistent in their just demands. Let there be no relaxation of our present tenement house laws.

THE CHARAKA CLUB.

The Charaka Club, as we are informed by an introductory note to the first volume of its *Proceedings*,¹ "was organized by a number of medical men of this city [New York] who were interested in the literary, artistic, and historical aspects of medicine, and who hoped to find some recreation if not profit in dealing with this, the less serious, side of their art." We have frequently referred in these pages to the Indian Hippocrates, Charaka, after whom the club is called, at the suggestion, as we understand, of Dr. B. Sachs. Judging from the delightful volume before us, the members may well congratulate themselves on the accomplishment of their objects; for if they have not all gained much, both of recreation and of information, from listening to papers of the high character of those now published, presumably as a first instalment, they must surely be paradoxically deficient in those very qualities predicated by the mere desire shown in their organization. The volume begins with a list of the papers read and subjects discussed at their meetings up to date, numbering twenty-seven in all. Of these, eight are selected for reproduction in this book. They are Hindu Medicine, by Dr. Sachs; In the Shade of Ygdrasil (poems), by Dr. Peterson; The Hippocratic Doctrine of Injuries to the Cranium, by Dr. Gerster;

The Story of the Man who Wanted to Hypnotize but not to Pay, by Dr. Collins; The Cult of Æsculapius, his Statues, and his Temple, by Dr. Dana; A Contribution to Ethics, by Dr. Collins; The Evil Spoken of Physicians, by Dr. Dana; and The Ophthalmology of the Ancient Greeks, by Dr. Ward A. Holden. If we were to indicate our personal preference, an invidious thing to do from among so much excellent material, we should single out for special commendation the paper on Hindu Medicine, and that on Æsculapius. The latter is enriched by no fewer than fifteen admirable halftone pictures of the most celebrated antique statues of the god of healing, together with a view of the sacred grove at Epidaurus (restored) and three other architectural pictures. The story of Æsculapius is a very difficult one to trace with any consecutiveness, such notices as remain to us from the ancients consisting of scattered references only, frequently obscure, in Homer (Hesiod, curiously, does not mention him), Apollodorus, Apollonius, Ovid, Pindar, Cicero, Diodorus, Lucian, and especially Pausanias. Dr. Dana has given us a brief but clear and consecutive account. Surely, however, he has strayed a little in saying that Coronis (the mother of Æsculapius) was the daughter of Phlegyas and "his wife Latona." Coronis was, indeed, the daughter of Phlegyas, and, by Apollo, the mother of Æsculapius, but Latona was the mother of Apollo (and Diana) by Jupiter, and not, unless we are greatly mistaken, either the wife of Phlegyas or the mother of Coronis; although it must not be imagined that any possible relationship between Apollo and Coronis would in any way have interfered with their relationships. There was no "table of prohibited degrees" in high Olympus.

The three poems by Dr. Frederick Peterson are graceful fancies gracefully expressed. They are called Heredity, Environment, and Solitude, and are perhaps symbolical respectively of Nithhögg, the serpent, gnawing at the roots of Yggdrasil, the ash tree; of Rataöskr, the squirrel, running up and down its trunk; and of the eagle of divine contemplation seated high up in its branches.

Dr. Gerster's article is full of interesting matter which combines a practical with its æsthetic and historical value. As for the book itself, it is of a kind to delight the lover of books as books. We have noted, indeed, a few errors, but as it is to be

¹ *Proceedings of the Charaka Club. Volume I. New York: William Wood & Company, 1903. Pp. vii-97. (Price, \$3.50.)*

hoped, for the scholastic credit of the medical profession, that the present *édition de luxe*, limited to 300 copies, will arouse such a general appreciation as to create a demand for an edition for more general distribution, all such errors will probably be caught and corrected therein. But daintily bound, admirably printed on excellent paper, well illustrated, with the club bookplate for a frontispiece, it is a production of which the club, the authors, the publisher, and the printer may alike be proud. If it should serve to stimulate a more general love for the literary, historical, archæological, and artistic presentations of medical science and art, it will accomplish a good work; and, in any event, the mere existence in New York of such a society of medical men seeking relaxation from the too intensely blank utilitarianism of this absorbingly practical age and place is like the sight of a distant palm tree in the desert—a glad promise that there, at least, will be found a refreshing spring.

AN INGLORIOUS EVASION OF QUARANTINE.

When people of the intelligence of university students disregard the public interest so far as to break quarantine, as was done recently by four students of Notre Dame University, Illinois, which institution had been laid under quarantine by the authorities on account of smallpox, it is not to be wondered at that the enforcement of sanitary observances is so hard among the more illiterate classes, especially in our cities. It is possible that these young men are congratulating themselves upon having been "smart" in eluding the vigilance of the authorities and making good their escape in spite of the pursuit that was made. Other people, however, may wonder what advantage a university training can be to such youths, if it does not train them, before all else, to consider the urgent needs of the public interest as of more moment than a certain amount of undoubtedly inconvenient restraint to themselves.

A MEMPHIS SURGEON'S EARLY WORK IN THE FORMALDEHYDE TREATMENT OF SEPTIC CONDITIONS.

Our attention has quite recently been called to certain very meritorious work done so long ago, some of it, as in 1892, in the treatment of septic conditions with formaldehyde, by Dr. John L. Jelks, of Memphis, Tenn. Dr. Jelks seems to have expressed himself at that time as skeptical concerning the dangers of the use of formaldehyde under proper conditions. He may therefore be credited with having played a substantial part in paving the way to the intravenous use of the germicide in septicæmia.

News Items.

Society Meetings for the Coming Week:

MONDAY, *February 16th.*—New York Academy of Medicine (Section in Ophthalmology); New York County Medical Association; Hartford, Conn., Medical Association; Chicago Medical Society.

TUESDAY, *February 17th.*—New York Academy of Medicine (Section in General Medicine); Buffalo Academy of Medicine (Section in Pathology); Ogdensburg, N. Y., Medical Association; Syracuse, N. Y., Academy of Medicine; Medical Society of the County of Kings, N. Y.; Baltimore Academy of Medicine.

WEDNESDAY, *February 18th.*—Woman's Medical Association (New York Academy of Medicine); Medico-Legal Society, New York; North-Western Medical and Surgical Society of New York (private); New Jersey Academy of Medicine (Newark); New York Society of Dermatology and Genitourinary Surgery (private); New York Academy of Medicine (Section in Genitourinary Diseases).

THURSDAY, *February 19th.*—New York Academy of Medicine; Brooklyn Surgical Society; New Bedford, Mass., Society for Medical Improvement (private); Medical Society of City Hospital, St. Louis; Atlanta Society of Medicine.

FRIDAY, *February 20th.*—New York Academy of Medicine (Section in Orthopædic Surgery); Clinical Society of the New York Post-Graduate Medical School and Hospital; Baltimore Clinical Society; Chicago Gynecological Society; Manhattan Medical and Surgical Society (private).

Summer Homes for the Poor.—The Brooklyn North District Epworth League has acquired about twenty acres of land at Jamesport, L. I., upon which small cottages are to be erected, to entertain poor children during the hot weather.

An Annual Cleaning Day for Illinois.—A bill has been presented in the Illinois State Legislature naming Labor Day, which is already a legal holiday, as an annual cleaning day somewhat in the style of the Utah bill which is referred to editorially in our last issue.

Anti-Christian Science Legislation Defeated.—A measure restricting the practice of Christian Science, which was introduced into the New Hampshire Legislature, has been defeated. A somewhat similar measure is now before the legislature of the State of Pennsylvania.

The Spread of the Opium Habit in Denver.—The annual report of the State Board of Health of Colorado recently issued contains a statement of the inspector of the Chinese that there has been of late a very rapid growth in the practice of opium smoking which is spreading among the whites.

The New Orleans Meeting of the American Medical Association.—Active work is being carried on by the local committee in New Orleans, and by the officers of the association in preparing for the meeting of the organization which is to be held at New Orleans, in May. Dr. Frank Billings, of Chicago, president of the association, and Dr. George H. Simmons, its secretary, recently spent several days in New Orleans perfecting details of the arrangements and in conference with the local committee. It is expected that about four thousand members will be in attendance.

Typhoid Fever at Cornell.—An epidemic of typhoid fever has made its appearance in Ithaca and has attacked a great many of the citizens of the town and the students of Cornell University, which is located there. According to newspaper accounts, over three hundred cases have occurred.

Kansas City Hospital.—A committee of the City Council of Kansas City, Mo., recently investigated the condition of the municipal hospital, and as a result of this investigation condemned the condition of affairs existing in unqualified terms. As a consequence of this investigation it is probable that a liberal appropriation will be made for the erection of a new hospital.

Warning the Public.—The Committee on Tuberculosis of the Charity Organizations Society, of this city, have issued a warning to the public against nostrums claiming to be specifics for tuberculosis, some of which have been advertised in a way which would convey the impression that they had received the endorsement of the committee. The committee has therefore adopted and made public the following resolutions:

Resolved, That a public announcement be made that it is the unanimous opinion of the members of this committee that there exists no specific medicine for the treatment of pulmonary tuberculosis, and that no cure can be expected from any kind of medicine or method except the regularly accepted treatment which relies mainly upon pure air and nourishing food.

In Memory of Dr. Martindale.—At a recent meeting of the Richmond (N. Y.) Medical Society the following resolutions were passed concerning the death of the late Dr. Frank E. Martindale:

Resolved, That we, his associates of the Richmond County Medical Society, of which he has been a prominent member for thirty-three years, vice-president for two years and president for four years, in meeting assembled, hereby record our profound sorrow at the loss of our fellow member;

Resolved, That the sympathy of this society be and hereby is extended to the family of the deceased in their sad bereavement;

Resolved, That the secretary be instructed to forward a copy of these resolutions suitably engrossed to the family of the deceased and that he shall publish a copy of them in the local and medical papers.

JEFFERSON SCALES, M. D.,
HORACE W. PATTERSON, M. D.,
Committee.

Tenement House Reform.—At the meeting held last week the New York Academy of Medicine passed the following resolution, introduced by Dr. S. A. Knopf:

Whereas, Strenuous efforts are being made to induce the legislature to utterly undo the great advances made in recent years in tenement house reform and sanitation, and to prevent the permanent carrying into effect the great improvements in the construction and management of tenement houses in New York and Buffalo, which have been made possible by the recent tenement house law, and

Whereas, Pulmonary tuberculosis is extremely prevalent in the city of New York, there being eight thousand deaths and twenty thousand cases annually, and

Whereas, The lack of light and air in the rooms of the great masses of the people is one of the most potent causes in increasing the prevalence of this

and other communicable diseases and constitute serious menaces to health and morality, be it

Resolved, That the New York Academy of Medicine deplores any weakening of the present tenement house laws, and urgently requests the legislature to permit no changes to be made that will in any way decrease the amount of light and air available for the people living in such houses or in any way take a backward step in regard to their sanitary condition.

The resolution was strongly supported by Dr. E. G. Janeway; also by Dr. Beverly Robinson, Dr. Henry P. Loomis, Dr. Alfred Meyer, and Dr. Hermann Biggs.

The New York State Legislature.—Four new bills have been presented recently in the legislature, in which physicians are interested to a greater or less extent. One of these is an amendment to the articles of incorporation of the Brooklyn Eye and Ear Hospital which provides that not less than six nor more than eleven surgeons actively connected with the institute shall be members of the Board of Directors ex-officio, and that the ex-officio vacancies shall be filled in the order of seniority of service. This bill was introduced into the Assembly by Mr. Morgan, and has been referred to the Committee on Revision and favorably reported therefrom. Another Assembly bill, which was introduced by Mr. McManus, provides that no representation concerning either the merits or demerits of qualities of any patent medicine or medicinal preparation distributed for public sale, shall be posted, published or circulated unless the same shall previously be examined, approved and certified by the local Board of Health. Furthermore each such certificate must be filed in the office of the clerk of the county in which the city, town or village is located, and shall not be valid save for one year. The future of this bill is very easy to foresee, as it is absolutely impracticable. In the Senate Mr. Elsborg has introduced an amendment to the Greater New York Charter abolishing the office of coroner, and authorizing the Board of Health of the city of New York to appoint medical examiners, and prescribed their powers and duties. This is a measure which has been under advisement for a long time and which has been already commented on several times in our editorial columns. It has received the endorsement of physicians generally. A bill has also been presented providing that in civil actions examinations of females shall be by at least one physician or surgeon of their own sex.

The Society of Medical Jurisprudence, at its regular meeting held at the Academy of Medicine, on Monday evening, February 9th, elected Dr. Adolf Lorenz to honorary membership in the society. A paper on the Adulteration of Drugs and the Laws Relating Thereto was read by Dr. H. W. Wiley, Chief of the Division of Chemistry of the U. S. Department of Agriculture. Dr. Wiley reviewed the subject of drug adulteration in a general way and spoke of the need for a careful legal supervision of the quality of the drugs on the market. He described at some length the plan of work laid out for the recently established drug laboratories in which it is proposed by the government to carry on a systematic study as to the quality of our drugs and the

character of many indigenous drugs, the value of which has not been recognized by the medical profession. Dr. Wiley spoke of the excellent work done by the American Pharmaceutical Association in its studies of the subject of adulteration, and quoted from the reports which had been presented before that body. He was followed by Dr. Tuthill, Dr. Berg, and Dr. Beck, all of whom took part in the discussion, and spoke of the serious dangers to the patient in the sale of adulterated articles by the retail druggist. Mr. Caswell A. Mayo, editor of the *American Druggist*, in discussing the paper presented the druggists' side of the question, saying that even if all the charges made concerning the sale of adulterated drugs were true, which he doubted, the physicians and the public should bear in mind that there were still many honest druggists, and that these honest druggists should be given the support of the public. He pointed out the fact that the druggists themselves had been the originators of all pure drug legislation, a fact which of itself was sufficient evidence of the existence of a public spirit in the drug trade in favor of the highest standards. Unfortunately the public put a premium upon dishonesty by their desire to economize in a petty way. The women were the greatest sinners in purchasing drugs and allied articles from department stores and cut-rate druggists at reduced rates regardless of the quality of the drugs offered, although pure drugs could be purchased at a slightly higher rate from reputable pharmacists. He said that he wanted to enter a protest against the indiscriminate condemnation of the entire drug trade because of the faults of a portion of it, and he wished to enlist the co-operation of the public in bringing about a healthier condition of affairs by diverting their patronage from those druggists whose sole claim was based upon the cheapness of their products, to those who furnished pure drugs at fair prices, prices which afforded adequate remuneration for the care and skill exercised by the druggist in insuring their purity.

Official News.

Infectious Diseases in New York:

We are indebted to the Sanitary Bureau of the Health Department for the following statement of cases and deaths reported for the two weeks ending February 7, 1903:

DISEASES.	Week end'g Jan. 31		Week end'g Feb. 7.	
	Cases.	Deaths.	Cases.	Deaths.
Typhoid fever.....	34	9	55	12
Scarlet fever.....	264	15	278	16
Cerebro-spinal meningitis.....	0	0	0	0
Measles.....	164	8	203	10
Diphtheria and Croup.....	361	60	369	47
Small-pox.....	3	1	2	0
Tuberculosis.....	248	163	343	174
Chicken-pox.....	129	0	119	0

Army Intelligence:

Official List of Changes in the Station and Duties of Officers serving in the Medical Department of the United States Army for the week ending February 7, 1903:

STRAUB, PAUL F., Captain and Assistant Surgeon. Granted leave of absence for four months with permission to go beyond the sea.

Public Health and Marine-Hospital Service Health Reports:

The following cases of smallpox, yellow fever, cholera, and plague were reported to the surgeon-general during the week ending February 7, 1903:

Smallpox—United States.

Location.	Date.	Cases.	Deaths.
California—San Francisco	Jan. 18-25	8	1
Illinois—Chicago	Jan. 24-31	14	3
Indiana—Elwood	Jan. 24-31	2	
Indiana—Evansville	Jan. 24-31	4	
Indiana—South Bend	Jan. 24-31	1	
Kentucky—Lexington	Jan. 24-31	12	
Kentucky—Newport	Jan. 24-31	1	
Maine—Biddeford	Jan. 24-31	26	
Maryland—Baltimore	Jan. 24-31	2	
Massachusetts—Boston	Jan. 24-31	7	1
Massachusetts—Haverhill	Jan. 24-31	3	1
Michigan—Grand Rapids	Jan. 24-31	9	
Nebraska—Omaha	Jan. 24-31	1	
New Hampshire—Manchester	Jan. 24-31	3	
New Jersey—Camden	Jan. 24-31	4	
New Jersey—Hudson County, including Jersey City	Jan. 25 (Feb. 1)	5	
New Jersey—Newark	Jan. 24-31	2	1
New York—New York	Jan. 24-31	3	1
Ohio—Cincinnati	Jan. 23-30	12	
Ohio—Cleveland	Jan. 24-31	10	3
Ohio—Dayton	Jan. 24-31	1	
Pennsylvania—Altoona	Jan. 20-31	6	5
Pennsylvania—Eric	Jan. 24-31	9	
Pennsylvania—Johnstown	Jan. 24-31	10	1
Pennsylvania—McKeesport	Jan. 24-31	3	
Pennsylvania—Philadelphia	Jan. 24-31	29	4
Pennsylvania—Pittsburg	Jan. 24-31	16	6
Pennsylvania—Pottsville	Jan. 24-31	11	
South Carolina—Charleston	Jan. 24-31	3	
South Carolina—Greenville	Jan. 17-24	1	
Tennessee—Memphis	Jan. 24-31	2	
Utah—Salt Lake City	Jan. 17-24	16	
Washington—Tacoma	Jan. 18-25	1	
Wisconsin—Milwaukee	Jan. 24-31	8	1

Smallpox—Foreign.

Canada—Hamilton	Jan. 1-31	1	
Canada—Winnipeg	Jan. 17-24	1	
France—Marseille	Dec. 1-31		37
Great Britain—Birmingham	Jan. 10-17	1	
Great Britain—Bradford	Jan. 10-17	35	
Great Britain—Dublin	Jan. 10-17	2	
Great Britain—Liverpool	Jan. 10-17	42	2
Great Britain—London	Jan. 10-17	2	
Great Britain—Manchester	Jan. 10-17	16	1
Great Britain—Nottingham	Jan. 10-17	13	
India—Bombay	Dec. 23-Jan. 6		18
Italy—Palermo	Dec. 27-Jan. 30	24	1
Mexico—City of Mexico	Jan. 11-18	3	
Russia—Moscow	Jan. 3-10	3	1
Spain—Malaga	Dec. 1-31		10
Straits Settlements—Singapore	Dec. 13-20		1

Yellow Fever.

Colombia—Panama	Jan. 19-26	4	2
Ecuador—Guayaquil	Jan. 3-17		35
Mexico—Vera Cruz	Jan. 19-26	4	

Cholera—Insular.

Philippines—Manila	Dec. 7-13	7	5
Philippines—Provinces	Dec. 7-13	318	207

Cholera—Foreign.

Malta—Quarantine Island	Jan. 17	7 from Alexandria.	
Egypt—Alexandria	Jan. 5-12	1	
Straits Settlements—Singapore	Dec. 13-20		5

Plague—Insular.

Hawaii—Honolulu	Jan. 18		1
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Plague—Foreign.

India—Bombay	Dec. 23-Jan. 6		341
India—Karachi	Dec. 21-28	39	20
Mexico—Mazatlan	To. Jan. 5		60

Public Health and Marine Hospital Service:

Official List of Changes of Station and Duties of Commissioned and Non-commissioned officers of the Public Health and Marine-Hospital Service for the Seven Days ended February 5, 1903:

GEDDINGS, H. D., Assistant Surgeon-General. Detailed as recorder of board convened to meet at Washington, D. C., for the physical examination of an applicant for the position of second assistant engineer, R. C. S.

CARTER, H. R., Surgeon. To report at Washington, D. C., February 6, 1903, for duty as temporary member of Sanitary Board.

BLUE, RUPERT, Passed Assistant Surgeon. Relieved from duty at Milwaukee, Wisconsin, and directed to proceed to San Francisco, Cal., and report to Surgeon A. H. Glennan for duty.

VON EZDORF, R. H., Assistant Surgeon. Granted eight days' extension of leave of absence.

KERR, J. W., Assistant Surgeon. To report at bureau for instructions.

WARREN, B. S., Assistant Surgeon. Relieved from duty as recorder of board convened to meet at Washington, D. C., for the physical examination of an applicant for the position of second assistant engineer, R. C. S.

ALEXANDER, E., Acting Assistant Surgeon. Granted leave of absence for twenty-seven days from February 1st.

HAMILTON, H. J., Acting Assistant Surgeon. Granted leave of absence, on account of sickness, for thirty days from December 27th.

HARRIS, B. Y., Acting Assistant Surgeon. Granted leave of absence for ten days from February 21st.

SAMS, F. F., Acting Assistant Surgeon. Granted leave of absence for fourteen days from February 4th.

KOLB, W. W., Pharmacist. Granted leave of absence for twenty-eight days from February 12th.

Appointments.

HENRY R. CARTER appointed Acting Assistant Surgeon for duty at Newport News, Virginia, from January 10, 1903.

ROBERT H. GRAY appointed Acting Assistant Surgeon for duty at Shreveport, La., from January 26, 1903.

Naval Intelligence:

Official List of Changes in the Medical Corps of the United States Navy for the week ending February 7, 1903:

BIDDLE, CLEMENT, Surgeon. Detached from the Naval Recruiting Station, Philadelphia, Pa., and ordered to continue duty at the Naval Hospital, Philadelphia, Pa.

BROWN, H. L., Acting Assistant Surgeon. Ordered to duty at the Naval Proving Grounds, Indian Head, Md.

COOKE, C. H., Medical Director (retired). Ordered to the Naval Recruiting Station, Philadelphia, Pa.

CURL, H. C., Passed Assistant Surgeon. Discharged from treatment and ordered to duty at the Naval Hospital, Mare Island, California.

CURTIS, L. W., Passed Assistant Surgeon. Commissioned Surgeon from December 2, 1902.

DE BRULER, J. P., Assistant Surgeon. Ordered to the Naval Hospital, Norfolk, Va.

FARWELL, W. G., Medical Director (retired). Detached from the Marine Recruiting Station, Philadelphia, Pa., and ordered to the Navy Yard and Hospital, Portsmouth, N. H.

FURLONG, F. M., Passed Assistant Surgeon. Detached from the Navy Yard, New York, and ordered to the U. S. S. *Prairie*.

GRIEVE, C. C., Acting Assistant Surgeon. Appointed Acting Assistant Surgeon from January 29, 1903.

GROVE, W. B., Passed Assistant Surgeon. Commissioned Passed Assistant Surgeon from November 7, 1902.

HARMON, G. E. H., Medical Inspector. Ordered to duty at the Naval Station, Port Royal, S. C.

JUDD, N. W., Acting Assistant Surgeon. Ordered to the Naval Station, Key West, Fla., for duty at Dry Tortugas, Florida.

MORRIS, L., Passed Assistant Surgeon. Detached from duty at the Naval Hospital, Philadelphia, Pa., and granted sick leave for three months.

MURPHY, J. L., Assistant Surgeon. Detached from the U. S. S. *Don Juan de Austria*, and ordered to duty on the U. S. S. *Monadnock*.

NELSON, H. T., Jr., Acting Assistant Surgeon. Appointed Acting Assistant Surgeon from January 29, 1903.

PLESS, H. B., Passed Assistant Surgeon. Commissioned Surgeon from December 2, 1902.

PLUMMER, R. W., Passed Assistant Surgeon. Detached from the U. S. S. *Prairie*, and ordered to the Navy Yard, New York.

ROSSITER, P. S., Acting Assistant Surgeon. Ordered to the Naval Recruiting Station, Baltimore, Md.

SCHWERIN, L. H., Acting Assistant Surgeon. Appointed Acting Assistant Surgeon from January 29, 1903.

SEAMAN, W., Assistant Surgeon. Detached from the U. S. S. *Monadnock* and ordered to duty on the U. S. S. *Don Juan de Austria*.

SPEAR, J. C., Medical Inspector (retired). Ordered to the Marine Recruiting Station, Philadelphia, Pa.

SPEAR, R., Passed Assistant Surgeon. Commissioned Passed Assistant Surgeon from November 7, 1902.

THOMPSON, J. C., Assistant Surgeon. Detached from duty with the Marine Detachment, Dry Tortugas, Fla., and ordered to duty on the U. S. S. *Columbia*.

Births, Marriages, and Deaths.

Married.

BATTLE—POLKINHORN.—In Washington, D. C., on Wednesday, February 4th, Dr. Lewis Junius Battle and Miss Ida Blanche Polkinhorn.

HOLSTIN—WALTERS.—In New Orleans, Louisiana, on Monday, January 12th, Dr. J. D. Holstin and Mrs. Walters.

HANNA—STADIGER.—In Philadelphia, Pa., on Tuesday, February 3d, Dr. Dillinger Cyrus Hanna and Miss Susan Elizabeth Stadiger.

MATHEWS—KING.—In Columbus, Ohio, on Thursday, February 4th, Dr. John Alexander Mathews, of Brooklyn, N. Y., and Miss Florence Hosmer King, daughter of Dr. Isaac Fenton King.

SHEPARD—CHURCH.—In Derby, Connecticut, on Tuesday, February 3d, Ralph Kissam Shepard, son of Dr. Charles H. Shepard, of Brooklyn, and Miss Nellie Comstock Church.

THOMAS—ERBEN.—In Philadelphia, Pa., Wednesday, February 4th, Dr. Claude L. Thomas and Miss Lillian T. Erben.

WEBB—FARRINGTON.—In New York City, on Wednesday, February 4th, Dr. Frank R. Webb and Mrs. Anna L. Farrington.

Died.

ALLEN.—In Brooklyn, N. Y., on Thursday, February 5th, Dr. Henry W. Allen, in the forty-second year of his age.

ASH.—In Brighton, Illinois, on Saturday, January 31st, Dr. J. R. Ash, in the eightieth year of his age.

BUNCE.—In Oberlin, Ohio, on Friday, January 30th, Mrs. Ellen Bunce, wife of the late Dr. William H. Bunce, and mother of Dr. W. C. Bunce.

CONLEY.—In Chicago, Illinois, on Monday, February 2d, Dr. P. H. Conley, surgeon at the Cook County Hospital.

DE BOWES.—In Brooklyn, N. Y., on Saturday, February 7th, Dr. Thomas N. De Bowes, in the seventy-fifth year of his age.

DISBRO.—In Cleveland, Ohio, on Thursday, January 29th, Dr. Zelotes P. Disbro, in the eighty-third year of his age.

FLOOR.—In Youngstown, Ohio, on Saturday, January 31st, Dr. C. L. Floor.

GIBSON.—In Alexandria, Virginia, on Wednesday, January 28th, Dr. William Gibson.

GROVE.—In Petersburg, West Virginia, on Sunday, February 1st, Dr. Thomas Jefferson Grove, in the seventy-fourth year of his age.

HARRIS.—In Bridgeton, N. J., on Monday, February 9th, Dr. George A. Harris, in the fifty-ninth year of his age.

HORNOR.—In Bryn Mawr, Pa., on Sunday, February 8th, Dr. Caleb Hornor, in the seventy-fourth year of his age.

KILLION.—In Baltimore, Maryland, on Thursday, January 29th, Dr. Thomas A. Killion, in the thirty-ninth year of his age.

LEWIS.—In New York City, on Sunday, February 8th, Dr. Tousley B. Lewis.

MACGREGOR.—In New York City, on Thursday, February 5th, Dr. James R. MacGregor, in the seventieth year of his age.

MYNTER.—In Buffalo, N. Y., on Monday, February 9th, Dr. Herman Mynter.

SHIMWELL.—In Philadelphia, Pa., on Wednesday, February 4th, Dr. B. T. Shimwell, in the fifty-first year of his age.

VALENTINE.—In Richmond Hill, L. I., on Thursday, February 5th, Dr. J. Frank Valentine, in the forty-fifth year of his age.

VAN AKEN.—In Malden, N. Y., on Friday, January 30th, Dr. David F. Van Aken, in the sixtieth year of his age.

WOOLWORTH.—In Brooklyn, N. Y., on Friday, February 5th, Dr. Earle Eugene Woolworth, in the thirtieth year of his age.

Obituary.

JOHN HOMANS, M. D.,
OF BOSTON.

Dr. Homans, who died on February 7th, was one of the most experienced and successful surgeons in the country. Of late years he had been specially distinguished for his extensive and admirable work in abdominal surgery. He was sixty-six years old. He was a graduate of the Harvard Medical School, of the class of 1862. During the civil war he served as an assistant surgeon in the United States Navy. After the war he spent a few years in Europe, and had since practised in Boston.

HERMAN MYNTER, M. D.,
OF BUFFALO.

Dr. Mynter, who died on February 9th, had for many years been favorably known as a surgeon, not only in Buffalo, but throughout the country, particularly since his connection with the case of the late President McKinley. He was a Dane by birth, and he took his medical degree from a Danish university. But virtually his entire professional life was spent in Buffalo. It was not often that he contributed to medical literature under his own name, but for several years he did editorial work, and did it creditably. As a man, Dr. Mynter was frank and genial, and he was liked and respected by his professional brethren.

SAMUEL FENWICK, M. D., F. R. C. P.,
OF LONDON.

Dr. Samuel Fenwick, who died recently in London at the age of seventy-two years, enjoyed a high reputation, both as a teacher and a clinician. His first diploma was that of the Royal College of Surgeons of London, but in 1846 he became M. D. of St. Andrew's University, in Scotland, and later, 1859, M. D. of Durham, England. He was elected a fellow of the Royal College of Physicians of London in 1870. For some years he was a lecturer on pathological anatomy at Newcastle-on-Tyne, the medical school of the University of Durham. He then moved to London, where he became assistant physician to the City of London Hospital for Diseases of the Chest. Subsequently he was appointed assistant physician to the London Hospital, and becoming lecturer on medicine at its medical college, attained that great reputation as a teacher which he ever afterward maintained. His *Guide to Medical Diagnosis*, in the Students' Aid

Series, for many years held a leading place among the clinical manuals used by English students. It is an essentially practical work, and was the first, perhaps, to reduce the exclusion method of diagnosis to practical guide book form. His *Outlines of Medical Treatment*, built upon the same lines, also achieved great and deserved popularity. Indeed, it may be doubted if, even at the present day, these works can be bettered for the special purpose for which they were intended, *viz.*, as practical guide books for use at the bedside by students undergoing their preliminary clinical training. Dr. Fenwick, however, became specially noted as an authority on diseases of the digestive organs on which subject he published many communications. His work on *The Diseases of the Stomach and Duodenum* is well known. His communication on The Presence of Sulphocyanide of Potassium in the Saliva in many Different Diseases (*Royal Medico-chirurgical Society's Transactions*, 1882) was one of the most important of his communications.

THE FOURTEENTH INTERNATIONAL MEDICAL CONGRESS.

This Congress will be held at Madrid from April 23rd to April 30th, inclusive. The officers are as follows: President, Professor Julián Calleja y Sánchez; general secretary, Dr. Angel Fernández-Caro; general treasurer, Professor José Gómez Ocaña. The national committee for the United States consists of Dr. A. Jacobi, of New York, president, and Dr. John H. Huddleston, 126 West Eighty-fifth Street, New York, secretary. For Cuba, the national committee is as follows: President, Dr. Manuel Bango y León, of Havana; secretary, Dr. Augustin Varona y González del Valle, of Havana. Dr. Juan Santos Fernández, of Havana, is the delegate of the organization commission for the island of Cuba. The British Committee consists of Dr. F. W. Pavy, F. R. S., of London, president, and Dr. D'Arcy Power and Dr. P. Horton-Smith, of London, secretaries.

Regulations.

Article 1.—The Fourteenth International Congress of Medicine will meet at Madrid, under the patronage of their Majesties, King Don Alphonso XIII and the Queen Mother, from April 23rd to April 30th, inclusive, 1903. The opening session will take place on April 23rd, and the closing session on April 30th. The purpose of the congress is exclusively scientific.

Article 2.—The congress will be composed of physicians, pharmacists, dentists, veterinary surgeons, and other persons exercising one of the different branches of the medical sciences, both Spaniards and foreigners, who shall inscribe themselves as members and pay the corresponding subscription. All others possessing professional or scientific titles desiring to assist, as well as the members of the press, shall be permitted to take part in the proceedings on the same conditions and with the same rights as physicians themselves.

Article 3.—The subscription is thirty pesetas

(§5.20). This sum must be paid at the time of the inscription, or before the opening of the congress, to the secretary-general (Faculty of Medicine, Madrid), who will furnish the subscriber with a card of membership. This card will confer on the holder the right to share all the privileges reserved to members of the congress.

Article 4.—The national committees of the different countries may receive the subscriptions of their compatriots, and send them to the secretary-general, at Madrid, who will return to them cards of membership corresponding to the number of inscriptions. After March 20, 1903, all applications and subscriptions must be sent direct to the secretary-general of the congress at Madrid.

Article 5.—Every member of the congress should, when sending his subscription, also transmit to the secretary-general, either directly or through his national committee, a memorandum indicating exactly and legibly, his name, rank, and degrees, as well as his address, and also his *carte de visite*. For subscriptions, as well as for the presentation of communications, use should be made of the forms specially printed, which will be sent on request, by the secretary-general.

Article 6.—Members of the congress on fulfilment of the prescribed conditions shall have the right to take part in all the proceedings, to present verbal or written communications, to speak in the discussions, to vote upon all questions submitted, and to share in all the privileges reserved for members of the congress.

Article 7.—They shall, moreover, be entitled to a general résumé of the proceedings of the congress and a report of the work of the particular section which they may join. Those members who wish to receive many volumes or the complete report of the proceedings, must pay for each volume a sum to be fixed later, but this shall not exceed the cost of printing. The subscriptions for volumes will be received at the secretary-general's office at the close of the congress. Those members who shall have written communications in several sections accepted by the committee of examination, shall receive the volumes of these sections without extra charge.

Article 8.—The proceedings of the congress shall be sent to the members as soon as published.

Article 9.—The congress shall be divided into the following sections: [See programme of section work below.]

Article 10.—The members of the congress must at the time of inscription state which section or sections they wish to join. Those members who join several sections, shall receive the volume of the first of the sections named by them.

Article 11.—An executive committee, composed of the president, secretary-general, and treasurer, and of the presidents and secretaries of sections, is charged with the administration of the congress.

Article 12.—The congress shall sit every day, either in general session or in sectional meetings.

Article 13.—Two ordinary general meetings shall take place, one at the opening and another at the closing of the congress. There shall be, moreover, so many extraordinary sessions as may be adjudged necessary; the number of them shall be determined

later by the executive committee. These meetings shall be devoted to conferences, to which shall be invited eminent scientists of different nations. Only those so invited shall be allowed speech at these conferences.

Article 14.—At the opening session the secretary-general shall give an account of the organization of the congress, the president shall deliver an inaugural address, the presentation of official delegates shall take place, and honorary presidents shall be announced. At the closing session the deliberations of the congress shall be reviewed, the place of next meeting shall be decided upon, and the election of officers shall take place. In these meetings only those selected and invited by the executive committee shall have the right of speech.

Article 15.—The committees of sections shall arrange their programmes (the reading and discussion of papers, the consideration of propositions, etc.). Each section shall appoint at its first sitting its honorary president and assistant secretaries; some of whom shall be chosen from among the foreign members, to give a verbal résumé of the communications presented in the different languages, so as to facilitate the discussion of them.

Article 16.—The president of each section shall govern the sessions and debates according to the forms established for all deliberative bodies. Only questions of internal order shall be put to the vote. Scientific questions shall not be put to the vote.

Article 17.—The time allotted to each communication shall not exceed fifteen minutes, and in the discussions no speaker shall speak for more than five minutes. Authors of communications will be allowed ten minutes to reply to all objections. Under exceptional circumstances, when the importance of the subject justifies it, the president may extend the speaker's time allowance.

Article 18.—Communications in reference to the work of the congress must be sent to the secretary-general's office before January 1, 1903, who will see to their transmission to the respective sections. The titles of papers must be accompanied by a short résumé, if possible in the form of conclusions; this abstract will be printed by the executive committee and distributed to the members of the corresponding section.

Article 19.—Communications may be presented after January 1, 1903, and even during the congress, but they cannot be put in the orders of the day until after the discussion of all those presented in the ordinary course.

Article 20.—The written text of all the works presented to the congress whether in the general meetings or at the sections, must be sent on the same day to the secretary of the respective committees. The executive committee shall decide as to its complete or partial insertion in the reports.

Article 21.—The official languages of the congress in all its sessions shall be Spanish, French, English, German, and Italian.

Supplementary Article.—The ladies belonging to the families of members of the congress and accompanying them, shall benefit by the reductions in railway rates, and shall be permitted to take part in the entertainments and functions to be given in honor of the members of the congress. For this

purpose they will be required to furnish themselves with a special card, the price whereof will be twelve pesetas (\$2.20) each.

The Sections.

The following section work is already announced:

I. *Anatomy*.—President, Dr. Santiago Ramón y Cajal; secretary, Dr. Dalmacio García Izcará. Subjects: (1) What is the Best Method of Didactic Exposition of the Nervous System? (2) The Positive Value of Anatomical Measurements for the Ethnical Determination of Individuals. By Dr. Giuseppe Sergi, of Rome; Dr. R. Live, of Rome, and Dr. Manouvrier, of Paris. (3) The Structure of the Nerve Cell. By Dr. Camillo Golgi, of Pavia; Dr. Romeo Fusari, of Turin, and Dr. Holmgren, of Stockholm. (4) The Origin of the Fibroblasts in Connective-tissue New-formations, Normal and Pathological.

II. *Physiology, Biological Physics and Chemistry*.—President, Dr. Gabriel de la Puerta y Ródenas; secretary, Dr. Juan Manuel Díaz del Villar. Subjects: (1) The Physiological Action of Saccharine. Should it be Proscribed from Foods and Aliments, and its Use Confined Solely to Therapeutics? By Dr. Gabriel de la Puerta y Ródenas. (2) The Influence of Glandular Poisons on Muscular Contraction. By Dr. Enrique Pérez Zuñiga, of Madrid, and Dr. Christiani, of Geneva. (3) The Biochemical Study of Organometalloid and Metallic Combinations. By Dr. Agustín Murúa y Valerdi. (4) Experimental Pancreatic Glycosuria. By Dr. Juan M. Díaz del Villar, of Madrid; Dr. Pietro Albertoni, of Bologna, and Dr. Felippo Bottazzi, of Florence.

III. *General Pathology, Pathological Anatomy, and Bacteriology*.—President, Dr. Amalio Gimeno y Cabañas; secretary, Dr. Antonio Mendoza. Subjects: (1) Parasitism in Neoplasms. By Dr. Marchiafarva, of Rome. (2) The Genesis of Sarcoma. (3) Blastomycetic Lesions. (4) The Desirability of a Revision of the Classification and Description of Known Bacteria. By Dr. Antonio Mendoza, of Madrid, and Dr. Bartolomeo Gosio, of Rome. (5) Vaccinations with Chemical and Culture Liquids. By Dr. Alessandro Lustig, of Florence.

IV. *Therapeutics and Pharmacy*.—President, Dr. Benito Hernando y Espinosa; secretary, Dr. Martín Bayod y Martínez:

a. *Therapeutics*.—Subjects: (1) The Relations Between the Chemical Composition and the Physiological Action of Medicines. By Dr. Emilio Pérez Noguera, of Madrid; Sir T. Lauder Brunton, of London; Dr. Cervello, of Palermo; Dr. Bardet and Dr. Robin, of Paris. (2) The Dangers and Exigencies of the So-called Intensive or Exaggerated Medication in Chronic Diseases, and Especially in Tuberculosis. By Dr. Antonio Espina y Capo, of Madrid, and Dr. Hayem, of Paris. (3) The Use and Dangers of Intrarhachidian Injections of Cocaine in Medicine and Surgery. By Dr. Francisco Pí y Suñer, of Barcelona; Dr. Tuffier, of Paris, and Dr. Postempski, of Rome. (4) Mechanism of the Physiological and Therapeutical Action of Hypnotics and Narcotics. By Dr. Vicente Peset y Cerverav, of Valencia, and Dr. Vincenzo Chirone, of Naples. (5) Intravenous Therapy. By Dr. Ros-

soni, of Rome, and Dr. Gaetano Rummo, of Naples. (6) The Therapy of Tetanus; Baccelli's Method. By Dr. Agenore Zeri, of Rome. (7) The Therapy of Epizootic Aphthæ: Baccelli's Method. By Dr. Loriga, of Rome.

Communication: On the Clinical Forms of Pulmonary Tuberculosis; their Therapeutic Indications. By Dr. Pegurier, of Nice.

b. *Medical Hydrology*.—Subjects: (1) A Physicochemical Study of the New Gaseous Elements, Argon and Helium, in Mineral Waters. By Dr. Ramón Llord y Gamboa, of Madrid; Dr. A. Poskin, of Spa; Dr. Raymond Durand-Fardel, of Paris, and Dr. Vinaj, of Turin. (2) Syphilis and its Hydromineral Treatment. By Dr. Marcial Taboada, of Madrid; Dr. G. Soffiantini, of Acquarossa; Dr. Hermann Keller, of Rheinfelden. (3) Tuberculosis and its Hydromineral Treatment. By Dr. Agustín Lacort, of Madrid, and Dr. Marcellin Cazaux, of Eaux-Bonnes.

Conference: The Qualitative and Quantitative Determination of Fluorine in Mineral Waters. By Dr. Llord y Gamboa.

c. *Pharmacy*.—Subjects: (1) The Therapeutic Estimation of Antitoxic Sera. By Dr. F. Francisco de Castro y Pascual. (2) The Importance and Superiority of the Colloidal State of Substances in the Preparation of Medicines and in their Pharmacological Action. (3) Hypodermic Injections; Their Pharmaceutical Significance and the Desirability of Issuing a Pharmacopœia Unifying the Procedures for Preparing and Preserving These Preparations. By Dr. Emilio Alcobilla, of Madrid, and Dr. Giovanni Bufalini, of Florence. (4) The Necessity and Utility of Medicaments of Definite Therapeutic Potency and the Adoption in Each Case of a General Process for Obtaining and Preparing Them and Estimating Their Value. By Dr. Manuel Alvarez Ude.

V. *Internal Pathology*.—President, Dr. José Calvo y Martín; secretary, Dr. Enrique Oliván y Sanz. Subjects: (1) The Part of the Brain, the Heart, and the Kidneys in Infections. By Dr. José Codina Castellví. (2) The Ætiology and Prophylaxis of Paludism. By Dr. Francisco Huertas Barrero, of Madrid; Dr. Celli, of Rome, and Dr. Vittorio Ascoli, of Rome. (3) The Pathogeny of Cardiac Arrhythmia. By Dr. Antonio Espina y Capo, of Madrid, and Dr. Castellino, of Naples. (4) The Application to Clinical Medicine of New Investigations on the Physical and Chemical Properties of Blood Serum. By Dr. Lucatello, of Padua. (5) The Ætiology and Therapy of Pellagra. By Dr. Devoto, of Pavia. (6) The Diet in Typhoid Fever. By Dr. Queirolo, of Florence.

Communications: Lemon Juice in Anginas. By Dr. Hassan Mahmoud Pacha, of Cairo; The Pathogeny and Nosographical Position of Tuberculosis. By Dr. Ballotta Taylor, of Santander.

VI. *Neuropathy, Mental Diseases, and Criminal Anthropology*.—President, Dr. José María Esquedo y Zaragoza; secretary, Dr. Abdón Sánchez Herrero. Subjects: (1) Toxic and Infectious Insanities. By Dr. Jerónimo Galiana. (2) Psychical Ætiology and Therapeutics. By Dr. Sánchez Herrero. (3) The Centre of Projection and Association in the Brain According to the Determination

of Exact Anatomy and Pathology. By Dr. Bianchi, of Naples. (4) The Clinical Study of Agnosia and Asymbolia. By Dr. Simarro y Lacabra. (5) The Delimitation of the Pathological Nature of Crime. By Dr. Rafael Salillas, of Madrid, and Dr. Morselli, of Genoa. (6) Psychiatric Intervention in the Reformatory Treatment of Criminals. By Dr. Alonzo Martínez, of Madrid, and Dr. Lombroso, of Turin.

Communication: The Effect of Animal Electromagnetism. By Dr. Etienne Skalski, of Vouvant.

VII. *Pædiatrics*.—President, Dr. Francisco Criado y Aguilar; secretary, Dr. Manuel Tolosa de Latour. Subjects: (1) The Therapeutic Value of Serum Therapy in Diphtheria. By Dr. Vicente Llorente y Matos, of Madrid; Dr. Comby, of Paris; Dr. Cervesato, of Bologna, and Dr. Luigi Concetti, of Rome. (2) Treatment of Club-foot. By Dr. Antonio Martínez Angel, of Madrid; Dr. Broca, of Paris; Dr. A. Lorenz, of Vienna, and Dr. Ghilini, of Bologna. (3) The Treatment of Articular Tuberculosis. By Dr. José Ribera y Sans, of Madrid; Dr. Lannelongue, of Paris, and Dr. Hoffa, of Wurzburg. (4) Alimentation in Early Infancy. By Dr. Fernando Calatraveño, of Madrid; Dr. Rousseau Saint-Philippe, of Bordeaux, and Dr. Guaita, of Milan. *Questions Proposed for Special Consideration:* (1) Acute Non-tuberculous Meningitides; (2) Infantile Rheumatism and its Relations with Cardiac Affections and Chorea; (3) Alcoholism in Children; (4) The Treatment of Purulent Ophthalmia in the Newly-born.

VIII. *Dermatology and Syphilography*.—President, Dr. Manuel Sanz y Bombin; secretary, Dr. Juan de Azúa y Suárez. Subjects: (1) Blennorrhagia from the Medico-Social Point of View. By Dr. Suárez de Mendoza, of Madrid; Dr. Ernest Finger, of Vienna; Dr. Bertarelli, of Milan; Dr. Giuseppe Profeta, of Genoa, and Dr. Vittorio Mibelli, of Parma. (2) Parasyphilitic Diseases: The Retrospective Diagnosis of Syphilis. By Dr. Sanz Bombin, of Madrid, and Dr. Augusto Ducrey, of Pisa. (3) The Treatment of Pruritus. By Dr. Juan de Azúa. (4) The Purpuras. By Dr. Juan de Azúa. *Questions Proposed for Special Treatment:* (1) Prodermitis. (2) Pellagra. (3) The Ætiological Value of Anatomico-pathological Lesions in Dermatology. (4) Cutaneous Trophism. (5) Diseases of the Skin in Hot Countries. (6) Neoplastic Cutaneous Infections Produced by Pathogenic Mushrooms. (7) The Gastrointestinal Ætiology of Acne. (8) Acrodermitis. (9) Folliculitis. (10) Benign Cutaneous Neoplasms. (11) Dyscrasic or Autotoxic Dermatoses. (12) Cutaneous Gangrenes. (13) Sclerodermias. (14) Cutaneous Sarcomatosis and Mycosis Fungoides. (15) Streptococcic Dermatoses. (16) The Bronchopulmonary Lesions of Hereditary Syphilis. (17) The Most Advantageous Treatment of Secondary Syphilides. (18) The Topical Treatment of Syphilides. (19) Alterations of the Blood in Syphilitics and its Modification by Medication. (20) In the Present State of Science is a Group of Parablennorrhagic Affections Admissible? (21) Blennorrhagic Neuropathies. (22) Recurrent Epididymitis and Vesiculitis. *Communications:* The Histopathological Alterations of the Blood and Lymphatic Vessels in

Syphilis. By Dr. Augustus Ravogli, of Cincinnati. What Relation has Syphilis Among the Races? By Dr. Arthur Alpâr, of Alexandria. Studies in Tropical Syphilis. By Dr. Arthur Alpâr, of Alexandria. The Treatment of Syphilis by Deep Gluteal Injections of Insoluble Salts of Mercury. By Dr. C. Barthélemy, of Paris.

IX. *General Surgery: (a) Surgery and Surgical Operations*.—President, Dr. Federico Rubio y Gali; secretary, Dr. Ramon Jiménez y García. Subjects: (1) Postoperative Deaths. By Dr. Ribera, of Madrid; Dr. Davide Giordano, of Venice, and Dr. Domenico Bionde, of Sienna. (2) Indications for Surgical Intervention in Affections of the Stomach. By Dr. Cardenal, of Barcelona; Dr. Novaro, of Genoa; Dr. Ceccherelli, of Parma, and Dr. Hartmann, of Paris. *Communications:* Surgical Anæsthesia by Means of Spinal Cocainization. By Dr. José Spreafico, of Almería; A New and Effective Method of Kidney Fixation. By Dr. Harvey Reed, of Rock Springs.

(b) *Urology*.—President, Dr. Alfredo Rodríguez Viforcós; secretary, Dr. Luis González Bravo. Subjects: (1) The Remote Results of Surgical Intervention in Malignant Tumors of the Kidney. By Dr. Azcarreta, of Barcelona; Dr. Pousson, of Bordeaux, and Dr. Mariani, of Genoa. (2) The Comparative Value of the Means Actually at Our Disposal for the Appreciation of the Functional Condition of the Kidney. By Dr. González Bravo, of Madrid; Dr. Lobo Regidor, of Madrid; Dr. Albarán, of Paris; Dr. Giuseppe Mya, of Florence; Dr. Casper and Dr. Richter, of Berlin. *Communications:* Implantation of the Urethra in the Rectum. By Dr. R. Harvey Reed, of Rock Springs.

X. *Ophthalmology*.—President, Dr. Santiago de los Albitos; secretary, Dr. Francisco Sanz y Blanco. Subjects: (1) The Surgical Treatment of the Lacrymal Passages. By Dr. Castresana y Giocoechea, of Madrid; Dr. Reymond, of Turin; Dr. Tartuferi, of Bologna; Dr. Lapersonne and Dr. Rochon-Duvignaud, of Paris. (2) The Necessity for the Unification of Optometric Scales. By Dr. Jacinto de las Cuevas y Pulido, of Madrid, and Dr. Landolt, of Paris. (3) Optic Neuritis in the Course of Acute Affections. By Dr. Francisco Sanz y Blanco, of Madrid; Dr. Vincenti, of Naples, and Dr. Antonelli, of Paris. (4) Investigations into the Action of Medicines on the Pupil and the Accommodation and Intraocular Tension. By Dr. Manuel Márquez Rodríguez.

XI. *Oto-Rhino-Laryngology: (a) Otology*.—President, Dr. Juan Cisneros y Sevillano; secretary, Dr. Rafael Forn y Romans. Subjects: (1) The Causes of Deafmutism. By Dr. Verdós, of Barcelona; Dr. Castex, of Paris, and Dr. Schmiegelow, of Copenhagen. (2) Anatomical and Clinical Study of Cholesteatomata. By Dr. Luciano Barajas, of Madrid, Dr. Schwartz, of Halle, and Dr. Cozzolino, of Naples. (3) The After Treatment of Operative Intervention on the Ear. By Dr. Botey, of Barcelona; Dr. Lermoyez, of Paris, and Dr. von Stein, of Moscow.

(b) *Rhino-laryngology*.—President, Dr. Eustasio Uruñuela; secretary, Dr. Celestino Compairé. Subjects: (1) Its Surgical Intervention in Every Kind of Laryngeal Cancer in All its Phases and

Stages Desirable from the Medico-social Point of View? by Dr. Sota y Lastra, of Seville. (2) The Appraisal of Local Treatment in Laryngeal Tuberculosis. By Dr. Roquer Casadesús, of Barcelona; Dr. Krause, of Berlin; Dr. Grazi, of Florence, and Dr. Masini, of Geneva. (3) Is Atrophic Rhinitis always Autochthonous? The Necessity of Establishing Precisely its Diagnosis to Determine its Treatment. By Dr. Pelaez, of Granada; Dr. Moure, of Bordeaux, and Dr. Freudenthal, of New York. *Communications*: Hot Air in Rhino-laryngological Therapeutics. By Dr. Lermoyez and Dr. G. Mahu, of Paris.

XII. *Odontology and Stomatology*.—President, Dr. Alejandro San Martín; secretary, Dr. Florestán Aguilar. Subjects: (1) The Treatment and Filling of Teeth with Diseased Pulps. By Dr. A. V. Harlan, of Chicago, and Dr. J. Losada, of Madrid. (2) Mental Microscopy. By Dr. Leon Williams, of London, and Dr. J. Choquet, of Paris. (3) Buccofacial and Skeletal Prothesis. By Dr. Claude Martin, of Lyons; Dr. V. Guerini, of Naples, and Dr. Delair, of Paris. (4) The Requirements that should be insisted on for the Practice and Teaching of Odontology. By Dr. Godon, of Paris, and Dr. Florestán Aguilar, of Madrid. (5) The Nature and Treatment of Alveolar Pyorrhœa. By Dr. Hopewell Smith, of London; Dr. Younger, of Chicago, and Dr. Damians, of Barcelona. (6) Local Anæsthesia in Odontology. By Dr. C. Amoedo, of Paris; Dr. Pier Michele Giuria, of Genoa.

XIII. *Obstetrics and Gynecology*.—President, Dr. Eugenio Gutiérrez González; secretary, Dr. Carmelo Carrillo y Cubero. Subjects: Indications for Hysterectomy in Acute Puerperal Infection. By Dr. J. Cortiguera, of Santander, and Dr. Pinard, of Paris. (2) The Treatment of Placenta Prævia. By Dr. Candela, of Valencia; Dr. Pestalozza, of Florence, and Dr. Leopold, of Dresden. (3) The Pathogeny and Treatment of Chronic Cellular and Peritoneal Inflammations of the Pelvis. By Dr. Martin Gil, of Malaga, and Dr. Doléris, of Paris. (4) Indications for and Results of Opothrapy in Gynecology. By Dr. Jayle, of Paris. (5) Conservative Surgery of Lesions of the Annexa. By Dr. Fargas, of Barcelona; Dr. Treub, of Amsterdam; Dr. Palmer Dudley, of New York, and Dr. Mangiagalli, of Pavia. *Questions Proposed for Special Consideration*: The Early Diagnosis of Ectopic Pregnancy; The Treatment of Urethro-vaginal Fistula. *Communications*: Induced Abortion and Premature Accouchement in its relations with Natural Right, Theology, Medicine, and The Penal Code. By Dr. Enrique Salcedo y Ginestal, of Madrid.

XIV. *Military and Naval Medicine and Hygiene*.—President, Dr. Antonio Serrano y Borrego; secretary, Dr. Hermenegildo Tomás del Valle. Subjects: (1) How to Solve the Problem of Tuberculosis in Armies. By Dr. Traller, of Madrid. (2) The Advantages and Inconveniences of Compressed Medicines in Medical Supplies on Campaign. By Dr. Ubeda y Correal, of Madrid, and Dr. Mazzoni, of Rome. (3) The Influence of the Military Life in the Development of Affections of the Nervous System, and Especially of Psychoses. By Dr. Salinas, of Madrid. (4) The Hygiene of Troops at

Sea and on Land on the West Coast of Africa. By Dr. Angel Fernández-Caro, of Madrid. (5) The Prophylaxis of Syphilitic and Venereal Affections in the Army. By Dr. Rodríguez Vásquez, of Madrid, and Dr. Favre, of Rome. (6) Accident Wards in Modern Warships. By Dr. Redondo, of Madrid, and Dr. Francisco Coletti, of Rome. *Communications*: Hygienic Problems of Feeding in Besieged Places. By Dr. Angel de Larra y Cerezo, of Madrid. (2) The Need of Military Sanatoria in Spain. By Dr. Hermenegildo Tomás del Valle, of Madrid.

XV. *Hygiene, Epidemiology, and Technical Sanitary Science*.—President, Dr. Félix Guzmán y Andrés; secretary, Dr. Felipe Ovilo y Canales. Subjects: (1) The Necessity of Determining the Prophylactic Value of Disinfection, and a Critique on the Methods Generally Followed. By Dr. Angel Fernández-Caro, of Madrid, and Dr. Canalis, of Genoa. (2) Practical Measures, Individual and Collective, to Obviate the Propagation of Dysentery. By Dr. Larra y Cerezo, of Madrid. (3) The Desirability of Establishing Sanitary Custom-houses on the Land Frontiers of Countries. By Dr. Guzmán Andrés, of Madrid, and Dr. Pagliani, of Turin. (4) The Utility of Antituberculous Dispensaries as a Means of Augmenting the Vital Resistance of the Proletariate. By Dr. Montaldo Peró, of Madrid, and Dr. Slavo, of Sienna. (5) Hygiene and Sewage. By Dr. Menéndez Novo, of Madrid, and Dr. Rosario Bentivegna, of Rome.

XVI. *Legal Medicine and Toxicology*.—President, Dr. Adriano Alonzo Martínez; secretary, Dr. Julián Fuentes y Fernández. Subjects: The Legal Significance of Wounds According to their Cause, Situation, and Character. By Dr. Gian Giacomo Perrando, of Sassari. (2) The Medicolegal Concept of Deformities. By Dr. Maestre, of Madrid. (3) Discernment and Criminal Precocity. By Dr. Fuentes, of Madrid, and Dr. Tamassia, of Padua. (4) The Capacity and Responsibility of Degenerates. By Dr. Alonzo Martínez, of Madrid, and Dr. Alberto Severi, of Genoa. (5) On the Localization of Poisons. By Dr. Mariscal, of Madrid.

The General Addresses will be delivered as follows: Professor S. Laache, of Christiania, on Reciprocity in Pathology; Professor Arthur Thomson, of Oxford, title to be announced; Professor Ivan Petrovitch Pavlov, of St. Petersburg, title to be announced; Professor Guillaume Waldeyer, of Berlin, or the Actual Condition of Phylogenetic Theories and Darwinism; Professor Eduardo Maragliano, of Genoa, on The Struggle of the Organism Against Tuberculosis; Dr. Emilio R. Coni, of Buenos Ayres, on Public Medicine in South America; Dr. Juan Santos Fernández, of Havana, on Diseases of the Eyes in a Tropical Country; Professor Brouardel, of Paris, on Adulterations of Food, and Their Influence on the Development of Certain Diseases; Professor A. Politzer, of Vienna, on The Need for Official Instruction on Ontology; Dr. Howard A. Kelly, of Baltimore, on Urinary Infection; Professor Rodríguez Carracido, of Madrid, on Pharmacological Complexity in Medical Prescriptions; Professor Santiago Ramón y Cajal, title to be announced; Dr. Rafael Rodríguez Méndez, of Barcelona, title to be announced.

Pith of Current Literature.

PRACTICE OF MEDICINE.

Spontaneous Rupture of the Heart, with a Report of Seven Cases. By Arthur S. Hamilton, M. D. (*Philadelphia Medical Journal*, January 24th).—Spontaneous rupture of the *normal* human heart rarely if ever occurs, and no cases have been placed on record since the microscope has come into use and accurate diagnoses have been made possible. The causes of heart rupture are: (a) predisposing—pathological conditions of the heart, and (b) exciting—some muscular or physical strain. The condition usually occurs in people past sixty years of age, and is more frequent in men than in women. The rupture may be either partial or complete, but the heart muscle is rarely torn squarely across in large bundles, it is usually dissected apart by the burrowing blood. The most common seat of rupture is in the wall of the left ventricle, on the anterior surface, a little above the apex and a little to the left of the septum. The heart muscle is generally found to have undergone fatty degeneration. The symptoms vary according to the rapidity with which death occurs, and they may accordingly be considered under three heads. (a) Death sudden. There may be no symptoms, the patient may die during sleep; again the patient may fall dead with only a cry or a groan. (b) Death gradual. This is rare. In such cases there may be intense precordial pain, shortness of breath, a feeling of impending death and of something having given way in the heart. The pulse becomes small and feeble, at times irregular, and finally imperceptible; the face may be pale and covered with cold sweat; vomiting and even diarrhoea may occur. The signs of hæmorrhage and effusion into the pericardial sac, when they can be made out, are of great diagnostic importance. (c) Death either sudden or gradual after an amelioration of the initial symptoms. There is at first great pain but this gradually grows less. The rapidity of the heart beat is increased, but no increase in the area of cardiac dulness can be made out, and in a little while the patient seems to improve greatly and may appear to have completely recovered. After the lapse of a few hours or days, the symptoms return in a more violent form, and death occurs soon afterward. The diagnosis is generally only made at the autopsy; if it should be made before, then the prognosis would be unfavorable. It seems hardly necessary to add that treatment is of no avail. The seven cases reported and a bibliography conclude the article.

Reasons for Believing that the Only Way in Nature for Yellow Fever to be Contracted by Man is from the Mosquito. By John W. Ross, M. D. (*Medical Record*, January 24th).—By way of preface it may be said that the bacillus icteroides of Sanarelli stands in no causative relation to yellow fever, and when present must be considered as a secondary invader in this disease. The credit for having been the first to advocate the mosquito theory belongs to Dr. Finlay, who, as early as 1881, laid down the three cardinal principles for the sup-

pression of the disease. The reasons for believing that the only way in *nature*, by which yellow fever can be propagated is by the mosquito are seven: (1) Havana has been freed of yellow fever and has remained so for the past fourteen months, and this result was accomplished by basing all the sanitary precautions on the theory of the mosquito origin of the disease. That the brilliant results obtained were not a mere coincidence is proved by the fact that never before, in a period of about 140 years, has this occurred. (2) That an infected mosquito is capable of giving the disease has been proved by twenty-one actual experimental inoculations upon human beings. That the cases of disease so produced were really cases of true yellow fever is proved, first by the fact that the confirmatory diagnosis was made by an expert commission; and secondly, that three of the inoculated subjects died and the autopsies performed upon them showed all the characteristic lesions of yellow fever. (3) The elaborate experiments undertaken with the object of trying to infect people by bringing them in contact with infected fomites all proved negative, yet the subjects of the experiments were all carefully selected non-immunes and some of them subsequently contracted yellow fever. (4) The mosquito theory of the propagation of the disease is the only one that is capable of satisfactorily explaining all the facts that are known concerning the disease. (5) That other parasites are not capable of transmitting the disease is shown (a) by the fact that the successful crusade against yellow fever in Havana was conducted by waging war upon the mosquito alone, and during the whole period that the disease has been kept under, Havana has been harboring a non-immune population of some 40,000 souls, while being infested, as it always is, with bed-bugs and fleas. (b) Analogy is against the supposition that other parasites could be capable of propagating the infection. All the other diseases we know of that are transmitted by a parasite are capable of being transmitted only by a specific parasite and in no other way. (7) All who witnessed the experiments with yellow fever and who by education were capable of forming a scientific opinion believed that the mosquito was the parasite that conveyed the disease, and that there was no other way by which the disease could, by nature, be transmitted.

Appendicitis in the Country.—M. Paul Boudin (*Journal des praticiens*, January 3rd) regards appendicitis as too new a malady for miscellaneous operation. Insufficient mastication and constipation are the main ætiological factors. The unusual site of greatest pain in some cases may easily lead to confusion with nephritic, hepatic, or ovarian colic, and, therefore, in the country, where patients are not so frequently seen, expectant treatment is the best. He thinks better results are obtained from purgative than from opiate treatment, because the "putrid materials" and their toxins are thus eliminated, and absorption symptoms are thus avoided. Calomel is at once a purgative and an antiseptic, as well as a vermifuge, for some cases of appendicitis are due to lumbricoid worms, says the author. Later, if necessary, a surgeon can remove the diseased appendix as an interval operation.

Contribution to the Ætiology of Overacute Peritonitis.—Dr. William Zannini (*Gazzetta degli ospedali e delle cliniche*, December 28th) reports a case of extremely acute peritonitis caused by the rupture of a psoas abscess into the peritoneal cavity. The patient was a woman, aged fifty-two years, who had had an attack of fever and a chill twenty-five days before admission, followed by the appearance of a painful swelling in the left inguinal fossa. Icebags were applied for six days and the swelling diminished, but an acute pain appeared along the sciatic nerve and she was unable to extend the left thigh completely. In order to make the lower limb lie flat on the bed, she had to raise her body into a half-sitting position. On the day following her admission she suddenly began to vomit and to complain of diffuse pain in the abdomen. Meteorism, fever, tenderness over the belly, and other symptoms of peritonitis came on in rapid succession, and the patient died within forty-eight hours. Although the patient had not had any movement of the bowels for a few days, and enemata had remained ineffectual, the diagnosis of obstruction was excluded, because the onset was febrile, while fever is usually absent in obstruction at the beginning; moreover, the meteorism was diffuse, while it is localized at first in obstruction. The diagnosis was, therefore, psoas abscess ruptured into the peritonæum, and this was confirmed completely at the autopsy. It was found that this abscess did not come from caries of the spine, but from an osteomyelitis of the ilium in the left fossa, which had burrowed beneath the ilias fascia, perforated this fascia, and burst into the peritonæum. It is important to distinguish these cases from sciatica, and to remember that efforts at complete extension of the limb may cause the rupture of a psoas abscess.

Hæmaphæic Icterus.—M. Gilbert and M. Herscher (*Presse médicale*, December 27th) describe this condition as characterized by an icterus *fruste*, and by the presence of biliary pigments in the serum. The urine undergoes important changes, becoming high colored, like strong beer, obliterating the right half of the spectrum. With nitric acid, it assumes a mahogany color. It always contains urobilin in greater or smaller quantity, more frequently biliary salts, and exceptionally true biliary pigments. The concentration of the urine is the sole element which distinguishes the condition from that of simple family cholæmia. It results in this, that a slow cholæmia is ultimately converted into a marked oliguria.

SURGERY AND ANATOMY.

The Anæsthetization of So-Called "Difficult" and "Bad" Subjects. By Dr. F. W. Hewitt. (*Lancet*, January 10th and 17th).—Difficult and bad subjects for anæsthetization are considered by the author under six headings: 1. Patients whose general health is good, possibly exceedingly good, but who possess some physical peculiarity rendering them more or less liable to intercurrent embarrassment or arrest of breathing. Very muscular men should receive ether rather than chloroform; less of the drug is required and less damage will be done by their struggles and excitement. Further there is

less trouble from the excretion of laryngeal mucus. The condition of the upper air passages and the number and arrangement of the teeth influence the symptoms displayed during anæsthesia. Where the nasal passages are blocked, and the upper teeth are large and overhanging, there is sure to be trouble as the lower jaw cannot be pushed forward. A small mouth prop should be placed between the teeth in such cases. Oral breathing is to be preferred to nasal breathing. Middle-aged men of powerful build, with red cheeks, thick necks, and good teeth require careful handling. A mixture of chloroform and ether works well in such cases. In muscular and obese patients the operation should not be started until perfect anæsthesia has been obtained, otherwise reflex suspension of breathing may occur. In examining a patient before anæsthesia it is more important to test the patency of the nasal passages than to examine the heart. Enlarged tonsils and adenoids, fixity of the lower jaw from rheumatoid disease, sublingual abscess, or angina Ludovici—any of these conditions may make anæsthetization difficult and dangerous. In such patients all asphyxiating anæsthetics or methods should be avoided—as a rule, chloroform or a mixture of chloroform and ether should be used. In goitre chloroform is the only permissible anæsthetic. But where there are general bronchitis, tracheal stridor, and orthopnoea, it may be hazardous to administer chloroform. Oxygen used in conjunction with the anæsthetic is often of great value in these cases. Patients who have been confined to bed for some time with some constitutional disease are not usually bad subjects. In cases of acute illness the patients may be difficult to anæsthetize, even though in a state of collapse, while the patient moribund from a chronic malady may be perfectly passive. Cases of heart disease are not bad subjects providing the methods employed are suitable. The A. C. E. mixture is usually the best anæsthetic; pure nitrous oxide must be avoided. It is exceptional for mental disquietude or "nervousness" to cause trouble—the nitrous oxide-ether sequence works well in neurotic individuals. Alcoholic subjects and persons who have used tobacco largely are notoriously difficult to anæsthetize, and are liable to give trouble while under the anæsthetic. Finally there is a class of subjects who give trouble to the anæsthetist without any discoverable cause. As our clinical knowledge increases these cases become more and more exceptional. A few of them almost seem to warrant the use of the term "idiosyncrasy."

Through-and-Through Intestinal Suture, with Report of Additional Cases. By F. Gregory Connell, M. D. (*American Medicine*, January 24th).—The method of applying intestinal sutures has gone through the following phases: (1) The suture including all coats with the knot on the serosa, in the peritoneal cavity; (2) the suture including the peritonæum only; (3) the suture including the peritonæum and the muscularis; (4) the suture including the peritonæum and the muscularis, and penetrating but not perforating the submucosa; (5) the suture including all coats, with the knot on the mucosa, in the lumen. The author writes to urge the last method enumerated, which has the

following advantages: (1) Less danger of yielding or tearing; (2) less danger of leaking, even though yielding or tearing does not occur; (3) smaller diaphragm; (4) diminished adhesions; (5) less danger of necrosis; (6) no foreign body; (7) decrease in time required. The square stitch, or side knot, is the best. The method proposed differs from Maunsell's in two particulars: (a) the complicated invagination is unnecessary; and (b) the extra longitudinal incision is not needed. The method of applying the sutures is clearly given, and the text is made clear by the aid of nine illustrations. The author draws the following conclusions: (1) The suture that aims to include but a portion of the bowel wall is dangerous; (a) because it is liable to fail to include any of the submucosa, in consequence leaving a weak stitch; (b) because if it includes any of the submucosa it is almost certain to penetrate the coat, leaving a stitch open to the dangers of capillarity. (2) By utilizing a through-and-through suture the danger of yielding is excluded. (3) By employing a suture that is knotted in the lumen the danger of yielding is excluded. (4) It is acknowledged that the most appropriate place for the knot when all coats are perforated is in the lumen of the bowel. (5) It is undeniable that when the submucosa has been perforated accidentally the knot ought to be placed inside. (6) It is also undeniable that many so called Lembert stitches perforate the submucous coat, and so convert an intentional non-perforating into a non-intentional perforating suture. (7) Undeniable, too, that owing to the extreme tenuity of the submucous coat (one-sixteenth of the thickness of the needle that is to "penetrate it but not perforate" it) we are utterly unable to distinguish between a perforating and a non-perforating Lembert suture. (8) The logical conclusion is that the ideal locations for the last and all knots in an enterorrhaphy is outside the peritoneal cavity, in the lumen of the bowel. (9) As a chain is no stronger than its weakest link it is of practical import that the last one or two stitches be also perforating and knotted in the lumen. (10) The diaphragm by its valve-like action is of great value in the prevention of leakage. (11) The tying of the knot according to the method described above, does not interfere with the establishment of firm union nor tend to leakage. (12) The side knot, or "square" stitch, in rendering a retaining suture unnecessary, is superior to the top knot or "circular" stitch.

Resection of the Large Intestine for Carcinoma. By Dr. J. Swain. (*British Medical Journal*, January 10th).—Cancerous growths of the intestine are almost always found in the large bowel; the sigmoid flexure, the cæcum, and the descending colon are the parts usually affected. The chief peculiarity consists in the contraction of the new growth, causing a marked stenosis of the lumen of the intestine. This stenosis is the chief cause of the symptoms for which the patient seeks relief; and a gradually increasing constipation, amounting in some cases to actual obstruction, accompanied by attacks of pain, should suggest the possibly malignant nature of the affection. The pain is caused by ineffectual attempts by the bowel above the con-

striction to overcome the obstruction. Above the growth the intestine is usually dilated and hypertrophied. Visible peristalsis is a valuable sign. A tumor can sometimes be felt, especially in the transverse colon. The only means of cure consists in the resection of the adjacent parts of the bowel and mesentery involved. The parietal incision should always be made over the tumor if possible; it should be about two inches long at first and can be enlarged later if resection is decided upon. In every case the portion of the bowel to be operated upon should be brought freely outside the abdomen. The gut should be divided an inch away from the growth on either side; this is best done with sharp scissors. As regards the enterorrhaphy, the author prefers end-to-end union by direct suture, as the use of most forms of apparatus is open to the objection that a foreign body is left in the gut. But where the condition of the patient is bad the use of a bone bobbin, Murphy's button, etc., may be desirable. The best suture material is Chinese silk twist, the best needle an ordinary milliner's needle, and the best stitch Halsted's. About four stitches should be placed in each inch of circumference. The operation is followed by a good deal of shock, which is best met by the administration of nutrient enemata of brandy and peptonized milk every four hours. Morphine should be avoided after the first twenty-four hours. Flatulence is usually relieved by a turpentine enema.

Exaggerated Reflexes in Carcinosis.—M. D. de Buck and M. O. Van der Linden (*Presse médicale*, January 3rd) report a number of cases of carcinoma of various organs in which they found exaggerated tendon and cutaneous reflexes. They regard this as a valuable new diagnostic symptom in cases in which malignancy is suspected. They account for the heightened reflexes by the entrance into the circulation of the toxins from the growth, which act upon the spinal cord as an excitant, like strychnine. The authors do not admit a diminution of reflex inhibition through nutritive alteration of the pyramidal tract, for then, especially in the cases with clonism, there would be a muscular hypertonia, abolition of the cutaneous reflexes, and Babinski's phenomenon.

A Note on the Anatomy of the Perineal Fatty Tissue. By W. W. Keen, M. D. (*American Medicine*, January 31st).—If the two layers of fatty tissue about to be described are kept in mind in operating upon the kidney, the finding of this organ will be greatly facilitated: (1) A superficial layer of fat that will bulge into the incision that is first made through the superficial tissue in operating. This layer should be called the "transversalis" layer. (2) A deep layer which surrounds the kidney and is the perinephric fat proper. Between these two layers there is a distinct interval, which is occupied by a stratum of connective tissue. In operating, if all the layers are carefully torn through until the perinephric layer is reached, and then this layer is either incised or carefully torn through and its edges drawn into the wound, it will be found that the opening thus made gives entrance to a sort of infundibulum, or funnel-shaped opening, at the bot-

tom of which the kidney is invariably found. Dr. Keen has had the conclusions he has reached through experience gained at the operating table confirmed by a series of special dissections.

Appendicitis. By Dr. G. Barling. (*British Medical Journal*, January 10th).—With the pain of the onset of appendicitis the patient generally vomits. When the stomach is empty and food is withheld, vomiting usually ceases. If it still persists, this is a pronounced indication for operative intervention. Tenderness over the cæcal region may at first be very intense; with the tenderness muscular rigidity is associated, becoming more localized as the pain and tenderness of the onset subside. If this improvement does not occur, it is indicative of peritonitis of some severity and extent. Only when the muscular rigidity is passing off can the inflammatory thickening of the appendix, matted to adjacent parts, be palpated as a definite tumor. Of all the signs as to the necessity of operation, the pulse is the most valuable and reliable. Its rapidity is the index rather than its quality. Should the quick pulse of the onset remain at 120, or higher, for more than twelve hours, the case should be looked on as a grave one. Quite as significant is a steady quickening of the pulse. The temperature is an uncertain guide, but is by no means to be despised. While the leucocyte count does not furnish an infallible guide in appendicitis, yet as a rule, the more widespread and intense the infection, the greater the leucocytosis. Constipation is the rule, but diarrhœa may take its place and is of good prognostic import, as indicating that the peristalsis of the bowel is still active.

The author's statistics are as follows: Total number of cases, 143; deaths, 25 (mortality, 17.5 per cent.).

Class I. Diffuse peritonitis, 29 cases, 14 deaths, 15 recoveries. Appendix not removed in 12; 7 survivals, 1 recurrence.

Class II. Pelvic and adjacent peritonitis, 34 cases; 7 deaths, 27 recoveries. Appendix not removed in 22; 15 survivals, 2 recurrences.

Class III. Localized non-adherent abscess, 49 cases; 2 deaths, 47 recoveries. Appendix not removed in 26; 25 survivals, 1 recurrence.

Class IV. Localized "safe" or adherent abscess, 31 cases; 2 deaths, 29 recoveries. Appendix not removed in 27; 25 survivals, 1 recurrence, 1 not traced.

Subphrenic Abscess as a Complication of Appendicitis. By Henry A. Christian, A. M., M. D., and Louis C. Lehr, M. D. (*Medical News*, January 24th).—In a study of 4,028 autopsies the authors found death to have been due directly or indirectly to acute appendicitis in 86 cases. Seven of these cases showed an involvement of the subphrenic region in a purulent process, and although it would not be correct to say that they were all cases of true subphrenic abscess, yet they serve to show how subphrenic abscesses occur. Abstracts from the protocols of the autopsies are given and the cases can therefore be closely studied. In the reported cases the affection was unilateral six times, four times on the right side and twice on the left. Subphrenic

abscess secondary to appendicitis may occur in one of four ways: (1) As a localized abscess, part of a generalized purulent peritonitis; (2) by extension of the disease process from the appendix to the subphrenic region by an intraperitoneal route; (3) by extension of the disease process by an extraperitoneal route, either by way of the lymphatics, or by infiltration through the retroperitoneal tissue; (4) by way of the blood current as a part of a general septic embolic process, or as a sequence of liver abscesses which are of embolic origin by way of the portal vein. It is by the second and third of these methods that the greatest number of these cases originate. In four of the seven cases the process had extended from the subphrenic region into the pleural cavity, though in none was the diaphragm perforated. In cases of appendicitis the pleura may become involved in an inflammatory process in one of two ways: (1) By extension of a pneumonic focus or infarct in the lung; and (2) by extension from the abdominal cavity, either by way of the lymphatics or by erosion of the diaphragm.

Twelve Cases of Malignant Disease Treated by the Röntgen Rays. By Henry Perkins Moseley, M. D. (*American Medicine*, January 31st).—The best results are obtained with tubes of low vacuum, that is to say with tubes that give out a large number of rays that are not highly penetrating. The results in the twelve reported cases were as follows: Cured, 2; possibly cured, 2; improved, 1; relieved, 1; not improved, 1; died, 5. The author gives the following conclusions as a result of his experience with these and other cases: (1) The small and superficial cases of malignant disease seem to be the most susceptible to this form of treatment. (2) The relief of pain is a very prominent feature of the Röntgen ray treatment, and is often noticed after the first exposure. In cases which have not progressed too far, it is almost possible to promise the anæsthetic effects. (3) It is impossible to determine from our present knowledge without trial what cases will be favorably influenced by treatment, but patients should be warned not to be too hopeful. (4) The danger of burning is a real one. Patients should appreciate the possibility of it before treatment is started, although with proper precautions it may be avoided.

Enterectomy for Malignant Disease. By W. L. Woolcombe, F. R. C. S. (*British Medical Journal*, January 10th).—Histologically, the only variety of malignant disease of the intestine is that known as cylindrical-celled epithelioma or cylindroma, though, of course, various degenerations may occur, such as colloid, which are sometimes described as varieties. The growth commences in Lieberkühn's glands and the deeper parts of the mucous membrane, and in its early stages appears to the naked eye as a plate or nodule, which gradually spreads round the bowel, following the course of the vessels. However far it extends, it still retains to a remarkable extent the type of the gland from which it starts, and thus a growth possessing malignant properties may so closely resemble a simple structure that, if a small portion is examined alone, it is difficult to say if it is malignant. There

is little evidence of the presence of the growth until either obstruction or distention of the gut takes place. This is what forms the distinctive difficulty of dealing with malignant disease. Good results cannot be hoped for until we discover some early destructive symptom or can feel justified in opening the abdomen to examine suspicious cases. Of the different parts of the bowel, the large is by far the most commonly attacked, and here the gland invasion is slowest—a favorable point. Further, the type of growth dealt with is of low malignancy as compared to that occurring in other parts of the body.

OBSTETRICS AND DISEASES OF WOMEN.

On the Results in Fifty Cases of Abdominal Hysterectomy for Fibroid Disease of the Uterus: with Remarks on the After-history of the Patients and on the Artificial Menopause. By C. J. Bond, F. R. C. S. (*Lancet*, January 17th).—The following lessons are to be learnt from a study of the series of cases here reported: The frequent history of sterility and of repeated miscarriages. Of 50 patients 30 were married; in these there were 11 miscarriages and only 33 children.

The disabling effect of the disease depends on the pain and pressure effects of the pelvic tumor. The social condition of the patient is an important factor in deciding as to operation—yet rest and luxury never cure fibroids.

In 18 cases one or both ovaries were cystic. Those cases presented the worst symptoms.

Degeneration in fibroid tumors is more frequent than is generally supposed. The occurrence of degeneration, cystic or otherwise, does not seem in any way to lessen the hæmorrhage or other symptoms referable to the fibroid, nor is its presence inconsistent with further peripheral growth of the tumor.

In two cases the uterine wall was found to be invaded by very numerous small fibroids. It seems to be an established fact that the uterus may be readily and safely amputated at almost any level. It is no longer thought necessary always to amputate just above the internal os. Two of the 50 patients died from the immediate effects of the operation. In 38 cases the patients are now in good health and pursuing their usual daily vocations. Three patients have died; one is confined to bed with thrombosis in the thigh; and four have not been traced. The sexual appetite persists in those cases where the uterus was amputated above the cervix and the ovaries were left. Where the ovaries and uterus were removed together, all sexual appetite has been lost; where the ovaries alone were removed it is distinctly impaired. Myomectomy is a conservative operation of much value. Abdominal cervical hysterectomy is a safer operation than has been represented and is comparable with that of ovariectomy.

Catheterization in the Puerperium.—Three principal factors contribute to the production of urinary retention in the puerperium, says M. Zúñiga (*Gaceta Médica de Costa Rica*, December): (1)

The greater space about the bladder after childbirth, rendering its capacity greater than during pregnancy; (2) inertia of the abdominal muscles; (3) the traumatism to which the urethra is subjected during parturition. The author holds that if the bladder has been emptied before parturition, such retention, to the limit of twenty-four hours, should not be disquieting; and that catheterization should not be resorted to until that time has expired; as even so simple a measure is attended with grave danger in the puerperium, despite every aseptic and antiseptic precaution. Further, there is strong probability of dependence upon the catheter being established, when once used. In his opinion, spontaneous evacuation of the bladder almost invariably occurs within twenty-four hours; and since adopting the expectant plan for that length of time, the necessity for catheterization, and establishment of the catheter habit have been much less frequent than under the old twelve hour limit.

NERVOUS AND MENTAL DISEASES.

Pathogenesis of Tabes Dorsalis.—M. J. Nageotte (*Presse médicale*, January 30th) concludes from his histological and pathological studies of observed cases, that locomotor ataxia is the result of a localized focus of disease which is carried by the nerve roots to the nerve radicles and which sometimes propagates itself as far as a ganglion. The original focus is an inflammatory, transverse, radicular neuritis, frequently originating in a chronic syphilitic meningitis through the lymphatics. The neuritis, like the meningitis, is of syphilitic origin. A meningomyelitis of diffuse character precedes the tabes, and causes the complications of the disease, but the disease is created only by the intermediary radicular neuritis. Nageotte thinks this pathogenesis accounts for the capriciousness of the disease, its occasional virulence, its apparent arrest at times, and its possible cure. It takes equal account of individual peculiarities and does not exclude other factors as occasional causes in localizing the morbid process and in diminishing the resistance of the nervous elements involved.

Cerebral Syphilis. By Albert E. Brownrigg, M. D. (*Boston Medical and Surgical Journal*, January 22nd).—All the lesions of cerebral syphilis are essentially inflammatory in character and the chief changes occur primarily in the blood vessels and secondarily in the brain and meninges. Associated with the inflammatory reaction there is a peculiar exudation or infiltration, which is often distinctly localized and constitutes the gumma. Besides this lesion, there is usually an obliterative endarteritis, due to a proliferation of the subendothelial lining of the blood vessels. Besides these primary lesions, there are two degenerative diseases which chiefly affect the nerve cells of the brain or spinal cord, and which are most commonly produced by the remote effects of the syphilitic poison in the blood. These diseases, usually called post-syphilitic degenerations, include clinically locomotor ataxia and paresis. The diagnosis of brain syphilis is often a difficult matter, and should depend more on the character and grouping of the symptoms than on

their mere presence or absence. The chief symptoms may be grouped as follows: (1) Headache and vertigo; (2) nausea and vomiting; (3) optic neuritis; (4) cranial nerve palsies or paralyses; (5) apoplectic attacks, or more gradual attacks of somnolence or coma, with partial hemiplegia; (6) irritability and general mental failure; (7) polyuria and polydipsia; (8) marked remittent character of all symptoms, and their changeability. Cerebral syphilis usually appears about three years after the primary infection, but headache, facial paralysis, and optic neuritis have been known to occur as early as one month after the primary sore. The prognosis is always indefinite. The cases in which the brain symptoms occur early, usually do better than those in which the brain is involved late in the disease. In the cases that end fatally the patients usually live from six months to three years. The treatment should be general as well as specific, and on account of the liability to brain involvement in every case of syphilis, patients should be warned to take life easy and avoid all mental strain and worry, and to refrain from the use of alcohol. The mixed treatment should be begun early in the second stage, as potassium iodide seems to give the best results where the brain is involved. After brain symptoms have once set in the iodide should be pushed. One patient took as high as 1,500 grains of the iodide a day with apparent benefit.

Massage in Tabetics.—M. G. Constensoux (*Presse médicale*, December 6th) says that massage in cases of *tabes dorsalis* should be specialized and adapted to the peculiarities of each case, in some cases being useful, in others useless. It should be done by a physician or by a masseur under the former's absolute instructions. It should be employed for its general tonic effects and to combat certain sensory disturbances. Massage of the skin is useful for its tonic effect and for its influence upon impaired sensation. Massage of the muscles is useless for its effect upon ataxia; it fatigues the patient when it is energetic, and is without any influence upon genuine atrophy or paralysis. Passive motion is contraindicated on account of the already too freely movable joints and hypotonic muscles. Active motion is of use when it is employed for the purpose of reeducating the muscles. The séances should be short and fatigue of the patient must be avoided.

Insanity Among Soldiers of the American Army in the Philippine Service. By A. B. Richardson, M.D. (*Philadelphia Medical Journal*, January 31st).—From May, 1899, to June, 1902, there were admitted to the Government Hospital for the Insane from the army of the Philippines, 319 soldiers. This army from June, 1898, to July, 1902, comprised a total of about 122,000 men, with a monthly average for the entire period of 40,000 men. If to the number of insane as above given, are added 43 cases which were late in arriving at the hospital, then the average yearly number of insane soldiers per thousand of men in the field would be 2.26. This figure may be compared with the insanity statistics for the District of Columbia for the year 1900. In a population of 276,000 the proportion of insane was

one per thousand. The author gives quite full statistics with reference to the supposed causative factors in producing the insanity. We note merely that 64 per cent. of the cases, of presumably known origin, were due to fever, overheat, or alcoholism, alone or combined. With regard to the prevalent forms of insanity, study of the 319 cases, gives these percentages: 62 per cent. acute melancholia; 19.4 per cent. acute mania; 11 per cent. chronic melancholia; 11.2 per cent. acute dementia or acute confusional insanity, and the rest scattered. The percentage of recoveries is unusually high. Up to June, 1902, of the 319 cases received, 58.6 per cent. had been discharged as recovered. "Taken all in all, it may be said that the popular impression of the prevalence and unfavorable character of insanity among the soldiers of the Philippine army has been greatly exaggerated. Considering the character of the service and the climatic conditions, the percentage is very low and, as shown above, the character of the disease is, in nearly all cases, quite favorable."

LARYNGOLOGY, RHINOLOGY, AND OTOTOLOGY.

The Treatment of Acute Suppuration of the Middle Ear. By Wendell C. Phillips, M. D. (*Medical News*, January 17th).—The prophylactic treatment lies almost wholly in the hands of the general practitioner, who is often responsible for the development of acute middle ear suppuration. All cases of adenoids should be attended to at once, since adenoids are a prolific source of middle ear infection. All cases of grippe and the exanthemata, especially scarlet fever and measles, should be treated from the start with a view to preventing ear trouble as the disease advances. Such cases should have the nose and nasopharynx kept scrupulously clean by the use of simple antiseptic nasal sprays and pharyngeal cleansings. Special warning should be given against forcibly blowing the nose. After the infection has once developed the treatment as summarized by the author is as follows: (1) In acute middle ear suppuration early and free drainage is of the utmost importance; (2) patients should remain in bed until acute symptoms have passed; (3) free purgation (preferably by means of calomel) should be resorted to; (4) microscopical examination of pus should be made; (5) local treatment should consist of cleanliness and free drainage; (6) proper internal medication should not be ignored; (7) prolonged attempts to abort suppuration of the mastoid cells are to be condemned; (8) early operative intervention in mastoid suppuration prevents the more serious complications and gives far better hearing results; (9) uncomplicated cases of acute suppuration of the middle ear, when properly treated, always recover in from two days to three weeks; (10) the responsibility for preventive treatment must be largely assumed by the family practitioner.

The Treatment of Chronic Suppuration of the Middle Ear. By James F. McKernon, M. D. (*Medical News*, January 17th).—Definition: Chronic suppuration of the middle ear is an inflammation of the structures forming the middle ear, which has lasted for six months or more with

or without, treatment. The object of treatment is threefold: (1) Cure of the otorrhœa; (2) the improvement of the hearing; (3) the relief of the subjective sounds. The method of treatment, clinically speaking, is of two kinds, namely, the dry, and the irrigation or wet. If a trained nurse could always be had the first method would seem to be the best. Practically the wet method will usually yield the best results. Before beginning any specific line of treatment the nasopharynx must be freed of any existing obstructions. The cardinal principle which governs any line of treatment is the one which demands the attaining and the maintaining of absolute cleanliness of the auditory canal and its adjacent structures. Next to this in importance is a correct diagnosis of the structures of the middle ear that are involved in the suppurative process. *The dry method of treatment.*—With sterile hands wipe the auditory canal thoroughly dry and then insufflate over the drum and walls of the canal any very fine dusting powder, such as xeroform, nosophen, boric acid, acetanilid, aristol or iodol. Insert a small wick of gauze into the canal and if possible make it pass through the perforation in the drum, then loosely pack the canal to the meatus. This treatment must be repeated as often as the gauze becomes thoroughly moistened. *The wet method of treatment.*—(1) Irrigate the ear with any of the following solutions: mercury bichloride 1 to 4,000 or 1 to 8,000, boric acid 20 grains to the ounce, carbolic acid 1 to 100 or 1 to 200. Probably a normal salt solution is as good as anything that can be used. A good solution for further sterilizing the parts is the following: Equal parts of a 1 to 1,000 solution of mercury bichloride and absolute alcohol, to which may be added boric acid at the rate of 10 to 20 grains to the ounce. The frequency with which this treatment is to be repeated will depend on the quantity of the discharge; at first it may have to be used every three hours, but too frequent irrigation may become detrimental. Special indications are to be met as follows: (1) Polypi must be removed and their bases cauterized. (2) Exuberant granulations should be destroyed by means of strong solutions of silver nitrate. (3) Elasticity of the drum membrane is promoted by using Valsalva's method or by catheterization of the Eustachian tube, and still later in the treatment vaporization to the middle ear may be resorted to with advantage. When the discharge is very persistent and there is an area of exposed bone complicating the simpler condition great benefit often results from partially filling the auditory canal with pure carbolic acid and then neutralizing the acid with alcohol at the end of thirty seconds. "A word of warning . . . when necrosis of the bone is found upon our first examination, it is our duty to inform the patient of the danger to life if this condition be allowed to exist without removal of the diseased bone."

A Case of Excision of the Larynx for Cancerous New Growth.—Dr. D. I. Tatarine (*Chirurgia*, December, 1902) reports the following case: The patient was a man sixty-four years of age, who had had syphilis when he was twenty-six. For sixteen years he had been using his voice in reading aloud

to his blind mother for five or six hours daily for seven or eight months in the year. Two years before admission he noted hoarseness, which became gradually worse. He did not drink, but smoked from twenty to thirty cigarettes daily. The symptoms were cough with slight mucous expectoration, difficulty and pain in swallowing. The larynx was movable and the lymphnodes were not enlarged. The left vocal cord was found ulcerated and grayish in color. The right was found thickened, and on microscopical examination showed the presence of cancer. The operation was performed by Dr. Diakonoff, the larynx being exposed and isolated by blunt dissection. Tracheotomy was performed and the opening sutured into the wound; the narcosis being continued through the trachea, by means of a rubber tube attached to a funnel covered with several layers of gauze through which the anæsthetic was dropped. The larynx was then removed, a tracheotomy tube introduced into the trachea and a gastric tube into the stomach. The patient made an uneventful recovery. Wolff's artificial larynx was introduced and the patient could speak distinctly with it. The author does not think that the excision of small pieces of diseased larynx is dangerous in cases in which it is doubtful whether the patient has cancer, tuberculosis, or syphilis of the throat. Mackenzie asserted that such excisions were apt to cause infection and to stimulate the rate of growth, and were therefore to be avoided. The author used a small pair of forceps with sharp blades, which clipped off some of the tissue from the diseased cords after these had been anæsthetized with a five-per-cent. solution of cocaine. He regards Wolff's artificial larynx as the most satisfactory instrument of its kind, the one which gives the best possible results, and the most pleasant quality of voice. The patient should be directed to wash it daily with water and wipe it with gauze. It is difficult to select tubes for this apparatus which will be of suitable length for the case, and it is necessary sometimes to select a series of tubes which can be tried one after the other until the best one is chosen. A tube that is too long goes too far into the trachea, and so irritates the passage and stimulates the flow of saliva, irritates the wound, and allows food particles to escape. If the tube is too short it allows the wound to collapse and prevents the air from entering the throat.

The Restoration of the Inferior Turbinate Body by Paraffin Injections in the Treatment of Atrophic Rhinitis. By R. Lake, F. R. C. S. (*Lancet*, January 17th).—The author has treated several cases of bilateral atrophic rhinitis in which the turbinated bones had undergone absorption by the submucous injection of melted paraffin. The paraffin should have a melting point of 105° F., and be injected with a Downie syringe. The nasal mucous membrane having been rendered anæsthetic, the needle is pushed along under the mucous membrane of the inferior turbinate, or what remains of the structure according to the degree of atrophy present. As much paraffin should be injected as possible. As a result, the patients express themselves as being far more comfortable, as feeling the air pass through their nostrils; also the formation of crusts

has not recurred in cases where it had been checked before injecting, and the crust formation has been more rapidly checked in cases where it was still present.

MATERIA MEDICA, PHARMACY, AND THERAPEUTICS.

Wood Alcohol Poisoning. By S. W. Abbott, M. D. (*Boston Medical and Surgical Journal*, January 15th).—Wood alcohol is being sold under various names and a number of deaths from its ingestion have recently been reported in Boston. Taking as his text the death of three men who died from drinking "Colonial Spirits" and in whose stomachs at autopsy wood alcohol was found, Dr. Abbott writes to urge the advisability of more stringent regulations to govern the sale of such products. In Boston, at least, wood alcohol is sold quite freely in the department stores under a variety of different names, and deaths from its use are on the increase. To avoid further trouble the author suggests that two measures be adopted, viz.: (a) that under whatever name it is sold it shall be distinctly marked poison, and (b) that it shall only be sold by registered pharmacists, and then only when a record of the sale has been made.

A Consideration of the Scientific Application of Mechanical Vibratory Stimulation in the Treatment of Disease. By Maurice F. Pilgrim, M. D. (*Medical News*, January 24th).—While protesting that the vibratory method of therapeutics is not a cure-all, yet the author of this paper believes that "vibratory stimulation properly applied, is destined to bring within the classification of curable diseases, many chronic and acute disorders that thus far have been regarded as hopeless or incurable." These happy results are to be obtained by stimulating the nerve centres that are concerned in controlling the diseased organs. These centres are located mostly in the spinal cord and in the sympathetic system. "The nervous system is so constructed that it can be affected only by vibrations. . . . It is perhaps unnecessary to say that the natural and normal stimuli of the nervous organism inhere in or are a part of the universal ether." When therefore the normal stimuli are deficient it becomes the duty of the physician to apply them. This is done by means of a vibrating machine. Specific cases are to appear in print at some future day; for the present it is enough to say that the results obtained vary in selected cases from perfect to satisfactory, and the diseases amenable to this treatment form an extraordinary and varied assortment.

A Case of Quinine Poisoning Followed by Recovery.—Dr. Gabriele Lamonaca (*Gazzetta degli ospedali e delle cliniche*, December 28th) reports a case in which the occasional toxic effect of quinine, which is manifested in some individuals, was well illustrated. Tomaselli was the first to describe quinine poisoning, in connection with malarial infection in 1874, and since then numerous observations have been published on the subject. The patient was a young man, twenty-one years old, who had been suffering with tertian malaria for sixteen years at various intervals. He presented the ap-

pearance of malarial cachexia with jaundiced skin and a large spleen. He had always taken quinine with good effect for his trouble. The accesses of fever were very marked and accompanied by bilious vomiting, tremors, and convulsive movements and intense pain in the loins and hæmaturia. On investigation, the author found that the patient had been taking large doses of quinine, and that the simple malaria was transformed as a result of this medication into an ictero-hæmaturic fever, which sometimes results from quinine poisoning. The remedy was therefore discontinued, and heart stimulants and a supporting diet prescribed. In six days the symptoms of quinine poisoning disappeared; the pain in the loins, the jaundice, the vomiting, and the bloody urine gradually went away. In order to prove that these symptoms were due to quinine, the author performed the following experiment on the patient twenty days later. He administered a decoction of cinchona bark at six in the morning. Three hours later the patient had his initial chill and a moderate fever continuing for four hours. There were no tremors nor any vomiting, but there followed pains in the loins, a slight jaundice, and a dark colored urine. In commenting on this case the author says that these effects of quinine occur only in malarial patients, who are especially predisposed to quinine poisoning. These symptoms do not occur every time the quinine is given, but recur from time to time in the course of the sickness. It is important to recognize that they are not due to the malaria, that they occur from two to six hours after the administration of the quinine, and that they may be observed after comparatively small doses (one or two grains) of quinine in almost any of the forms usually employed. In such cases an important question is the further treatment of the malaria. Quinine should be of course suspended and the patient stimulated in order to prevent asthenia. Arsenic, iron, methylene blue, and other substitutes for quinine, should receive a thorough trial in such cases.

PHYSIOLOGY AND PATHOLOGY.

Some Observations on Cyanosis. By Dr. G. A. Gibson. (*Lancet*, January 17th).—The one constant factor in the production of cyanosis is diminution of oxygenation, due to obstruction to access of air, to decreased area of breathing surface, or to lessened amount of blood flowing to the lungs. The blood is of high specific gravity—from 1,070 to 1,080; the hæmoglobin is increased, often rising above 100 per cent.; the red corpuscles increase in number so as frequently to exceed 7,500,000 to the cubic millimetre, while there is a moderate leucocytosis. The author reports two cases of cyanosis in which blood was taken from various parts of the arterial and venous system and examined; he found that the increase in red corpuscles and hæmoglobin was general throughout the body, and not local—i. e., not limited to particular organs or vessels. In two other cases of cyanosis oxygen was given by inhalation, careful blood examinations being made from time to time. In neither case did the use of oxygen have the slightest effect upon the condition of the blood.

Proceedings of Societies.

MISSISSIPPI VALLEY MEDICAL ASSOCIATION.

Twenty-eighth Annual Meeting, held in Kansas City, Mo., October 15, 16, and 17, 1902.

The President, Dr. S. P. COLLINGS, of Hot Springs, Ark., in the chair.

The Relationship Syphilis Bears to the Body Politic.—This was the title of the president's address. His reasons for selecting this subject were, first, the importance of calling attention constantly to a disease so widespread as syphilis; secondly, because it was a disease which with proper education concerning its frequent occurrence and of its various modes of transmission, could be controlled more effectively than most diseases, and, thirdly, because for the past twenty-five years he had been a daily observer of its frightful ravages upon the body politic, or society at large.

The history of syphilis was so closely interwoven with the history of the world that it was difficult to dissociate the one from the other. From the earliest records kept by the Chinese and Hindus down to the records of the Greeks and Romans, a disease characterized by a primary sore, followed by constitutional symptoms, had existed. Anthropology had demonstrated that an affection was present among men in prehistoric times which produced lesions corresponding with those found to-day in tertiary syphilis, and in the inherited forms of this disease. Records showed that 4,526 years ago the Chinese knew of the duality of the chancre. They also knew that mercury was the antagonistic medicine. And syphilis existed among the Jews centuries before the birth of Christ, assuming such proportions at one time that Moses had 24,000 men who had contracted it summarily put to death. With the outbreak of the epidemic of the fifteenth century, the disease seemed to have assumed a malignant form, the general characteristics of the affection becoming apparently more pronounced and malignant. The prevention of the spread of syphilis, in the author's opinion, by educating the public more thoroughly as it was being educated concerning the communicability and modes of transmission of tuberculosis, should be more vigorously advocated. The public, however, must first be willing to learn before it could be taught.

Syphilis was communicated not only by some infected person, but by articles which had come in contact with the specific poison, and kissing was a prolific source. Bulkley had shown it could be conveyed by knives, forks, cups, pipes, cigars, chewing gum, and candy passed from one person to another. A new-born babe with inherited syphilis was extremely infectious to those about it. The history of this disease was intimately associated with the subject of prostitution.

In our day the prohibition of prostitution was not practical. Regulation of the vice had proved ineffectual in controlling its spread. If it was legalized, the men frequenting the houses should be subjected to the same rules in regard to examination that the

unfortunate inmates were subjected to. In New York there were in 1901 about 200,000 cases of syphilis, and Gilhon a few years ago estimated that there were two million cases in the United States. Syphilis was prolific of harm to humanity; its dire results were far-reaching; it was no respecter of persons, being as vicious in the palace as in the hovel, and physicians could do more by educating their patients as to the modes of infection and by advising with the younger ones among those whom they treated than all the laws that had been or would be enacted could do to prevent the spread of syphilis.

Smallpox.—Dr. JOHN M. BATTEN, of Downingtown, Pa., read a paper on this subject in which he detailed the symptoms, then discussed the diagnosis and prognosis, and emphasized the necessity of vaccination.

An Attempt to Obtain Uniformly Active, Sterile, and Non-irritating Preparations of Digitalis for Subcutaneous and Internal Administration.—Dr. E. M. HOUGHTON, of Detroit, referred to the unsatisfactory condition of our knowledge of the chemistry of digitalis, and stated that a sterile, non-irritating, and uniformly active preparation was greatly needed. He detailed his efforts to obtain such a preparation containing the largest possible amount of active constituents and the smallest amount of the inert constituents of the drug, based on pharmacological experiments on the lower animals. He gave the clinical results and conclusions arrived at.

Some Developments in the Therapy of Iodoform.—Dr. J. J. GAINES, of Excelsior Springs, Mo., followed with a paper on this subject. He regarded iodoform as the best remedy for tuberculosis at the command of the physician. He spoke of it as an ideal iodide, storing all quantities of iodine, which could be easily liberated. He mentioned its use in pulmonary and gastrointestinal diseases, and reported a number of cases in which he had used it with gratifying results.

Normal Sleep versus Drug Unconsciousness.—This paper was read by Dr. J. B. LEARNED, of Northampton, Mass. Natural sleep was indispensable to long life and business success. Drug unconsciousness, labeled sleep, was the reverse. The indoor brain worker failed to lay the foundation of normal sleep by day, and suffered by night the result thereof. Brain and muscle employed in the open alone during the day would secure the normal conditions of sleep at night. Automatic brain activity at the sleeping hour was the immediate cause of wakefulness. The ready remedy was muscular exertion under the direction of the will, either mild, without change of parts, or the reverse. Control of the respiratory and circulatory functions met the desired end by withdrawing power from the brain centres. All automatic brain work was suspended when concentrated attention was paid to alternate contraction and relaxation of certain groups of muscles. Automatic brain work was pathological. Brain and muscle work, under the direction of the will, was physiological. The author detailed a method of inducing sleep.

The Treatment of Exophthalmic Goitre by Electricity.—Dr. H. M. BEAVER, of Spring Hill, Kansas, in this paper, defined exophthalmic goitre, and then discussed the clinical history, causes, etc. He said predisposition might act as a predisposing cause. The exciting cause might be a previous illness, injury, or over-exertion. The exciting cause involved a determination of blood to the brain and medulla oblongata. This determination of blood acted as an irritant by pressing upon the nerve centres causing the incoordinate nerve action found in this disease. The symptoms referable to the heart, lungs, stomach, thyroid gland, and eyes were nervous phenomena. The cardinal principle of treatment was to decrease the flow of blood to the head. When this was accomplished, all the minor symptoms would subside. The author reported three cases of the disease, and described the mode of application of electricity, also the battery used. He regarded exophthalmic goitre as a vasomotor paralysis; hence it was amenable to electrical treatment.

Typhoid Fever; its Antiseptic Treatment.—Dr. JAMES BILLINGSLEA, of Baltimore, contributed a paper with this title, in which he reported 150 cases. He summarized the chief points in the disease. He said various antiseptics had been tried and vaunted. These were mentioned. Eliminative measures had been freely tried, and one of the most potent agents that the profession had to-day, Brand's method of cold bathing, owed its merits largely to its eliminative value. But even the undoubted value of Brand's method did not militate against the importance of an antiseptic plan.

Dr. WILLIAM F. BARCLAY, of Pittsburgh, Pa., contended that sewage had much to do with the causation of typhoid fever. He had been able in a large number of cases to trace the cause to bad sewerage. As to treatment, he had given for years a solution of acetate of ammonium, administering one or two drachms, every three hours, during the day, with quinine at night, if indicated. He excluded milk from the diet, believing that it was dangerous. In cases accompanied by hæmorrhage he used turpentine externally in preference to other remedies.

Dr. JOHN M. BATTEN, of Downingtown, Pa., believed that typhoid fever originated from sewage and polluted water. In the treatment, large doses of quinine were dangerous. The antiseptic plan of treatment prevented autointoxication.

Dr. WILLIAM A. CAMPBELL, of Colorado Springs, contended that when patients became very hungry for food, the physician should try to find out what articles of food would best agree with them. This was the plan he pursued in treating typhoid cases. He did not regard milk as a dangerous food in typhoid fever cases.

What Class of Pulmonary Cases do well in Colorado?—Dr. W. A. CAMPBELL, of Colorado Springs, read a paper thus entitled. After speaking of the prevalence of tuberculosis and the frequency of unrecognized and cured cases as shown by autopsies, he gave an analysis of 250 cases that had come under his observation, in which his examinations were made soon after the patient's ar-

rival in Colorado. He found in this series of cases that the average was $29\frac{4}{5}$ years. Sex or social station made no difference in physical condition or result. Twenty-nine State and five foreign countries furnish the cases. Those with tuberculous family history did not do so well as the non-tuberculous. The percentage of benefited decreased as the duration of the disease increased. The right lung was involved alone oftener than the left. The percentage of benefited was slightly in favor of the right lung. Where both lungs were involved, the mortality was 50 per cent. In the first stage cases 92 per cent. were benefited; in the second stage, 54 per cent.; in the third stage, 13 per cent. Hæmorrhage occurring in the first stage of the disease was no contraindication to residence in high altitude. The diminished arterial tension and dilatation of external capillaries due to lessened atmospheric pressure made it safe in hæmorrhagic cases for the patient to seek a higher altitude. He would not send persons with acute miliary tuberculosis, or phthisis florida, to high altitudes. Neither would he send those extremely nervous, with an irregular or rapid heart and high temperature. Those well advanced, with rapidly breaking-down lung, should not come. Those having cardiac dilatation or acute endocarditis or myocarditis should not come. Cardiac murmurs were no contraindication if compensation had taken place. Those having Bright's disease should not come. Advanced laryngeal or intestinal cases did not do well. He would have patients come with sufficient money to support themselves on good food until acclimated and improvement was well advanced. In conclusion, he cited the high percentage of those benefited in the first stage, and made an appeal for the early detection and early protection of the tuberculous subject.

Climatic and Electric Peculiarities of Colorado Favoring Recovery in Pulmonary and Intestinal Diseases and from Surgical Operations.—Dr. J. E. MACNEILL, of Denver, followed with a paper on this subject, in which he discussed the physical characteristics of Colorado affecting its climate; spoke of the mineral springs of Colorado, and cited some generally accepted facts regarding mountain climates applicable to Colorado. He also discussed the value of high altitudes with their rarified air and direct sunlight in the treatment of abnormal conditions, and finally the electric conditions.

Digestive Disorders in Consumption, with Notes on Mixed Infections.—Dr. PAUL PAQUIN, of Asheville, N. C., regarded consumption as a mixed infection and the plague of civilization. The majority escaped this disease, not because they were not attacked, but because they resisted the attack. Here was a problem of protection: A condition that would prevent the germs of consumption from developing in the system, and if they did get a start in growth, a condition that would stop them. The digestive apparatus was the system on which the vital energy chiefly depended. If it did not carry on its functions with sufficient effectiveness and persistency, life was a nightmare, and when an individual was sick, recovery was a serious problem. So with respect to consumption, the most vital question was that of nourishment, whereon one might base such

measures of treatment as might be deemed best for restoration. Without nourishment of a sufficient kind in quantity and quality, nothing would avail in therapeutics. Tuberculosis could not be arrested without the assimilation of sufficient and proper food. Bearing in mind the pathology of the gastrointestinal affections accompanying consumption, a normal condition of the mucosa must be restored before good digestion could take place. Among the local measures to this end were gastric and high intestinal lavage. He had known patients who were declining steadily from the ravages of consumption and dyspepsia to gain from two to four pounds a week after the beginning of weekly or semi-weekly lavage of the stomach alone.

As specific measures, serotherapy, the cacodylates, and iodine offered the greatest aid in preventing organic changes. Immunizing antitubercle serum was effective, because it was antagonistic to the tubercle toxins, which were, in a large measure, responsible for such lesions.

Mixed infections in tuberculosis offered the greatest complexity in the dyspepsia accompanying them. He thought it was due to the effect of a combination of the numerous kinds of germ poisons produced in such cases, both in the lungs and alimentary canal.

The Treatment of Tuberculosis by the Use of the Ultra-violet Ray.—Dr. ALBERT E. STERNE, of Indianapolis, read this paper. He spoke of the division of the sun's rays, dwelling particularly upon the actinic, or chemical, rays of light, and the identity of those emitted from the voltaic arc with those of the sun. From this he had elaborated a method of treatment for which it was maintained that most excellent results had been attained, both in a general and in a local manner. The nude body was exposed to intense light from powerful voltaic arcs, and in addition free ozone was developed from a special ozonating apparatus. In local applications only one pole was used, and this was connected with vacuum tubes devised for different portions of the body to be treated.

Dr. Sterne reported most excellent results in almost all conditions of debility, notably in neurasthenia, and in the primary stages of tuberculosis.

Sanatorium Treatment of Pulmonary Tuberculosis, and How it may be Carried out at Home.—Dr. ROBERT H. BABCOCK, of Chicago, discussed this phase of the subject. He divided the sanatorium treatment into four classes. Pure air, nourishment, or forced feeding, hydrotherapy, and a strict régime, or control of the patient's daily life. The open air treatment was obtained by the patient's being exposed on a balcony or in properly constructed shutters where he was protected from cold winds and elements, and kept in the open air sometimes even when the temperature was as low as 13° below zero. Among the conditions which indicated rest in the open air were progressive loss of weight and cardiac asthenia. When patients had passed out of the stage in which these conditions existed, and were convalescing, then exercise was permitted, the exercise being carefully determined by the medical attendant. The nourishment of the patient was carefully selected, not only with refer-

ence to a proper proportion of proteids, which should be large, but also so as to include the proper amount of carbohydrates. Milk, raw eggs, meat and its varieties, poultry and fish, etc., were the articles on which reliance was chiefly placed. Hydrotherapy played an important part in the treatment. Hydrotherapy was applied for the purpose of stimulating nutrition, toning of the circulatory system, and overcoming the oversensitiveness of the skin, which existed in so many tuberculous patients. As to the control of the patient, a very important element in treatment, every patient should be controlled from the time he got up in the morning until he went to bed, and this was done by the supervision of a skillful medical attendant and nurses. The temperature was carefully recorded, and even the recreations in which they indulged were carefully selected by the medical attendants, with a view to the prevention of excitement, for even mental emotion was deleterious to many of these patients.

Speaking of the home treatment of tuberculosis, Dr. Babcock detailed it at considerable length, saying that the majority of medical practitioners were not fully alive to the importance and value of this treatment, and were not properly instructed in the details or method.

(To be continued.)

Book Notices.

Tratado Teórico-Práctico de las Enfermedades de los Niños. Por el Doctor FRANCISCO CRIADO Y AGUILAR, Catedrático de Enfermedades de la Infancia con Su Clínica en la Facultad de Medicina de la Universidad Central. Madrid: Imp. del Asilo de Huérfanos del S. C. de Jesus, 1902.

The opening pages of this book are devoted to a disquisition upon the comparative merits of the terms pædonocology, pædology, pædopathology pædiatrics, etc., the author dividing his work into two sections under the headings of pædology and pædopathology. Under the former he includes the anatomical and physiological characteristics of the infantile organism, infant feeding, clothing, bathing, exercise, and education. A good working basis is given the subject of the management of children in health and disease through the chapter dealing with the anatomy and physiology of the child; which subjects are fully and ably presented. In view of the general insistence upon the superiority of the mother's milk for the nourishment of the infant, it is with some surprise that one finds at the opening of the chapter upon infant feeding five contraindications to maternal lactation, considerable prominence being given to an unsatisfactory condition of the mother's appetite as a contraindication to the nursing of her child. Though many valuable suggestions are offered for the regulation of the infant's diet, be it breast-fed or bottle-fed, the lines are not drawn so hard and fast as is usually the case, much being left to the physician's judgment in individual cases. The chapter upon education voices the general sentiment against the overtaxing of the child, and embodies a plan for the better distribution of the hours devoted to study. In the section devoted to pædopathology, much space is given to abnormal

conditions in the new-born, the diseases of the nervous system also being treated of more fully than usual, as may be judged from the fact that, of the 1,130 pages included in the book, some 250 are devoted to the latter subject, and 360 to the former. The symptomatology, diagnosis, and treatment are very completely presented in these conditions, as they are also in the chapters devoted to respiratory, gastrointestinal, infectious, and miscellaneous diseases. The book embraces much valuable material which cannot fail to be helpful to student and practitioner.

The Elements of Bacteriological Technique. A Laboratory Guide for the Medical, Dental, and Technical Student. By J. W. H. EYRE, M. D., F. R. S., Edin., Bacteriologist at Guy's Hospital, London, etc. With 170 illustrations. Philadelphia and London: W. B. Saunders & Company, 1902. Pp. 11 to 371. (Price, \$2.50.)

In the preface it is stated that the bulk of the matter of this book is simply an elaboration of the typewritten notes distributed to the author's laboratory classes in practical and applied bacteriology. It aims to instruct the student in technical details and the use of apparatus in routine laboratory procedures. How well the author has accomplished his purpose may be seen by even a cursory examination of the book. But it requires a careful perusal to note the painstaking care with which each chapter has been prepared. In no instance has the author permitted the student to doubt or to hesitate at the most trivial detail in technics. Everything is told in the clearest possible manner and with a terseness of statement which gives a peculiar charm to the work. And throughout the book are illustrations that prove of eminent service in the elucidation of the text.

The reader will also note many practical hints and useful directions not heretofore stated in ordinary textbooks, as, for instance, the methods for determining the absolute value of the scale in the eye piece micrometer and other details in micrometry. The scope of the work embraces a minute description of all apparatus and its application, methods of sterilization, the preparation of culture media, methods of cultivation, isolation, and identification, experimental inoculation of animals, and general bacteriological analyses. In many of the chapters the methods which are in common use and have given the best results are printed in large type, while other recognized methods are in smaller print. Altogether, we do not hesitate to say that this is one of the most important and reliable works of its kind published, and we predict for it a most hearty welcome.

Taschenbuch der Massage. Für Studierende und Aerzte. Von Dr. ERICH EKGREN, an der III medicinischen Universitätsklinik zu Berlin. Mit 11 Abbildungen. Berlin: S. Karger, 1902. Pp. 90.

The author has given us a book which is essentially practical, merely the most important methods being given. It is opened by an introduction by Senator, in which he points out the value of mas-

sage as a therapeutic agent. The author, realizing the growing importance of stomach and intestinal massage, has devoted special attention to this subject illustrating it with appropriate photographs. He also points out the inefficiency of local massage without gymnastics, suitable diet, etc.

For the general practitioner this volume, although short, will be found to contain the essentials of the subject.

Medical Microscopy. Designed for Students in Laboratory Work and for Practitioners. By T. E. OERTEL, M. D., Professor of Histology, Pathology, Bacteriology, and Clinical Microscopy, Medical Department, University of Georgia. With 131 Illustrations, some of which are Colored. Philadelphia: P. Blakiston's Son & Company, 1902. Pp. xii-17 to 362. (Price, \$2.)

This book is intended principally for beginners in microscopy, and more particularly, for those who must work without the advantage of the guidance of a teacher. No pretense to originality is made. The subject is gone over in as complete a manner as the limits of the book will permit, and where several methods can be employed to obtain a certain result the most important one is usually mentioned.

The articles on bacteriological methods and those on pathogenic bacteria are to be recommended especially. In the articles on the malarial organisms the great advantage of the fresh specimen for rapid diagnosis, and the extreme difficulty in detecting the flagellated forms, are not sufficiently printed out for the student. The articles on stomach contents and fæces, which together take up but five pages, are so incomplete as to be practically valueless.

On the whole, the book is of value to those for whom it was written, and the busy practitioner whose time does not permit of his consulting more exhaustive works on the subject.

BOOKS, ETC., RECEIVED.

Therapeutics of Dry Hot Air. By Clarence Edward Skinner, M. D., LL. D., Professor of Thermotherapy in the New York School of Physical Therapeutics, etc. New York: A. L. Chatterton & Company, 1903. Pp. 5 to 200. (Price, \$2.)

The Pathology and Differential Diagnosis of Infectious Diseases of Animals. By Veranus Alva Moore, B. S., M. D., Professor of Comparative Pathology, Bacteriology and Meat Inspection, New York State Veterinary College, Cornell University. Illustrated. Ithaca, N. Y.: Taylor & Carpenter, 1902. Pp. xiv-380.

Golden Rules of Refraction. By Ernest E. Maddox, M. D., F. R. C. S., Edin., Ophthalmic Surgeon Royal Victoria Hospital, Bournemouth, Eng., etc. Golden Rule Series. No. XII. Bristol: John Wright & Company. London: Simpkin, Marshall, Hamilton, Kent & Company, 1903. Pp. 3 to 86.

Proceedings of the Charaka Club. Volume I. New York: William Wood & Company, 1903. Pp. vii-97. (Price, \$3.50.)

Transactions of the American Gynecological Society. Volume XXVII. For the year 1902.

Transactions of the American Orthopaedic Association. Sixteenth Session held in Philadelphia June 5, 6 and 7, 1902; Volume XV.

Medical and Surgical Reports of the Boston City Hospital. Thirteenth Series.

Second Annual Report of the New York State Hospital for the Care of Crippled and Deformed Children. For the year ending September 30, 1902.

Eighteenth Annual Report of the Bureau of Animal Industry. For the year 1901.

Miscellany.

The Shape of the Head and the Roving Temperament.—A (presumably lay) observer, in Spartanburg, S. C., according to the *New York Times* for January 24th, citing the *Spartanburg Journal*, has arrived, as the result of his investigations, at the conclusion that oblong-headed people are of a restless and roving nature, not content to take things as they happen and make the best of them. On the other hand, he finds that round-headed people are more content, less restless, and more satisfied to settle down and make the best of their environment, instead of trying to improve on it by frequent removals. It would be easy enough, we should think, to collect sufficient evidence on this point to warrant scientific conclusions.

A Confluent Pustular Eruption due to Potassium Bromide.—Dr. Arthur Hall (*Quarterly Medical Journal for Yorkshire*, etc., November) reports the case of a female infant, nine months old, to which two grains of potassium bromide were given three times daily for a week for convulsions. About four days after the bromide was stopped, a spot appeared on the left cheek, and fresh spots appeared for about ten days. Ten days later the child presented the following appearance: "The rash is widely distributed on the face and neck, especially on the cheeks and under the chin. There is none on the scalp. There are some large spots on the buttocks, otherwise the trunk is fairly clear. The forearms and dorsa of the hands and the legs and dorsa of the feet are considerably affected. In character the spots are all alike and only vary in size, stage of development, and effects of friction. Each spot is rounded in shape with a distinct, sharply defined edge. The size varies from two inches in diameter down to that of a split pea. The larger ones rise gradually to form a bun-like swelling, not having quite the contour of a bulla, though the smooth shiny surface of the tense epidermis looks at first sight rather like it. Some of the larger ones, especially on the legs, are covered by a thick dry crust. The surface of each is dotted over with small punctiform yellow pustules, but these, together with the rest of the inflammatory material which causes the swelling, are all covered over by the distended superficial layers of the stratum corneum, except where the pustules have begun to exude through, that is, in the older or more scratched spots. The spots are very irritable, and the child tries to scratch and rub them. Those on the legs have bled from the child knocking them." The author says that this "confluent pustular eruption" may be produced by both bromides and iodides, and is apparently due to a direct action of the salts on the skin structures themselves. It is not nearly so common a form of eruption due to these drugs as the discrete acne-like pustules. In adults there is sometimes a similar condition limited to one or two patches here and there, but, as a rule, a very extensive bromide rash, such as this, is seen only in infants, who seem particularly susceptible to the irritating effects of the drug. The corresponding eruption due to iodide of potassium is, on the contrary, more often seen in older persons. But it is usually in persons suffering from defective elimination of some kind that

the worst cases are seen, and then it may be extremely severe. In all these cases accurate diagnosis is of great importance, as the continuance or repetition of the offending drug will aggravate the condition, and, apart from the distress of the patient, may cause serious weakness, owing to excessive discharge and hæmorrhage from the spots. This last complication must not be forgotten. The diagnosis will have to be made from sarcoma and syphilis. As regards the diagnosis from sarcoma, the rapid appearance of the patches in several places and their pustular character should cause no difficulty. It is well also to remember that the rash may not appear until some time after the drug has been stopped, and will certainly remain for a long time. It does not seem to be usual for the mucous membranes to be affected, but in one case of iodide rash of this kind there was a swelling on the side of the tongue which projected from it to the size of a large filbert. The article is accompanied by an excellent photograph.

The Blessedness of Motherhood.—An exquisite word painting of the blessedness of motherhood is to be found in the *Prose Fancies* of the poet, Richard Le Gallienne, p. 145. He there says: " * * * but what is 'paternity' compared with motherhood? The very word wears a droll face, as though accustomed to banter * * * Maybe a recondite intention of the dogma of the Immaculate Conception was the accentuation of the fact that man's share in the sacred mystery of birth is so small and woman's so great, that the birth of a child is truly a mysterious traffic between the divine powers of nature and her miraculous womb—mystic visitations of radiant forces hidden eternally from the knowledge of man.

"We stand in wonder before the magical germinating properties of a clod of earth. A grass-seed and a thimbleful of soil set all the sciences at nought. But if such is the wonder of the mere spectator, how strange to be the very vessel of the mystery, to know it moving through its mystic stations within our very bodies, to feel the tender shoots of the young life striking out blade after blade, already living and wonderful, though as yet unsuspected of other eyes; to know the underground inarticulate spring, sweeter far than spring of bird or blossom, while as yet all seems barren winter in the upper air; to hear already the pathetic pleadings of the young life, and to send back soothing answer along the hidden channels of tender tremulous affinities; to lie still in the night and see through the darkness the little white soul shining softly in its birth-sleep, slowly filling with life as a moon with silver—it was a woman and not a man that God chose for this blessedness."

The Grape Treatment; the Action of Grape Juice on the Organism.—Dr. Moreigne (*Journal de médecine de Paris; Revue Française de médecine et de chirurgie*, December 8th) says that under the influence of grape juice there is produced (1) increased diuresis; (2) diminished acidity of the urine; (3) diminution in both absolute and relative values of uric acid; (4) a derivative action (laxative) on the intestine; (5) diminution of intestinal fermentation; (6) an economy in regard to nitrogen-

ous materials (*un engraissement azoté*), that is, a diminution in the nitrogenous disassimilation, and that without in any way decreasing its completeness. This economizing action is exercised in spite of the laxative effect, which action has the property of augmenting the nitrogenous disassimilation and oxidation. There is this great advantage over ordinary or medicinal purgatives, that the grape treatment may be continued without any ill-effects; (7) fixation of fatty matter in the organism; (8) an increased activity of the hepatic functions, and especially of the biliary secretion; (9) this proportion is very important and gives the explanation of the benefits of this treatment in many pathological conditions. By its power of economizing nitrogenous matters and fixing fats, in addition to the mineral salts of the grapes, this treatment is indicated in diseases with rapid wasting and exaggerated metabolism, such as tuberculosis. It provides, in short, thanks to the hydrocarbons contained, combustible matters which conserve those of the organism itself. All these facts are of real importance. They show that grape juice acts upon many important functions of the organism, and particularly upon the hepatic, intestinal, and renal functions; they demonstrate its manifold therapeutic properties, and enable us to explain the numerous good results (and even to foresee new ones) achieved by empiricism and related by physicians of grape-producing countries in various affections or pathological conditions in which grapes have been employed. The treatment has also this great advantage: it is accepted willingly by nearly all invalids and especially by children. It is absolutely harmless, and may be continued during many weeks without any unpleasant effects.

The Correlation of Mental and Physical Characters in the Human Race.—Alice Lee, D. Sc., Marie A. Lewenz, B. A., and Karl Pearson, F. R. S. (*Proceedings of the Royal Society*, December 27th) in a paper read before the Society, November 20th, arrive, as a result of an extensive and painstaking investigation, at the conclusion that while the intelligent are only *slightly* the more healthy, the athletic are *notably* the more healthy element in the community. Further, the athletic are considerably more intelligent than the non-athletic; they are the more popular and more noisy element; and they tend to quick rather than sullen temper. In general terms the athletic boy may be described as healthy, quick-tempered, and intelligent when compared with the non-athletic boy. He certainly under all three headings should make a better soldier than the non-athletic, and it is hard to discover any statistical evidence in *school* life for such expressions as "the flannelled fool at the wicket," or "the muddy oaf at the goal." What happens in later life can only be determined when ample statistics are available for reduction and comparison. Failing such data, the authors consider that we can argue only from the vaguest of impressions.

Dr. Thomas H. Chivers and Edgar Allan Poe.—Dr. Thomas H. Chivers, of Oaky Grove, Georgia, was the son of a wealthy cotton planter, and though

educated as a physician at the Transylvania University, never entered into the active practice of medicine, but devoted himself to literary pursuits. He was offered, but declined, the chair of physiology at the University of Atlanta. He wrote several volumes of poems of a rather mediocre character, but in later years developed many singular eccentricities, which, together with his association with Poe, have recently brought his name into prominence in connection with the revival of interest in the career of that gifted, but unhappy author. Dr. Chivers's verse, when not merely commonplace, was distinguished by a remarkable vocabulary, and the free use of alliteration and of somewhat involved metaphor. Dr. Chivers and his relations with Poe, who seemed to hold his verses in some esteem, are made the subject of an interesting note in the January number of the *Century Magazine*. Some idea of the character of the verses of Dr. Chivers, which furnished the source of great merriment for Swinburne, may be gained from the following stanza, which was quoted by Bayard Taylor in the "Echo Club":

Many mellow Cydonian suckets,
Sweet apples, anthosmal, divine,
From the ruby-rimmed berylline buckets
Star-gemmed, lily-shaped, hyaline;
Like the sweet golden goblet found growing
On the wild emerald cucumber-tree,
Rich, brilliant, like chrysophrase glowing
Was my beautiful Rosalie Lee.

The article is to be continued in a later number of the *Century*.

The Title of Doctor was, according to the *Journal médical de Bruxelles* for December 31st, for the first time made and conferred in the twelfth century, by the University of Bologna. The first doctor of medicine was Gulielmus Gordinio, who was invested with this dignity by the College of Aosta, in 1220.

Nugæ Medicæ Veterum.—The *Lancet* for November 29th publishes the following epitaph, sent by a correspondent, which is to be found in the old Bunhill Fields Burial Ground, London, which is situated in the City-road, just opposite the house where John Wesley lived and died, and contains, among other memorable tombs, the graves of John Bunyan, Daniel Defoe, and Isaac Watts.

South side:

"Here lyes Dame Mary Page,
Relict of Sir Gregory Page, Bart.,
She departed this life March 11, 1728,
In the 56 year of her age."

North side:

"In 67 months she was tap'd 66 times,
Had taken away 240 gallons of water,
Or ever fearing the operation."
Without ever repining at her case,

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Original Communications.

A CRITICAL REVIEW OF SOME OF THE RECENT LITERATURE OF TUBERCULOSIS.

(SECOND PAPER.)

By JONATHAN WRIGHT, M. D.,
BROOKLYN.

The literature of tuberculosis has been enormous in amount during the last year or two. The mere enumeration of titles would almost fill the space occupied by even such a cursory review as this. The most interesting subdivision has been that part of it which occupies much of the field of researches on immunity, but unfortunately of all sublunary departments of biology this has grown to be the one which instils into the curious but casual reader the most abject feelings of dismay. The Huxley lecture of Professor Welch¹ which pretended to be but a very superficial summary of recent work need only be perused to perceive that the discussion has left the *terra firma* of well established fact and legitimate deductions, to soar like a disembodied wraith, into the ether of vague hypothesis and fantastic etymology.

When one reads of toxins and antitoxins subdivided into cytotoxins, leucotoxins, spermotoxins, nephrotoxins, neurotoxins, syncytiotoxins, of agglutinins, precipitins, coagulins, of bacteriolysins, hæmolysins, of toxophores and zymophores, one wonders that Molière does not again appear in the flesh to ridicule this "*specieux babil qui vous donne des mots pour des raisons.*" Until, therefore, the discussion is brought down to the level of a finite understanding, not much can be made of it by any one not initiated in the jargon of modern biological chemistry.²

Perhaps after all little is lost by this confessed insufficiency of technical information, for the suspicion involuntarily arises that a refuge has been sought in etymology and tautology for ignorance and hopeless confusion. The truth does not usually need such complicated formulæ.

Virchow³ has reiterated, in almost his last publication, the assertion made nearly forty years ago in regard to the non-identity of the morphological

changes in cattle and human tuberculosis and, as a sort of parting warning to the profession he loved so well, he declares that the knowledge of "the bacillus is not the alpha and omega of tuberculosis." Neither, might we add, is the study of its products the sole route which must be traversed if we are to arrive at a complete knowledge either of the ætiology or of the therapy of this greatest of all scourges of humanity.

Koch's announcement in London, a year or two ago, as unfortunately has been the case with too many of his announcements, produced a very great sensation. While the obfuscation it causes in lay readers is to be greatly deplored, it has produced a very beneficial influence upon medical thought. The previous much more original statement of other observers, especially in America, had only aroused a languid attention, which, without the belated and perhaps a little ungenerous dictum of the great man would have subsided, for a time at least, into oblivion. Perhaps a great man's greatest utility is the notoriety he gives to other men's ideas. Koch⁴ has recently published a paper in which he unsparingly reviews the very vulnerable evidence, entirely circumstantial, of the actual transmission of cattle tuberculosis to man. He very justly characterizes it here, as he has hitherto done, as unsatisfactory. He very properly regards the fact, not only as unproved, but as highly improbable. Let us keep in mind that from cattle the infection must be supposed to enter the organism chiefly, but not wholly, from the alimentary tract below the pharynx, while from man himself it must be supposed to enter the organism chiefly through the upper air tract in the air current. In the latter case we are at once confronted with the schism with which the recent paper of Dr. Saenger is concerned. Dr. Saenger,⁵ who has written on the subject before, introduces his theme with the question, "Can solid or fluid dust or spray particles, containing tubercle bacilli, or can tubercle bacilli by themselves, taken up by the inspiratory air current and, floating in this, reach the alveoli of the lungs?" This is a question with which I was concerned some fifteen years ago and as the results of experimentation I was convinced, as indeed *a priori* considerations and our knowledge of the laws of physics should teach us, that it is to be answered in the negative.

¹ *Lancet*, October 11, 1902.

² Dr. Prudden's recent article *Medical Record*, February 14th, comes too late for review.

³ Virchow's *Archiv*, Bd. 167, Hft. 1.

⁴ *Deutsche medicinische Wochenschrift*, 48—1902.

⁵ Virchow's *Archiv*, Bd. 167, Hft. 1.

By his observations on dust in air currents drawn through moistened tubes Saenger concludes that dust particles floating in the inspired air cannot penetrate very far into the bronchioles. Still further experiments lead him to assert that "It is impossible that tubercle bacilli floating in the inspiratory air current should penetrate with this into the pulmonary alveoli."

He goes only so far as to admit that "It is conceivable that, at the most only in exceptional conditions, inspired tubercle bacilli which have lodged on the mucosa of the upper bronchi finally reach the alveoli with the secretions by aspiration." I must confess that I have never seen the slightest evidence to warrant even this guarded admission, nor do I believe it a physical possibility. I can only conceive that the tubercle bacillus is carried to the alveolar regions of the lungs by blood or by lymph vessels into which they enter either directly through the surface epithelium of the upper air tract or from lymph nodes and other foci of infection or lodgement. The waving cilia of the middle air tract—the smaller bronchi and bronchioles—must effectually expel any ordinary dose of bacilli which has passed the bifurcation of the trachea. The apparently weighty facts to be urged against this assumption are the phenomena presented by anthracosis of the lungs. One can only venture the suggestion that the presence of coal dust in the walls of the pulmonary alveoli does not necessarily warrant the assumption that they have passed through the epithelium of the alveoli; we may as well suppose that they have been carried there from higher up in the air tract by means of the lymph or blood channels. If we care to suppose that enormous clouds of coal dust have overwhelmed the powers of the cilia, we certainly cannot apply such a hypothesis to the ordinary inhalation of bacteria. Where coal pigment is found in the alveoli of the lungs, outside of their walls, it is contained, not in epithelial cells, but in leucocytes or the large phagocytes. How these arrive in the alveoli is as yet unsettled. If they come from the larger bronchioles above, they must have found their way there against the current caused by the cilia, which cease at the finest bronchioles. In all probability we must believe that the dust particles are carried in the lymph channels beneath the cilia bearing epithelial cells, rather than in the current of secretions constantly cast upward by the cilia on the surface. However that may be, the air is changed in the alveoli, not by air currents, but by the subtler influence of the diffusion of gases, and any ponderable substance heavier than air must have been deposited on a damp cilia-clad surface long before it has reached the alveoli.

If bacilli enter the system with the food, on the other hand, we cannot believe that any considerable

number of them are rubbed off into the crypts and lacunæ of the tonsils, and we must suppose that they eventually enter the system in an effective condition after they have reached the absorbents of the intestines.

In spite of Bollinger's early assertions, all pathological evidence now tends strongly to contravene this assumption, and the weight of clinical evidence against it is almost as emphatic. Of late, however, the question has been opened anew, chiefly from the experimental side.

News comes from an Italian laboratory⁶ which so exactly fits in with the conclusions derived from clinical and pathological experience, that one cannot help wondering if the observers have not been a little influenced rather by facts which are perfectly clear in clinical experience, than by the facts worked out with experimental processes. Manfredi and Frisco, as a result of elaborate experimentation, have come to the following conclusions:

1. Through the injection of very small doses of the tubercle bacillus into the peripheral lymph channels, it is possible to bring about experimentally a localized infection in the lymphatic gland system.

2. The external skin and mucous membranes in the normal condition allow tubercle bacilli to pass through them. They therefore form the natural port of entry of infection, which thereupon usually appears as exclusively or primarily a tuberculosis of the lymph glands (*scrofulous adenitis*).

3. According to the penetration alone of tubercle bacilli into the lymph glands, according to the amount and the virulence of the bacilli upon the one hand and the predisposition of the lymphatic gland system to reaction on the other, there will be produced three different consequences:

- a. A latent tuberculosis which is characterized by the presence of a few bacilli without specific change in the glandular parenchyma.

- b. A typical tuberculosis with the production of tubercle, but still limited to one or more glands without further spread to other organs and resulting in cure.

- c. A circumscribed tuberculosis, at first limited to the lymph glands, which afterwards draws the whole organism into the process.

4. In the fight against the tubercle bacillus, the lymphatic gland system develops for its own protection, as well as for that of the whole organism, a reaction which consists of the following established factors:

- a. Physical conditions which prevent the further introduction of the bacilli into the body, or retard it. These stand in relation partly with the anatomical structure of the ganglia, partly with physiological

⁶ *Centralblatt für Bakteriologie*, etc. Referate XXXII, Bd. 10, October 10, 1902.

processes. These latter are influenced by inflammatory conditions. The change in the gangliar parenchyma depends upon the influence of the bacilli themselves.

b. An influence which lessens the virulence and destroys a few of the germs.

c. A decided tendency to the fibrous degeneration of the specifically altered tissue, and to the partial or total sclerosis of the infected glands.

5. It is possible to increase artificially the protection of the lymph ganglia against the tubercle bacillus, or in other words, to bring about a certain degree of antituberculous immunization of the ganglia. This is increased by rapid intralymphatic inoculation with at first small, and then greater, doses of tuberculous poison.

As to experiments with the inoculation of animals with human tubercle bacilli, the tendency in the very numerous articles which are appearing is to deny the absolute insusceptibility of animals to large doses, but at the same time to support the essential claims of Koch. Moeller⁷ declares that calves, by feeding, by subcutaneous injection of human tuberculous sputum, by inhalation, by intraperitoneal and intravenous injection, or by cutaneous inunction of cultures of the human tubercle bacillus cannot be infected by the bacillus. This was deduced from the results of experimentation on four or five calves, and he came to the same conclusion as to goats after a similar number of experiments. Lassar, in the same journal, adds his testimony to the general experience "that man is not insusceptible to cattle tuberculosis." Behring⁸ in his recent elaborate researches makes it probable that the middle ground is the correct one, *i. e.*, that the human tubercle bacillus has a mildly pathogenic influence upon cattle, which can be cultivated into marked virulence by transmitting cultures through rabbits and goats. Presumably, therefore, the converse is true.

By the use of the human tubercle bacillus cattle may be rendered immune against their own virulent bacillus. Both varieties of the bacillus can alike be rendered markedly less virulent to cattle. The facts may be more or less significant but we have grown wary of accepting the idea that these principles can in practice be applied to the immunization of man, though Nocard⁹ has shown the cattle bacillus as virulently effective in apes, the bacillus having been injected with the food and apparently begun its work in the intestinal canal.

Fibiger and Jensen,¹⁰ while they admit the general proposition that the tuberculosis of animals has not a marked ætiological influence upon the spread and

existence of tuberculosis in the human race, publish a few observations which show that the experimental transmission of disease from man to animals and vice versa is practicable. We must, however, in studying such work keep in mind the fallacy of reasoning from premises of experimental technique to conclusions which are not warranted when applied to the actual infection of the human individual. Not only is it impossible under ethical laws to inoculate a man with a lethal dose of tubercle bacilli, but it would prove of no value if it were carried out. The average human organism takes care of the pharmacopœial dose of morphine, and we have every reason to believe that it takes care of many a dose of the tubercle bacillus, whether from man or cattle.

As time goes on, and as experimental observations multiply and are more carefully controlled, they are coming to be more in accord with clinical experience, certainly a gratifying tendency, for nothing but confusion results when the two stand in opposition to one another in their deductions. If we are to admit that the danger of infection by the tubercle bacillus from cattle has been grossly exaggerated, as a necessary corollary the importance of the fight to prevent contagion between man and man becomes more pressing. The practicability of materially lessening this by the isolation or segregation of patients is still problematical. Fortunately, this is being carried out in a way that is not only advantageous to the non-tuberculous, but to the patient himself.

Neither does it conflict with, but is a part of, the enormous advance made in the general hygienic conditions of civilized nations. Thus far, however, the improvement in hygienic conditions of life, by adding to the resisting powers of the individual, seems the most potent factor in limiting the ravages of human tuberculosis.

In the clinical diagnosis of tuberculosis, the paper of Massei on tracheal hæmorrhage, published four or five years ago, has borne fruit in the observation of Donelan,¹¹ who reports five cases carefully observed, the subsequent histories of which were followed. The observer is confident that the origin of the bleeding was the trachea after an attack of influenza. Other cases he believes he has also seen, but as the patients passed from observation so that a subsequent development of phthisis pulmonalis could not be excluded, he does not embody the reports in his paper. He ends his paper with the interrogation, "How many so-called cases of early tuberculosis have been merely recoveries from tracheal hæmorrhage, occurring as a sequel of influenza?" This query in itself would be a fruitful theme for an essay. Hæmorrhage into and from the mucosa of the air passages is a common observation. Laryngoscopy as a rule can reveal little of

⁷ *Deutsche medicinische Wochenschrift*, 40—1902.

⁸ *Ref. Centralblatt für Bakteriologie*, October 1, 1902, xxxii, Bd. 9.

⁹ *Ibid.*

¹⁰ *Berliner klinische Wochenschrift*, 38, 1902.

¹¹ *Journal of Laryngology*, January, 1901.

the subglottic condition of the mucosa. We must of late note the tendency to recognize a pre-bacillary stage of tuberculosis, at least so far as the sputum is concerned. We have cause to remember how auscultatory signs vary in the normal chest. Finally, everyone is aware of the widespread impression among medical men, not founded upon statistics so far as I know, that hæmorrhagic cases of phthisis frequently recover. When we collate these uncertain impressions and add to them the demonstrations of Massei, supported by the observations of Donelan, we make out strong presumptive evidence which would justify an acquiescence in the belief implied in the latter's question of the frequent occurrence of mistaken diagnoses in these cases. Perhaps some of us have been inclined to give too much weight to the history of hæmoptysis.

As for the therapy of the upper air passages, Veiss contributes a paper to Fraenkel's *Archiv*¹² on the curability of pharyngeal tuberculosis. In approaching the consideration of this subject one must bear in mind certain *a priori* principles, and others deduced from clinical experience and to some extent confirmed by experimental research. Pharyngeal tuberculosis in the early stages of pulmonary phthisis is only less rare than primary eruption of tubercle in the pharynx. It is very much rarer than laryngeal tuberculosis in any stage of the pulmonary lesion. The primary eruption of tubercle in the pharynx is certainly no less frequent, probably more frequent, than in the larynx. Now, presuming that infection takes place directly through the epithelium, the pharynx is very much more exposed to it than the larynx, and infinitely more exposed than the bronchioles and air cells, whither, as I have said, I do not believe the tubercle bacillus ever arrives in the air current. On the other hand, suppose that the tubercle bacillus is deposited in the pharyngeal tissues only by the lymphatic and blood currents. Owing to the extreme richness of the pharynx in the supply of these, we cannot believe it is, even from these, less often the temporary host of the invading organism than the larynx and the lungs. On either assumption, therefore, we must deduce the hypothesis that there is some factor of immunity inherent in the pharyngeal mucosa which does not obtain in that of the larynx or of the air passages below it. Now, these suggestions are not at all in contradiction with the further observation, perhaps not very well established, that in those rare cases of the acute eruption of tuberculosis the pharynx exhibits no such immunity as in the slower processes of tuberculosis. We can only conjecture that in some way the usual local index of immunity is lowered so that it is on a par at least with that of other regions. A hint of

how the local immunity of the pharynx may vary from time to time is to be had by the study of the clinical histories of cases of pharyngeal mycosis. On microscopical examination mycelial spores and a few of the threads may easily be found in the recesses of the teeth or the tonsils in nearly all cases where these are diseased, but it is only in rare cases that they, for some unknown reason, suddenly begin to grow at certain times in certain individuals until the sprouting vegetation is visible in the tonsillar crypts as shining white tufts or patches. After a longer or shorter period of time, apparently somewhat influenced by climatic change, they disappear. Local treatment has little or no influence in this disappearance.

We have here therefore a very striking example of a temporary lowering of resistance to the growth of a microorganism in the pharynx. It is not unreasonable to apply this as a parallel to the behavior of the pharynx toward the invasion of the tubercle bacillus. It is in the light of these considerations, as I have said, that we must review the literature of pharyngeal tuberculosis. The comparative frequency with which pharyngeal tuberculosis appears in acute miliary invasions and in the last stages of laryngeal and pulmonary tuberculosis explains, perhaps, the exceptionally unfavorable prognosis attached to it by some authors to which Veiss draws attention, at the same time reminding us of the occasional instances reported in literature of "cured cases."

Moritz Schmidt and Gleitsmann having given detailed accounts of several indubitable cases, the assertion is made by the former in his text-book that tuberculous lesions of the pharynx heal more frequently than those in other localities. This I believe is not only very true, but is easily susceptible of explanation. The pharynx is very much more accessible to all forms of topical treatment and can be very much more thoroughly inspected than any other portion of the upper air passages. If local treatment is ever efficacious it must be in these cases, when the pulmonary lesion is absent or in abeyance, and when they are not cases of the local manifestations of an acute general miliary tuberculosis. Veiss reports four cases which healed under the application of trichloroacetic acid. Unfortunately in all these cases, as is to be critically remarked in so many other "cured cases," the reports are not entirely satisfactory as to the diagnosis. In none is there any mention made of finding the tubercle bacillus, and in only one of a microscopical examination of tissue, which in this case was reported to be typically tuberculous. One can only remark as to this case that skilled microscopists have been known to pronounce tuberculous tissue which subsequently promptly healed under the administration of potassium iodide. Nevertheless, it

¹² Bd. XII, Hft. 3, 1902.

is more than probable that some, at least, of Veiss's four cases were really tuberculous, one or two having been put on antisyphilitic treatment without result.

In a brochure, Semon¹³ discusses the question of surgical treatment of the tuberculous larynx, of which subject he has hitherto said but little. He advises against making any breach of the surface when none in the way of ulceration already exists. This is one of the many discouraging features of the surgical treatment of tuberculous laryngitis. Theoretically, and very probably practically, Semon is correct, and yet frequently the most distressing cases of tuberculous laryngitis are those in which, with swollen arytaenoid tips and turbaned epiglottis, the dysphagia is excruciating where there is no appreciable ulceration. If there is one thing abscission of diseased tuberculous tissue in the larynx does, it relieves this most distressing symptom; and yet abscission always leaves a raw surface, not only open to infection, but liable not to heal.

Küttner¹⁴ chooses as his theme a very forlorn and hopeless problem, the question of therapy in cases of tuberculous laryngitis in women, complicated by pregnancy. He advocates in certain cases artificial abortion. He has very little practical experience, either of his own or in the reports of others, on which to base his indications. While cases of tuberculous laryngitis complicated by pregnancy go on regularly to a fatal termination I am not aware that they go on to it any more regularly than cases of tuberculous laryngitis without that complication. He disapproves of local surgical measures in these cases, saying that the trouble is a general one, and therefore contraindication to curetting, etc., is present. One fails entirely to see the force of this reasoning if we do not admit it in other cases. Indeed the only case I ever saw in which tuberculous infiltration and ulceration of the larynx healed entirely after curetting in my own practice was that of a pregnant woman. It is true that the larynx broke down several months after delivery, and the patient died several years after I first saw her, of laryngeal and tuberculous disease. So far as my own impressions are concerned, I lean to the wide-spread belief that pregnancy more frequently retards than hastens the march of tuberculosis in women, though doubtless there are instances enough in which the latter phenomenon is to be witnessed.

The severe loss of blood frequently attendant on abortion, even in the earlier months of pregnancy, is about the most disastrous thing that can happen to a phthisical patient. In surgical operations involving it, they rarely rally from what in other patients is a

temporary anæmia, and as a rule seem fairly to melt away before one's eyes. I think we have already come to the conclusion that the only indication for surgical treatment of the larynx is for such a procedure as will not curtail the resisting powers of the patient, either through the loss of blood, or the infliction of more suffering than the patient already endures from the malady itself, excepting, of course, dangerous dyspnœa, which is exceptional. It is for the gynæcologists to tell us whether or not artificial abortion is more of a drain on the patient than delivery at term. It is not, I am inclined to believe, pregnancy but its termination which is inimical to the vital force of the phthisical.

As to œdema of the larynx in phthisical cases, Logan Turner¹⁵ reports a case of sudden death from this cause. The symptoms of laryngeal and pulmonary involvement had not been especially well marked. It is very singular that with the comparative frequency of tuberculous laryngitis, and its deep and extensive infiltration of the soft and cartilaginous tissues, this is not a much more common termination of such cases; though, and this is always true of lupus, cartilage and bone are much less implicated than in the kindred lesion of syphilis. In the latter disease, the indications for tracheotomy are very often pressing, and were it not for the efficacy of specific medication they would be the rule in tertiary cases. Turner quotes statistics from Rice, showing that tracheotomy was indicated in a proportion of one to twenty-two in a comparison of tuberculous and syphilitic disease of the larynx, and this one patient suffered from it while under medication with potassium iodide. Turner by means of the submucous injection of the larynx *post mortem* has studied the subject certainly from a very faulty point of view. While any thing added to our knowledge of the anatomical possibilities of the effusion of serum is to be welcomed, it must be confessed that we can hope for little light on the pathology of œdema of the larynx from the mechanical introduction of extraneous fluids in the dead body.

As for the drug treatment of phthisis this now enters but little into the scientific literature of the treatment of phthisis. It does not belong there. It belongs in the department of diplomacy and finance. The whole trend of thought has for many years turned toward the question of immunity and the serotherapy of phthisis. For the reasons expressed at the outset of this review, I will pass over the question of immunity and turn for a moment to its allied subject, serotherapy.

A résumé of this we owe, as we do so much that is tiresome and discouraging in laborious research, to German industry and phlegmatic patience. Bron-

¹³ *Some Thoughts on the Principles of Local Treatment in Diseases of the Upper Air Passages.*

¹⁴ *Archiv für Laryngologie*, 1902. Bd. XII—Hft. 3.

¹⁵ *Edinburgh Medical Journal*. May, 1902.

stein and L. Frankel¹⁰ have gathered together a tolerably complete but necessarily a very condensed report of the activities in this field. To this the reader is referred, and to cheer him to the task, I may insert the quotation from Strauss with which they terminate their summary, "*C'est là un problème qui préoccupe actuellement au plus haut degré tous les chercheurs, et dont la solution ne se fera peut-être trop longtemps attendre.*" In the experimental, and especially in the clinical, work of Maragliano the authors find their most encouraging theme, and to it they devote by far the most space. They transcribe the summary of Mircoli, a follower of Maragliano, who reports the results of experiences with 2,897 cases. Let us consider these results in the light of the clinical experience long ago comprised in the sententious declaration of Alonzo Clark—"About one-half of all cases of phthisis pulmonalis recover." The increase in the number of incipient cases which may be diagnosed by the means of the stain for the tubercle bacillus and by other more refined clinical methods is sufficient to account for much of the improvement in the statistics noted over cases diagnosed twenty-five years ago, in the time of Dr. Clark. He was a most acute observer of disease long before the rise of serotherapy. As quoted by Bronstein and Fränkel, Mircoli declares:

1. "Out of 250 cases of limited apyretic tuberculosis

95 were completely cured,
110 improved,
30 remained *in statu quo*.

In 15 the process ran its course.

2. "Out of 932 phthisical patients with fever with circumscribed tuberculosis there were

168 cured,
511 improved,
163 stationary,
98 who grew worse."

3. "Bronchopneumonia without mixed infection; out of 655 (*sic*) patients there were

192 cured,
301 improved."

4. "The same complicated by the invasion of other bacteria, 332 cases, among which

31 were cured,
142 improved,
61 grew worse,
98 remained *in statu quo*."

5. "Bronchopneumonia with cavities, 712 cases,

281 improved,
290 grew worse,

and the others remained without change."

It would be stretching the Clark rule entirely too

much to apply it to this last class and we will not include it in our calculations.

Of the first four classes we may, perhaps, be allowed to think that in the first two, Clark's ratio of cures would be exceeded, while in the other two the cures would fall short of one-half. Let us, therefore, accept the total number of Maragliano's cured cases amounting to 486! Let us suppose that one-half those reported as improved eventually recovered, certainly a very liberal allowance, and we have 531. Let us in a still more liberal spirit suppose that one-half of all those remaining *in statu quo* eventually recovered, and we have 145, making a total of 1,162. Having been so liberal in our allowance of cures thus far, we may disregard the number of cases which grew worse, supposing they eventually died.

The total number in the four classes is:

250

932

655

332

—
Total 2,169

Applying Clark's rule to this number, one-half would be 1,084. This sort of calculation possesses no value of course, especially as the figures as transcribed by the authors do not tally, except in the way of illustration. But 1,162 cures, thus calculated, out of 2,169, does not exceed Clark's rough summary of one-half (1,084) sufficiently to make a very encouraging prospect for Maragliano's "serotherapy."

As to the foreign literature of tuberculosis, if we could form the habit of going to Germany for our facts and of going to England for our deductions, we should in the former find a more abundant harvest, and in the latter a more trustworthy separation of the wheat from the chaff. It would be repeating the general drift of this criticism even to make excerpts from the recent address of Sir Hugh R. Beever, published in the *Lancet* for January 10, 1903.

An Explanation of Professor Koch's Views on the Treatment of Tuberculosis.—According to cable dispatches to the *New York Sun*, Professor Hansemann said that it had been clearly demonstrated that tuberculosis could be transmitted through the food, tuberculosis of the intestines being established. This disease frequently heals of itself, but occasionally spreads to other parts of the body. In no case, however, does the infection cause ordinary tuberculosis of the lungs, which results in phthisis, and since the fact that this bovine tuberculosis of the human intestines is never by itself fatal, Professor Koch's assertion, to all practical intents and purposes, has turned out quite right. It would, therefore, be harmless to feed children with uncooked milk, but the milk which is commonly sold contains a number of other dangerous ingredients, which frequently lead to catarrh of the intestines.

¹⁰ *Centralblatt für Bakteriologie. Referate Bd. xxxii—Hft. 16-17.*

PULMONARY ANÆSTHESIA.*

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The purport of this paper shall be, not to give an elaborate and detailed treatise on anæsthesia and anæsthetics, but to present in a simple, yet practical, way some interesting and useful facts concerning the administration of anæsthetics, the action of patients under their influence, the signs that are of value to the anæsthetist, and the means to be used in emergencies that may arise during anæsthesia. In addition a report of some recent work with a most excellent new anæsthetic, shall be given.

Texts are replete with a lot of stuff on anæsthesia, and men have thought it advisable to copy, without the audacity of questioning, the statements made in them. For that reason this paper shall not attempt text book discussion, but, as much as possible, avoid reference to the facts presented there.

A man who is bound inseparably to one anæsthetic for all purposes will do mischief with it, no matter how small a death rate that particular drug may have. There are contraindications clearly laid down to ether as well as chloroform, and, unless cognizance is taken of this fact, somebody must suffer. This statement is made, because, after a surgeon has become thoroughly used to one drug, or has seen some other do mischief, he sometimes allows himself to become tied to one, to the complete exclusion of the other, regardless of indications.

How important it is that one should understand thoroughly the action of anæsthetics, and their proper mode of administration, will be impressed thoroughly on an observer who notices carefully the blunders made by men attempting to give anæsthetics, and the quandaries into which they are thrown by unusual circumstances arising. The day is gone when anæsthetics are to be entrusted to laymen—too much responsibility for life and suffering rests upon this part of the work; besides, opprobrium always falls more or less heavily upon the surgeon under whose care a patient dies, no matter if another is giving the anæsthetic. It is proper here to add, too, that any man incapable of selecting an anæsthetic properly, is incapable of properly giving it.

There enter into anæsthesia elements of danger from complications arising during the process, which embarrass the anæsthetist and sometimes the surgeon, too, very much. The proper comprehension of these, and a thorough mastery of the various means of averting or relieving them, is absolutely necessary if we would avoid humiliating accidents.

Patients who have suffered long from bronchitis

are prone to secrete excessive quantities of mucus, which, by accumulating in the throat, becomes a hindrance to respiration and may even cause cessation of that function. One patient, in my own experience, completely ceased to breathe and had to have her head lowered and the mucus mopped from her throat. The anæsthesia was resumed with chloroform with no further trouble. If chloroform is really contraindicated in these cases, then the advisable course, is to give hypodermically $\frac{1}{4}$ grain of morphine and $\frac{1}{50}$ to $\frac{1}{75}$ of a grain of atropine before anæsthesia is commenced. This symptom is then prevented or alleviated.

Paralysis of respiration occurs, following overcrowding of the anæsthetic, particularly ether. This can be avoided by remembering that the purpose of anæsthesia is to render patients unconscious and in their reflexes irresponsive to stimuli; when this is barely accomplished, all is done that needs to be done. When ether is given in quantities sufficient only to produce surgical anæsthesia, paralysis of respiration is not to be expected, but results only from excessive or improper administration. Artificial respiration, from 15 to 18 per minute, must be kept up till function is resumed.

During the second stage of anæsthesia, owing to general muscular rigidity, the blood is sometimes squeezed out of the veins and into the vena cava and the heart, so that the right heart is distended until contraction cannot take place, and death ensues. The anæsthetic must be suspended until rigidity ceases, or must be exchanged for chloroform until this stage passes off, when ether can be resumed. Fortunately, this so-called second stage of anæsthesia can so frequently be avoided that some are asserting that there is no second stage, or stage of excitement, essential to the administration even of the drug that has produced it with such unvarying certainty, *viz.*: ether.

It is a matter of record from hundreds of cases that it is possible for well trained anæsthetists to produce surgical anæsthesia without being hampered by all the common train of unfortunate symptoms belonging to the stage of excitement, without requiring three or four assistants to hold the patient on the table. This unfortunate, yet often necessary, procedure delays the anæsthetist, leaves the patient sore, and is an annoyance to the surgeon and all others concerned.

The means at our command to prevent the second stage are very easy and simple. The patient's confidence should be gained, if possible, by assurance of the ability of the anæsthetist, not in so many words, but by manifesting the proper interest in the patient, and by making the proper, not to say necessary, examination before beginning. The patient may then be told frankly that the desire is to prevent strug-

* Read before the Middle Tennessee Medical Association, November 21, 1902.

gling as he goes to sleep. Have him fold the hands across the chest and squeeze them tight; tell him every now and then to squeeze his hands. Begin the anæsthetic by placing the cone over the face without any application, then after a breath or two apply a drop or two of ether; then two or three drops, gradually increasing the amount of each application until a sufficient dosage is reached. Every half minute, or oftener, suggest to the patient to hold his hands tight, keeping his mind thus diverted from the anæsthetic. I have seen this done and have tried it successfully. Not every case will succeed, but I have been amazed at the results, and have seen the patients time and again go to sleep without a struggle or a murmur. But the room must be quiet; you can accomplish no good results if the room is full of people talking. I have seen one patient in the beginning of anæsthesia held by four men; I had them turn him loose and told him he had promised to hold his hands for me. Instantly he resumed that posture, became perfectly quiet and did not move again until he came out of the anæsthesia.

Death occurs by paralysis of the heart from over dosage, and from operations, especially in the region of the fifth nerve, in incomplete anæsthesia; in the former case, prevention can be secured by care on the part of the anæsthetist, as by removal of the cone from the patient's face when the sphincter is being divulsed, which causes a deep inspiration, and possibly an overdose; in the latter case, by care on the part of the surgeon not to operate until complete anæsthesia is secured. These statements are especially applicable to chloroform.

Death under anæsthesia occurs in patients from paralysis of the heart during complete anæsthesia, in which case it is instant; from damming of blood in the right heart during the second stage of ether anæsthesia, when it is slow and preventable; from paralysis of the heart due to operative interference in incomplete anæsthesia, where it is instant; from asphyxia due to obstruction of the respiratory passages by the tongue, enlarged tonsils, mucus, or from interference with respiratory muscles; and from combined shock of anæsthesia and operation. In the last two it is slow and usually preventable.

In all these the procedure is clear, with possibly one exception. The rule for position in impaired respiration or heart function is to lower the head to allow a freer flow of blood to the brain and the heart, but in all those cases where an intraabdominal obstruction to diaphragmatic function is causative of the symptoms, such as abdominal tumors, the proper course—the only course in the presence of these symptoms—is to elevate the head and relieve the pressure of the tumor on the diaphragm and heart. I have had narrated to me two cases of this kind; in

one the head was elevated and the symptoms improved at once; in one the head was lowered, and immediately the patient succumbed.

Certain diagnostic signs appear during anæsthesia, and if observed, are a certain cynosure to the anæsthetist; unobserved, they leave him wandering in a wilderness of darkness. As I have said already, the aim of the anæsthetist should be to keep the patient barely under surgical anæsthesia; all beyond that is uncalled for danger. But how are we to know where we are? When conjunctival reflexes are gone we are reliably certain of surgical anæsthesia. The patient's eyes look straight ahead and are steady; the pupils are moderately contracted, about one-eighth of an inch in diameter, and respond to light. On giving too much or too little of the anæsthetic, particularly ether, the pupils dilate. Is this dilatation a signal of danger or of too little of the anæsthetic? One of our leading texts affirms that we must stop administering, wait for reflexes, and begin again. But that is unnecessary. Close the eye, open it again in the presence of light; if the pupil reacts to light, the patient is safe and more ether can be given; if the pupil will not respond to light, too much ether has been given and we must wait for the pupil to respond. Under complete anæsthesia, when the steady straight-forward stare of the eyes is supplanted by a nystagmus, however slight, it means that the patient is passing out from under anæsthesia and needs another dose. In surgical anæsthesia respiration is regular, full, and stertorous, if ether is given, all respirations having about the same depth; a deep, sighing respiration nearly always precedes the appearance of reflexes, and should be recognized as their forerunner. The general circulation is to be watched in all cases, as it is an index to the oxidation of the blood and the condition of the heart.

The disadvantages of ether and chloroform as pulmonary anæsthetics, and the death of a patient now and then manifestly due to the action of these drugs, the time required to anæsthetize a patient, the time required for him to regain consciousness, the nausea and vomiting following the safer of these, sometimes also the other, the preparation necessary for them, the long period of thirst and distress succeeding the anæsthesia—all these objections deter the physician from administering an anæsthetic, especially at his office, and the patient from taking it anywhere, thus causing pain to be produced, imperfect examinations to be made, and incomplete treatment to go from the doctor's hands. What we needed was something safe, quick in administration and recovery, perfect in anæsthesia, devoid of unpleasant after symptoms. In ethyl chloride we seem to have all these and more. Nitrous oxide was hailed for these reasons, but rigidity, cyanosis, muscular twitchings, and short dura-

tion of anæsthesia, or, on the other hand, very expensive preparation for its use have kept it from being popular among physicians. But ethyl chloride properly given produces anæsthesia in from fifty seconds to two minutes, maintains it as long as necessary, restricted, it seems, only by the cost of the drug, and allows the patient to regain consciousness, and converse in from two to four minutes, and to get up and go his way unaided in a few more minutes. It is asserted that five operations can be done under ethyl chloride where three can be done under nitrous oxide, the anæsthetic being withdrawn. No symptoms come up in the course of administration to suggest danger; the pulse and respiration are practically unchanged in old and young, in weak and strong, with or without heart lesions. Nausea is sometimes present for a few minutes and then passes away; rarely is vomiting present, and when it is, it passes off briefly. The drug is so evanescent it cannot be kept long in the system unless constantly inhaled. After its administration in a room no ill odor is left to disturb the delicate sensibilities of following patients. Only one death has been reported, and in that case the patient had disease of the coronary arteries of the heart, and hence death was not attributable to ethyl chloride. Two others have been noted, but certainly were due to other causes. It has been administered some thousands of times (I have one report listing 12,436) and no other ill report has come to my ears, except that some have said five per cent. of patients cannot be anæsthetized with it. That depends largely on the method of administration. Not enough has been done with this wonderful drug yet to say that there is no danger in it. Potter ranks it with ether as safe for general anæsthesia, while he calls chloroform dangerous—after announcing 5,000 successive anæsthesias without a death. We must watch it and wait until hundreds of thousands are anæsthetized with it before we assert it to be absolutely safe, but so far everything points in that direction. I should rank the mortality as follows: First, chloroform; second, ether; third, ethyl chloride; fourth, nitrous oxide. Resuscitation from paralysis of respiration is more easily effected in ethyl chloride anæsthesia than with the other anæsthetics.

The method of administration is through a tight closed cone that allows a spray of the liquid to run upon a piece of gauze, over which all the inhaled air must pass, and containing an outlet valve, so as not to permit waste by expiring through the same opening. The nitrous oxide cone of the dentists is very good.

To illustrate what can be done with ethyl chloride: The quickest complete surgical anæsthesia was obtained on a child in fifty seconds. The quickest enucleation of an eye was four minutes from beginning

of anæsthesia. Questions were answered by this patient in two minutes after the anæsthetic was withdrawn; but that is about the usual period of time. I have used it for the examination of fracture; for the opening and packing of a bubo; for the amputation of a toe; for operative treatment of ectropion; for examination in hip-joint disease; for ligation of the supraorbital artery to check aneurysm within the orbit; for dilatation and curetting; for enucleation of eyes and for stricture. The longest period I have kept a patient anæsthetized was nineteen minutes. Ware, of New York, has held one forty-five minutes, one fifty minutes, and one seventy-five minutes. The only difference noted in my cases was that it required a little longer to regain consciousness after the prolonged anæsthesia.

It is proper here to say that not every case is completely relaxed by it, and ocular reflexes are not always destroyed. Otherwise, however, the anæsthesia is complete.

A CASE OF INTUSSUSCEPTION IN A BABY FIVE MONTHS OLD.

By LOUIS FISCHER, M. D.,

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VISITING PHYSICIAN TO THE WILLARD PARKER AND RIVERSIDE HOSPITALS, ETC.

In looking over the literature we find that this trouble is met with in very young infants, hence it seems worth while adding the present case to those on record.

There are two symptoms which are usually brought out prominently in the clinical history, whether the history is given by an intelligent nurse or by the mother of the baby.

First, vomiting, sometimes very persistent.

Secondly, no stool passed in one or several days. The latter symptom points to an obstruction of the bowel.

There is no previous history pointing to gastric or bowel disorder. We are usually told that the baby was in apparent health up to a certain time, and that then the symptoms of vomiting and constipation were noticed.

This affection commences at the ileocæcal valve and extends downwards. It is felt as a tumor usually much larger than the swelling found in appendicitis.

Intussusception usually causes a recession of the abdomen from the side of the cæcum, while appendicitis, if it does anything, will at least prevent recession of the abdominal walls at this point. The following case will illustrate a type of intussusception met with in general practice. The infant had suffered with constipation, and there was also vomit-

ing. The constipation had been present several days. A physician was called who ordered calomel. This seemed to aggravate the symptoms of vomiting. The constipation persisted. Several enemata were used, but were ineffectual as no fæces were passed. The family was alarmed and sent for Dr. A. E. Isaacs, of this city, through whose courtesy I saw the child several times in consultation.

CASE. Infant B., five months old, had vomited for some time; was constipated, having had no stool for several days. The temperature was about normal; the abdomen was distended. Antiperistaltic movements of the stomach were noticed. The child was breast fed. The breast was discontinued for a short time and barley water was substituted to relieve the vomiting.

The vomiting continued in spite of the withdrawal of the breast milk. Paroxysms of pain, constantly recurring. Infant screaming. Repeated enemata did not result in emptying the bowels. Calomel had been given in both large and small doses with no satisfactory result. In addition thereto, cathartics had been given without producing any cathartic effect. As the vomiting persisted, we believed that lavage would be of some benefit. The stomach was carefully washed out with the aid of a Nélaton catheter. The cleansing solution used was one quart of normal salt solution. The gastric contents were siphoned off until the contents flowed clear. The stomach was then given rest for half a dozen hours and the breast milk was again tried. The vomiting persisted; at the same time the distention in the abdomen continued. The diagnosis of intussusception was made and an operation suggested. The family objected to the operation and palliative measures were used. The nurse was able to pass about fourteen inches of catheter into the gut until she reached the obstruction. We had hoped that probably a slough would relieve this strangulated gut. Later in the disease, Dr. Isaacs was able to feel the mass of gut in the rectum, about two and one half inches from the anus, and to pass a catheter outside the intussusception as well as inside it some fourteen inches, without reaching the limit of the invagination. The child was seen by me at three different times. The symptoms which were most marked in this case were:

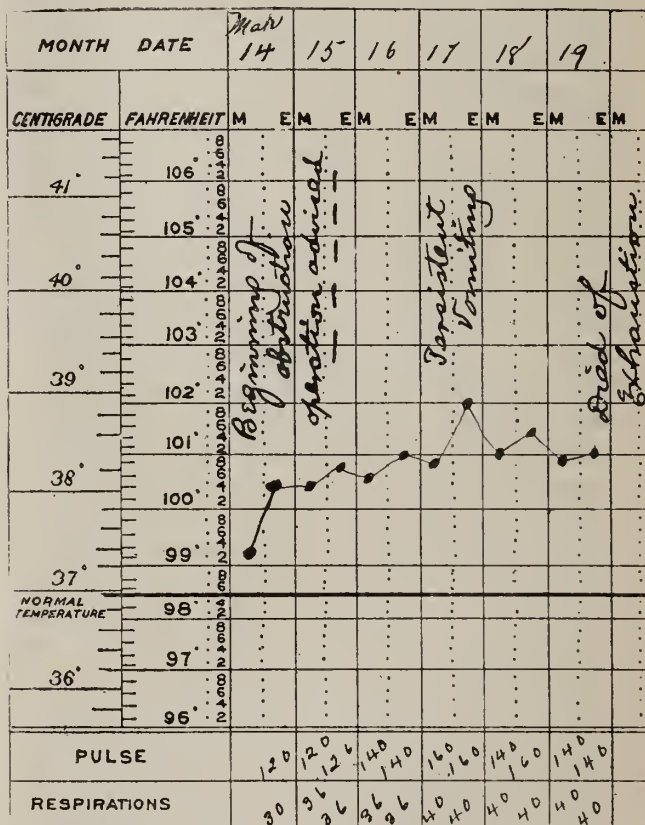
1. Continued vomiting.
2. Faecal impaction, the gut being so obstructed that no fæces passed in more than ten days, though flatus occasionally passed.
3. During the first two or three days not only was clear blood passed per rectum, but large masses of jellylike mucus, tinged with blood, were frequently expelled from the rectum until the end.
4. The distended belly, the abdomen abnormally distended and very tympanitic on percussion.
5. The absence of all inflammatory symptoms, such as rise of temperature until two days before the death of the patient, when the temperature rose to 101° F., and the pulse rose to 160.
6. Continued crying, the child, with rare exceptions showed evidences of pain.

There was no positive ætiological factor in this case, as there were two other healthy children in

this family, the father and mother were in apparent good health. There was no evidence of traumatism or of anything that could be connected with the cause of this condition. The mother stated that for a period of two months before the appearance of this condition she had given a patent cathartic every day, as she thought, with advantage. Whether or no this drug had anything to do with this condition it is difficult to state. The presumption is, however, that the continued effect of giving cathartics might have indirectly caused this condition.

Leichtenstern has collected 557 cases. He gives 151 recoveries and 406 deaths (73 per cent.).

Fitz's statistics give 51 cases treated without operation, with 16 recoveries, and 35 deaths (69 per cent.).



Dr. Louis Fischer's case of intussusception.
Name, Baby Brodsky; Age, 6 mo.

Ashhurst's fifth edition reports thirty-six cases operated with 6 recoveries, and 30 deaths (83 per cent.).

Successful cases treated by operation have been reported by the late Dr. Sands and by Hutchinson.

Pilz¹ reported in 1870, 94 cases in patients under one year, with a mortality of 84 per cent. From 1870 to 1891, 135 cases in patients under one year gave a mortality of 59 per cent.

The reduction in percentage of mortality in recent years is evidently due to modern aseptic surgery. Whereas formerly recovery depended on sloughing, to-day laparotomy is the rule.

¹ *Jahrbuch für Kinderheilkunde*. Bd. iii, p. 6.

Two interesting clinical points which I have made use of are given by Caillé:

1. Try to reduce the obstruction by non-operative means: injections of oil; the child in an inverted position following the injection; and gentle manipulation of the abdomen.

2. In percussing the abdomen, there will generally be found at the site of the obstruction a *very tympanitic* area adjoining a dull area. By carefully noting this point, the surgeon has an important landmark for his guidance in performing the operation.

In my case an operation was refused and the child died. The chances were decidedly in its favor. Both Dr. Isaacs and myself tried to convince the parents that the child's life might be saved by an operation,

1. Because it was a well developed and well nourished baby.

2. Because it was breast fed.

3. Because the diagnosis was made very early in the disease.

4. Because the heart's action was very good, and no chronic or infectious disease existed.

65 EAST NINETIETH STREET.

PYÆMIA AND EXSECTION OF PART OF THE LOWER JAW FOLLOWING A FRACTURE DUE TO TOOTH EXTRACTION.*

By J. A. HOFHEIMER, M. D.,
NEW YORK.

Fracture of the jaw due to tooth extraction is a not uncommon occurrence, and I have frequently met with it when in dispensary practice. These patients readily recovered. But general pyæmic infection with multiple abscesses as a sequela to such an ordinary event as extracting a tooth is of sufficiently rare occurrence to make a case notable.

Coupled with this condition there was also present a gradually increasing necrosis of the lower jaw posteriorly to the point of fracture, necessitating the removal of the ascending ramus including the condyle; this was done by the intrabuccal method, thus avoiding a large, unseemly cicatrix on the face, and leaving but a slight deformity. The case in detail is as follows:

Joseph H., aged nine years; of good family history, except that paternal grandmother had phthisis. Patient had measles when six years old, but no other severe illness. His health at the time of injury was apparently normal.

On *April 23, 1902*, having complained of a severe toothache the preceding night, he was taken

to the office of a so-called "painless" dental company, to have the offending molar extracted. The dentist removed the first molar from the right side of the lower jaw, but in doing so used his energies in such a way as to cause a stellate fracture of the jaw.

Evidently the dentist did not notice this, and the patient was permitted to return home, where, in a short time, the boy's face became greatly swollen and very painful. These symptoms of inflammation increased so rapidly that the following day the family physician was consulted. Owing to the tumefaction and pain of the soft parts and the inability of the patient to open his mouth to any great extent, the doctor at this time was unable to diagnose the fracture; but he did find that an abscess had formed about the bone, and that there was a slight discharge of pus from the tooth socket, which was nearly closed over by the swollen tissues. He incised along the gum with a bistoury and evacuated considerable pus, which gave temporary relief; and in a few days the subsidence of the swelling permitted him to diagnose the fracture.

The patient, however, continued to have a temperature from 101° to 102° F., which kept rising steadily. He became very anæmic and complained of pains in the right leg, especially about the groin. Frequent chills, followed by rising temperature and clammy sweats, were noticed.

On *May 7th*—two weeks after the injury—the writer first saw the patient with Dr. J. R. Healy. The child's temperature was now at times 104° F., pulse weak and thready; there were anorexia, albuminous urine, skin of a waxy yellowish-white appearance, sordes on lips and tongue, and the right corner of his mouth was the seat of an ulcerative process similar to that found in noma, and due to the irritation of the vile pus which was constantly dribbling from the alveolar abscess over this part. The right side of the face was greatly swollen, and crepitation was made out along the point of fracture.

The patient's right leg lay helpless in the bed, and he screamed with agony at the slightest touch to it. The entire limb from hip to knee presented an elongated oval contour and well marked fluctuation, denoting that the entire upper part of the leg was involved in a suppurative process. A diagnosis of pyæmia was made, and despite the weakness of the patient an immediate operation was decided upon as being the lesser evil. Under chloroform anæsthesia I made an incision, about five inches in length, on the outer and upper portion of the thigh, just below the trochanter, and evacuated nearly a quart of thin, foul smelling pus; the cavity was thoroughly washed out and the hand introduced. The femur was found to be bare, and all the intermuscular tissues were dissected apart and bathed in this pus from the gluteal region to the knee. A noticeable peculiarity was the scant flow of blood, both from the incision and after the pus was evacuated; and also the appearance of the muscular structures, which had assumed a bluish hue similar to fish flesh. This was undoubtedly due to the pronounced sepsis and leucocythæmia present, and to circulatory interference.

* Case presented and notes read before the Harlem Medical Association, December 3, 1902.

To favor drainage of this enormous abscess a counter opening was made just above the external condyle of the femur, and a tube introduced to drain the leg longitudinally; two other tubes were inserted in the large wound—one passing posteriorly to the femur and the other draining the gluteal region. It took several weeks to heal this limb, as it continued to discharge great quantities of thin, ichorous pus, excoriating the skin and necessitating daily dressing.

The mouth wound was discharging freely, and it was thought best not to resort to any operative measures here at this time, trusting that, as health returned, the diseased bone would exfoliate and healthy tissues form. The mouth was washed out several times daily with antiseptic solutions and syringed with hydrogen peroxide.

After the operation on the right leg the temperature decreased, but did not go below 101° F., and ten days later he complained of a pain in the right side and shoulder. A small swelling was found under the lower angle of the scapula, which gave evidence of fluid formation. Under cocaine analgesia this was incised for about three inches, and six ounces of pus escaped. This purulent secretion had formed up under the scapula and had burrowed in a downward and forward direction along the ribs of the right side.

Even after this operation our patient's temperature and fretfulness warned us that all was not going well. Strong bland nourishment was pushed to its fullest extent, and such tonics as could be borne were given assiduously. His color was improving and the wounds began to assume a healthier aspect, the discharges becoming more laudable.

On June 8th—one month after the initial operation—the left gluteal region was found swollen and tender. After waiting a few days and noticing no improvement, an incision was made into this mass and eight ounces of pus came away. This did not have the foul odor present at former operations, and was healthier in character; the flesh, also, had a natural appearance and bled freely. This wound healed quickly—in about ten days—before either of the earlier ones on the right side, thus indicating the diminished potency of the infection and the improved condition of the patient.

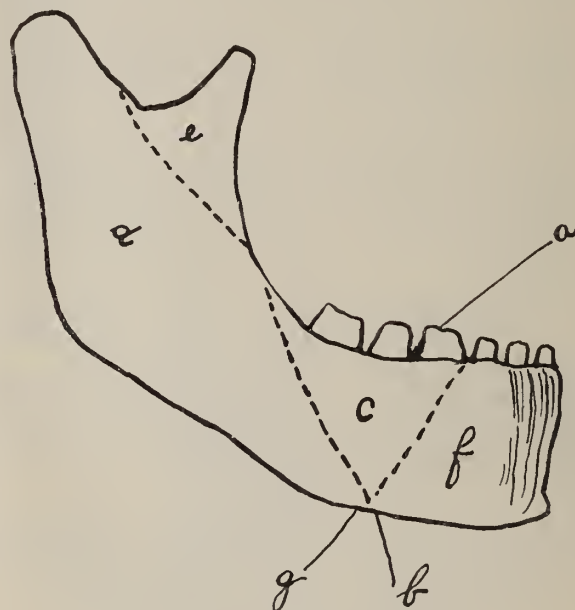
After this operation the temperature speedily became normal and convalescence progressed satisfactorily. The ulcer at the corner of the mouth also commenced to heal.

During all this troublous period the jaw injury was carefully watched. Ultimately, as was expected, spiculæ of bone exfoliated and were readily removed. The two teeth posterior to the seat of fracture became loose as the alveolar structure dissolved in the necrotic process, and were taken out. The area of fracture and exfoliation is marked *c* in the diagram.

Finally, a small inflamed area was noticed below the descending ramus *b*. This pointed in a couple of days and an operation was decided on. In this instance I had determined to remove all the diseased bone while endeavoring to leave as small a scar and deformity as possible.

Under full anæsthesia a small incision was made into the inflamed part and about a drachm of pus

escaped. The finger introduced into the wound could detect that the bone was denuded of periosteum almost to its articular surface on the outer side. The remainder of the periosteum was detached with the attached muscular structures, and a similar procedure was accomplished on the inner side of the bone through the mouth, by splitting the gum in the median line. Several spiculæ of loose bone were removed, and the point *g* was cut off with bone cutting forceps; this permitted the ascending ramus *d* to be rocked backward and



Dr. Hofheimer's case of fracture of the jaw.

downward on the angle of jaw. In this position the coronoid process *e* caught under the zygoma and was held fast, but was readily liberated when the coronoid was cut off with forceps. It was then a simple procedure to lift the largest remnant of diseased bone out of its bed, by drawing the distal end upward and forward. As can readily be seen by the diagram, the space left vacant by the removal of the originally fractured bone *c* gave quite a space to perform rotation in. The hæmorrhage was slight and readily controlled.

The bone was necrosed and of foul odor; the cancellous tissue in its interior being entirely broken down.

The result has been very satisfactory, there being but a slight deformity, which is gradually lessening, and a new bony formation is already developing; and in time we may hope that a false plate with teeth will restore the slight loss of normal contour and full function of mastication.

The health of the boy is now excellent. He walks with a slight limp owing to an atrophy of some of the anterior muscles of the right thigh; but under massage and calisthenics this is steadily improving.

123 WEST ONE HUNDRED AND TWENTY-SIXTH STREET.

THE PROPHYLAXIS OF APPENDICITIS.*

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Inflammation of the appendix vermiformis is so frequent, and is attended with so considerable a percentage of disastrous issues, that leaving out of consideration the very few cases occurring in the course of typhoid fever, of tuberculous or malignant disease of the intestine, of actinomycosis, or as the consequence of trauma, the question Can we do nothing to prevent such inflammation? seems perfectly pertinent.

What is the ætiology of appendicitis?

In my book on *Constipation in Adults and Children*,¹ in the first chapter on The Consequences of Constipation, under the heading *Appendicitis*, I say: "I hold that this very grave affection is in the majority of instances provoked by constipation (temporary or habitual)." The reasons therefor and the facts upon which they are based are then given.

Wyeth,² in an article on Appendicitis, published in 1896, lays great stress upon what he holds to be the unfortunate position of the appendix; that it is for this reason subject to distention from semiliquid fecal matter which passes into it from the cæcum, and of which it cannot readily unburden itself, owing to the weakness of its muscular tunic; that the weight of the bowels tends to interfere with its nutrition by direct pressure upon the single artery that supplies it; people of sedentary habits and with chronic constipation suffer more on account of increased pressure.

It will, I believe, be generally admitted that the first part of this statement is not in exact accord with the facts. It has been demonstrated time and again by post mortem section that under ordinary circumstances the appendix is empty or contains only a little mucus. It can be readily understood wherefore this is so when it is recalled that in life, in the normal state, the appendix is doubly closed to the cæcum, first by the falling together of its lips, and secondly, by a fold of mucous membrane which projects into its lumen on the inner side of its orifice, forming a sort of valve as first described by Gerlach. This, though contrary to the positive statement of Treves,³ has been sufficiently demonstrated by others.

As to the weight of the bowels interfering with its nutrition, that is also a statement based on the-

oretical grounds only. If this were so, we should have many more cases without concretions than we do have; we should see many more cases of gangrenous appendicitis, and, more particularly, we should have a large number of cases in old people, in whom the general circulation is already of greatly lessened force, and who are therefore prone to ulcerative and gangrenous processes in those parts the nutrition of which is still further impaired by interference with its vessels, either by pressure upon them or by obstructive processes within or about them. The fact is, however, that appendicitis is most prevalent in the earlier periods of life when the circulation is of greatest vigor and naturally that of the appendix also of much better force than at subsequent periods of life. Thus, Fitz,⁴ in 251 cases, found 76 per cent. of the patients under thirty years of age. Hawkes,⁵ of 224 cases seen in St. Thomas's Hospital, found but nine-tenths of one per cent. in persons over fifty years of age. Furthermore, the bowels make no pressure on the other abdominal organs or between their various segments, as has been sufficiently demonstrated by studies upon intraabdominal pressure. This is all so well and so abundantly proved by necropsies that no further evidence in its support need be adduced here.

Fowler⁶ also looks upon the disease as caused primarily and principally by impairment of the nutrition of the appendix by interference with the circulation of its single artery, a terminal vessel only, as he describes it. He further fortifies his position by the report of Van Cott, as to his finding in the mesoappendix of thirteen appendices exsected for the disease and submitted to him for examination, various forms of obstruction, para-, peri-, or endoangiitis, or organized thrombus. The greater exemption of women is explained upon the ground of a better blood supply, namely additional vessels that pass in the fold running from the broad ligament to the appendix, the appendicular-ovarian ligament.

The investigations of Breuer⁷ made at the express instigation of Nothnagel have contradicted the assumptions of Fowler. Summarized, the results of these investigations are as follows:

1. The blood supply of the appendix is not of the scant character, furnished by a terminal vessel only, that some authors would have us believe. In fact, quite a number of vessels of fair size pass from the circulatory system of the cæcum to the appendix, are distributed among its various structures, in the mucous membrane, in the muscular tunic, and immediately beneath the serous covering, and anastomose

* Read at the meeting of the Medical Society of the Greater New York, November, 1902.

¹ *Constipation in Adults and Children, with Special Reference to Habitual Constipation and its most Successful Treatment by the Mechanical Methods.* The Macmillan Co.

² *Southwestern Medical and Surgical Reporter*, July, 1896.

³ Article Perityphlitis, in Allbutt's *System of Medicine*.

⁴ *American Journal of the Medical Sciences*, October, 1886.

⁵ *St. Thomas's Hospital Reports*.

⁶ *Treatise on Appendicitis*, 1900.

⁷ Nothnagel's *System*. Die Krankheiten des Darmes in dem Peritonäum.

with branches from the appendicular artery—representing, thus, a blood supply ample in all respects for the nutrition of so very small and functionless a segment.

2. The vessels supposed to furnish the appendix in women with an extra supply of blood could not be found by him either on microscopical examination, or even after careful injection of the parts.

3. The changes in the arterial vessels which Van Cott asserts that he has seen with unfailing regularity could not be discovered by him.

The conclusions of Nothnagel,⁸ based upon these results are, that it is true that the blood supply of the appendix is not so ample as that of other parts of the intestinal tract, and that therefore an obstruction of the artery at its entrance into the mesenterium would be certainly followed by the gravest consequences. But these accidents, though possible, are of *so extraordinarily rare an occurrence that they are not to be considered* in the pathogenesis of the so-frequently occurring appendicitis.

The seriousness of the objections that present themselves to any pathogenesis of the disease based upon the ground of anatomical construction, faulty position, or insufficient blood supply, was felt by Nothnagel⁹ in his extensive consideration of the aetiology of the disease, in which all the various theories are discussed and, frankly expressed, the reader thereof is left in rather a hazy state as to what is really the effective factor in its production.

However, and this is the point to which I desire to direct attention more particularly, whatever views may be held upon this point by the various authors, the influence of constipation of an overloaded colon is acknowledged by all and invoked more or less by all.

Mynter,¹⁰ in his treatise on *Appendicitis*, counts indigestion and constipation among the predisposing causes.

Lange¹¹ is very outspoken on this point. He considers appendicitis unusually prevalent in this country and particularly in New York. He attributes this to two of our national failings, that of eating too much and chewing too little, the result of which is *constipation*. Contributory causes of the prevalent constipation are our hurrying, restless, nerve-straining lives, which lead us to ignore the demands of Nature. Fæcal accumulations set up trouble in the mucous membrane of the cæcum. So-called fæcal calculi are often found—but very rarely, much more rarely than was formerly believed, foreign bodies are a cause of the disease.

It is true that Fenwick¹² reports that, out of 43

cases of perforating appendicitis, in subjects whose previous state of health had been recorded, only three acknowledged a constipated state of the bowels. This, however, as stated in my book already referred to, “does not detract from the force of my argument. My experience has taught me that many more persons are constipated than really have an idea that they are so. With some, the evacuation every morning of a few hard, rocky scybala, requiring considerable effort for their expulsion, with others a scant evacuation every third or fourth day, is held to be an evidence of regularity, and they will tell their physician, when the occasion therefor arises, that they are regular.” I have had but lately some examples very illustrative of this.

I. A gentleman called upon me for treatment for his stomach. On questioning him, he informed me that his bowels were regular. An examination disclosed a marked hyperacidity. I treated him but he did not make good progress. Finally, I questioned him again and with more minuteness, and then found that he was very constipated and that he had been so for some time before he came to me; how long previously he could not remember.

II. A few months ago a lady came to consult me. Questioned as to the state of her bowels, she said that they were regular. A week later I discovered that she was of a decidedly costive habit.

III. Some days ago a gentleman came for treatment for a stomach trouble. To the question as to the condition of his bowels he answered: “Oh, yes, they are all right.” However, close questioning disclosed the fact that he was constipated, and that unless he took something to move the bowels, either medicine or large quantities of cold buttermilk, he had no action.

“Moreover, attacks of temporary constipation of longer or shorter duration are entirely overlooked or forgotten by the great majority of persons.”¹³

Upon this basis, holding constipation to be the essential factor, the pathogenesis of appendicitis stands out clear and distinct and is readily understood by all.

How does constipation affect the appendix?

First, it enables fæcal matter to pass into the appendix. It is in this way: “In constipation the residual matter accumulates in the cæcum and distends it: the orifice leading into the appendix is thereby opened. Fæces can now pass into this part, or rather are driven into it by the constantly growing mass. Their complete return, however, into the cæcum is prevented by this same mass of fæcal matter in the cæcum, which acts as an obstructing wall to anything coming from the appendix and by the lack of sufficient muscular power inherent in the organ.”¹⁴

Secondly, the fæcal matter thus forced into the appendix and stagnant therein, may undergo liquefac-

⁸ *Ibid.*

⁹ *Loc. citat.*

¹⁰ *Appendicitis*, 1897.

¹¹ Editorial in *Medical Record*, August, 1891.

¹² *Clinical Lectures on Obscure Diseases of the Abdomen*, 1889.

¹³ Illoway. *Constipation in Adults and Children*, etc.

¹⁴ *Ibid.*

tion and permit of the development of bacteria, which may give rise to an inflammatory process, either of a mild character, a catarrhal inflammation, or of a severe and grave type tending to the rapid formation of pus and with all the aspects of an acute infection, owing to the absorption of toxines by the richly developed lymphoid system of the mucous coat. All this depends upon the character of the fæces that are forced into it, whether or not they contain matters that undergo putrefaction easily or not.

It is only in this way that the theory based upon the assumption of the semblance of the lymphoid structures of the appendicular mucous membrane to the tonsils, and from which Sahli¹⁵ deduced his angina of the appendix, has any ground.

It is only in this way that the bacterial ætiology of appendicitis has any basis. In proof of this may be adduced the fact that diarrhœas, even of putrid character with abundant development of bacteria of varied forms and characteristics, do not engender appendicitis. In the few cases recorded where it was said to have so followed, it was a diarrhœa with constipation as described by various authors, and by me in the book already referred to.

Thirdly, it may lead to the formation of concretions. When fæces become stagnant in the colon they have a tendency to become inspissated, hardened. No evidence is needed to prove this, for almost every medical practitioner of any experience is familiar with the hardened scybala that are so common in cases of constipation.

The appendix is part of the intestinal tract, is anatomically constructed like it, not a whit different, and there is no reason why that which is of so common an occurrence elsewhere should not happen here. On the contrary, the inspissation occurs here more readily, owing to the greater immobility of the contained matter, the greater length of the absorbing surface, as has been very clearly set forth by Finkelstein,¹⁶ and the closer application of this absorbing surface to the contained matter. The mucous membrane takes up from the fæces the fluid portion thereof, and nothing but the dry hard residual matter is left.

The findings of Lockwood¹⁷ as to the abundance of bacteria in some of the concretions are also thus readily explained without recourse to the theory of a special bacterial invasion, for which no proof can be adduced, but rather much evidence to the contrary, as has been already indicated above.

There is no ground, as has already been pointed out by Nothnagel,¹⁸ for the supposition of Talamon¹⁹

that the concretions are formed in the cæcum and rolled into the appendix. The contents of the cæcum are semifluid, or nearly so, and inspissation to such degree does not occur therein. No such hardened masses—that is, of cæcal origin—have ever been found there.

The observation of Goldbach cited in support²⁰ cannot contravene the position here taken, as the history of the case clearly points to a cholic origin of the two small concretions found in the cæcum.

There remains only the question as to the greater exemption of women since they furnish to the ranks of the constipated a contingent as large as, if not larger than, does the male sex.

To this answer may be made: First, that in woman the pelvic cavity is much roomier than in man, and thus perhaps permits of greater distention of the cæcum without the orifice of the appendix being forced open. Secondly, that woman is more particular in her food, eats more at her home table, and is thus less liable to introduce decaying matter, which is likely to set up sharp putrefactive fermentation, into her digestive tract. Thirdly, she is not given so much to the free consumption of alcoholic beverages, which of themselves cause a predisposition to congestive processes in the abdominal organs, and particularly in the terminal parts of the intestinal tract.

With the ætiology of the disease thus clearly before us, the answer to the question propounded at the outset of this paper can be no other than an affirmative one. As the old maxim has it, *sublata causa tollitur effectus*, remove the constipation and there will be no danger of appendicitis.

By removing the constipation I do not mean the giving of a purgative to provoke an evacuation, to be followed only by a still more obstinately constipated state; but a restoration to the intestinal tract of its pristine, its inherent vigor, so that it can empty itself with regularity and spontaneously, of its own volition as it were, by the use of its muscle as Nature intended and provided that it should. That this can be done has been amply demonstrated by many eminent men and the procedures therefore have been fully described in my book on constipation already referred to.

It would of course, and I am fully aware of it, be a rather difficult matter to demonstrate clinically that to remove constipation will obviate the risk of appendicitis. However, if cases in which a first, and even a second attack of appendicitis had occurred, and eminent surgeons had after full examination advised and urged operative interference, had been cured of their appendicitis by relieving their constipation in the manner just above referred to, then, I believe, it must be admitted that the correctness of the position

¹⁵ *Verhandlungen des xiii Congresses f. innere Medicin*, 1895.

¹⁶ *Deutsche Zeitschrift für klinische Chirurgie*, 1896, Bd. xxxviii.

¹⁷ *Appendicitis, its Pathology and Surgery*, 1901.

¹⁸ *Loc. citat.*

¹⁹ *Colique appendiculaire, Médecine Moderne*, 1890; *Appendicite et Perityphlite*, Paris, 1892.

²⁰ Bors, *Diagnost. und Therap. der Darmkrh.*, Wiesbaden, 1898.

here taken has been further fortified, in all respects, by clinical demonstration.

The following, as their histories show, are such cases.

CASE I.²¹—June 9, 1897, M. J., a male, aged twenty-seven years; stoutly built young man, five feet eight inches in height; weight, one hundred and sixty pounds; clerk. He always enjoyed good health until two years ago, when he had an attack which was said to have been typhlitis. The physician who attended him employed, among other things, rectal injections, which brought away enormous quantities of fæcal matter. After the lapse of some time he was able to be up and about. On April 10, 1897, he had another attack which, according to his statement, was in all respects like the first. He eats well and always has a good appetite. His bowels have been constipated since he was eight years old, when he began to work. He does not know how the condition became a habit. He has used purgatives regularly, and therefore is at a loss to account for the large accumulations evacuated as above mentioned.²² He was formerly much given to athletic exercises, riding a bicycle, jumping, etc., but since the attacks of typhlitis he does not ride the bicycle and he has to be otherwise careful in his movements, for any unusual motion, such as jumping off a car, will cause pain in the right inguinal region. Since the attacks above mentioned he has had spells of bad breath. Occasionally he has headaches, not pains, but rather a dullness, a heaviness of the head.

Examination.—Stomach normal. Abdomen on inspection shows nothing abnormal; palpation reveals a dense, broad induration in the right inguinal region, extending from the right anterior superior spine of the ilium forward toward the umbilicus, eight centimetres in width and downward and forward, following the curvature of the region to the linea alba, six centimetres in length. The part is not sensitive to light superficial palpation, but a more forcible stroke, with deeper pressure, will cause him to wince, showing tenderness. I was rather in doubt whether anything could be done, but concluded to make the trial.

Treatment.—Dietary regulations; hydriatic applications over the seat of the induration; massage; electricity. Over the seat of the induration the massage was at first very lightly made, just skimming over the surface, and merely intended to stimulate the circulation, and thus to effect, if possible, an absorption of the exudate.

June 26.—The bowels began to act spontaneously to-day. He had a large, natural, spontaneous movement this morning.

September 16.—The bowels are moving regularly every day. The induration in the groin has disappeared entirely.

He remained under treatment—that is, the mechanical applications were made at intervals of from three to ten days—until February 14, 1898, when he was discharged. His bowels have continued to

act regularly. I saw him but lately and he informed me that he was perfectly well and last summer took a long bicycle trip through the Eastern States.

Since the publication of this report I have met him socially at various intervals, the last time only two months ago. He has had no further trouble. His bowels act with great regularity.

CASE II. April 18, 1900.—A. P., aged twenty-five years; single; five feet three inches; weight, one hundred and five pounds. No particular occupation; lives at home with her parents and helps in the house-keeping. She is of a lively disposition and enjoys going out to parties and entertainments very much. She had enjoyed good health up to two years ago, when she had an attack which the physician in attendance diagnosed as an acute appendicitis. She was sick for nine weeks and then being convalescent she went to the country and remained throughout the whole of the heated term. When she returned she was in fairly good condition. However, her digestion was weak; she had no appetite, and took but very little food. At intervals of from three to four weeks she would have a recurrence of the pain in the lower abdomen on the right side, which made it necessary for her to take to her bed and to apply an ice bag. After several hours, or even as many as twenty-four or thirty-six hours, she would feel relieved, get up out of bed and resume her usual life. Last summer, while up in the mountains, she had such a seizure, and came down at once to the city to see her physician. As the pains began to recur with greater frequency she was taken by a relative, some time during the past winter, to see an eminent surgeon, who, after an examination, informed her and her friend that she had a chronic appendicitis with recurrence of acute exacerbations, and that operative interference was absolutely necessary to insure her complete recovery. He urged an immediate operation. Since then she has become rather nervous as with every seizure she is nearly frightened unto death.

Status præsens.—She has no appetite, eats but very little, and then in a perfunctory way, because she says “she knows it is necessary for her to eat.” Only at rare intervals, and then mainly when in company, does she experience any craving for food. Her bowels are constipated, and have been so as long as she remembers. Since her illness she has got into the habit of taking some laxative medicine almost every night. She has the pains now at varying intervals, sometimes every three or four days; then, again, she may remain free therefrom for two or three weeks. Her tongue is always coated and, on awaking in the morning, somewhat dry. She sleeps well.

Examination.—Heart and lungs normal. Abdomen nothing abnormal to inspection or palpation. Abdominal walls very flat; no panniculus at all. No tenderness to touch or to percussion anywhere. The seat of the pain referred to above is, as pointed out by her, in the region of the cæcum. No pain there now, even on deep pressure. No pain on pressure about rectum. A little of the fæces adherent to the finger on withdrawal; had a very sickening and persistent odor. Stomach normally located, no splashing; water, 3vii; no splashing. Liver and spleen normal and normally located. Right kidney movable to

²¹ This case has already been previously reported in my paper Constipation—its Treatment by the Mechanical Measures, *Medical Record*, April 8, 1899. It is there case ii of that series.

²² This very strikingly demonstrates what I have maintained above, “that many more persons are constipated than really have an idea that they are so.”

third degree.

April 23rd.—Reexamined abdomen; results the same.

Test breakfast E. and B.; one hour; tube introduced and thirty cubic centimetres of stomach contents withdrawn. Ordinary appearance; bread fairly well worked up. Reaction to blue litmus +; reaction to Congo +; reaction to Phoro-Gluc.-Van. +; reaction to Resorcin—Rennet (after Leo) +, pepsin +.

Diagnosis.—Atony of the intestines of long standing. Impairment of gastric secretion. Motor function of stomach fairly good, but not quite up to the normal. Flatulence. (No doubt some of the pains—particularly those of short duration—are due to this.) As to an appendicitis, the examination disclosed nothing special; but the history and the names of the attendant leave no doubt as to the character of the illness mentioned above.

Treatment.—Dietary directions. HCl dilute, ten drops with lunch and dinner, in the way directed. Peptenzyme after meals. Faradaization of stomach. Massage to bowels. Inhibition of all medication to move the bowels.

The treatment was continued on these lines throughout the whole period that she was under observation. Progress was at first very slow. Though no pain was noted over McBurney's point and the appendicular region at the time of the examinations, as recorded, it was elicited subsequently at various times when she came and complained of the pain. Again, her stomach would revolt at the cruelties inflicted upon it in the shape of indigestible food matters ingested in the pursuance of social pleasures and duties. Then, in the earlier period, the peculiar pains that many women suffer prior to menstruation and with its oncoming were complained of, and with these were other factors that test the nerve stability of a person, and these contributed to aggravate the periodical suffering last referred to. On the whole, however, progress was made. Thus, *May 31st*, the record reads: Doing nicely. She says "she must admit that she is feeling much better." She complains that she has but little appetite. Take a nux vomica tablet before meals. Take half a glass of beer before she eats her soup. Continue treatment as before.

At another period gastralgie attacks supervened at intervals and had to be combated. She was much troubled with flatulence, both of stomach and bowels; but gradually this mended also. On *July 15th* the record notes: She is feeling splendid (her own words). Leaves for the mountains in a day or two.

September 9th.—Came in to-day to report. She had a splendid time while away; ate well, slept well, and gained five pounds. She had no attacks of the pain during this whole period. When she felt any slight twinges of it she took an asafetida pill (with which I had provided her previous to departure) and it always relieved her (caused discharge of flatus). Her bowels have been regular. Advised her to continue a preparation of malt for some time to come.

February 9, 1901.—Patient came in again to-day. She was perfectly well up to four weeks ago, when she again became constipated as a result of negligence on her part. Complains now of some pain across transverse colon. No appetite. Ordered a

bitter mixture and gave her a massage.

February 18th.—Again the gastralgie attack. *19th.* Test breakfast as before. Reaction to blue litmus +; reaction to Congo +; reaction to Phoro-Gluc.-Van. +; Free HCl, 24; total acidity, 59. Marked improvement in the gastric secretion. *21st.* Much better; no pain; bowels open. Continue malt preparation and the bitter mixture. *February 28th.* She is feeling very well again. She has gained somewhat in weight (two weeks ago 108 lbs., to-day 110 lbs.).

March 15, 1902.—I saw her to-day at a social function. She, has enjoyed good health all this time. "You have made a new woman of me," she said to me.

CASE III. *October 10, 1900.*—O. F. H., aged twenty-five years. Single. Merchant. Height five feet three inches. Weight 115 lbs. (about two years ago, 128 lbs.). Had always enjoyed good health. Two years ago he began to be seized at intervals with cramps and diarrhoea, which would last for a day and then be over. During the following summer the attacks increased greatly in frequency, to become less frequent with the setting in of the cooler weather. Last May he was seized with a pain in the abdomen more than ordinarily severe, which shifted (his own expression) and finally settled on the right side. A physician was called to attend him but he was not relieved. After some days he called upon a very prominent surgeon for advice, and, after examination, was informed that he had appendicitis, that an operation was necessary, and that it should be done at an early day, the sooner the better. He was very much alarmed thereat and went to consult another physician, who put him on a restricted diet and treated him for quite a long time with medicines, enemata, etc. He was not benefited at all.

Status praesens.—He is very constipated; has always been so, and is still more so since the onset of this illness. He is much troubled with pains in his bowels, particularly in the right side. These pains come on most frequently at night, and thus his rest is very much broken. Much flatulence. He eats very moderately. His face looks rather haggard and pain is written thereon.

Examination.—Tongue clean. Stomach normally located. Some splashing heard in left epigastrium about the border of the costal arch. (He has himself noticed this splashing sound.) Water 5vi. splashing to U. Liver and spleen normal.

Belly, nothing abnormal to inspection or palpation. No tenderness anywhere on deep pressure. *October 11th.* Test breakfast E. and B. one hour; tube introduced; removed forty cubic centimetres of stomach contents, bread and fluid. Ordinary appearance; settled in two layers; bread one-quarter, fluid three-quarters. Reaction to blue litmus +; reaction to Congo +; reaction to Phoro-Gluc.-Van. +; free HCl 32; total acidity, 58.

Diagnosis.—Atony of the intestines of long standing. Atony of the stomach. Much flatulence (dependent much upon the condition of atony of the digestive tract).

Treatment.—Dietary regulations; peptenzyme; nux vomica; massage.

October 21st.—Bowels moving regularly and spontaneously. The intervals of treatment were lengthened out, as good progress was made, at first

to once a week, then once in two weeks, and finally once a month until June 25, 1901, when he was discharged well.

August 20, 1901.—He had been running around much in the heat the day before, had taken quite a number of cold drinks, and at dinner in the evening had eaten some cold watermelon. Later in the night he was seized with an attack of cramp colic. A physician was called who gave him some composite tablets, and when I saw him the following morning (the 20th) he was considerably relieved. I prescribed a little rhubarb and soda mixture, with an addition of Hoffmann's anodyne and kept him in bed. I saw him again in the evening and he was better, all pain gone. As there was considerable flatulence I directed him to take an asafœtida pill and to repeat the same to-morrow in the course of the morning. As a precautionary measure I directed a cold compress to be applied. The next day he was up, but was told to keep in the house for that day (on account of the heat outside) until he should have taken a more substantial meal the next morning.

October 14th.—Patient had another attack the night before, like the one of last August, consequent upon eating an inordinate amount of ice cream on top of a very large dinner. He took several enemas, moved his bowels freely, and applied a hot water bag to his abdomen. When I saw him on the following morning (14th) he was rather better but still suffered considerable pain—cramps. Gave him morphine sulphate, one quarter of a grain, with directions to repeat in one hour if necessary. Saw him the same evening and found him free from pain. The cramps had ceased after the first dose and he had not required and had not taken another. Belly somewhat sore from the cramps but no particular tenderness over the appendicular region or elsewhere. Some flatulence. To take an asafœtida pill. The next morning he was up betimes and after lunch went out to attend to his business. He has been well since. His bowels are regular and he has passed several examinations for life insurance with satisfactory results. *October 2, 1902.* I saw him to-day while on a social visit. He has enjoyed health up to the present.

Therapeutical Notes.

The Treatment of Tuberculous Meningitis.—

Dr. Parreton (*Union médicale du Canada*, January) says that the physician must above all see that the laws of hygiene are respected, wherever they are in danger of violation, not only as regards nourishment, but equally in respect of all the delicate attentions that infancy demands. Overwork at school being one of the most frequent causes of the disease under consideration, the physician must make special inquiry as to whether the child's mind is not being overstrained. Everything, also, which can prove a source of overfatigue or excitement to the child must be carefully eliminated; the bowels must be kept open, and dentition carefully supervised. The bromides will aid in securing for the child a peaceful and recuperating sleep. Energetic intestinal derivation is, in the author's opinion, the most efficacious and sure means of combating

incipient tuberculous meningitis, and he is certain that in three of his own cases it was the effective means of saving life. Calomel, in spite of the objections that have been urged against it, is for him the medicament of choice in these cases, but it must be given in doses sufficient to ensure a free intestinal discharge. The treatment so much in vogue twenty years ago, of revulsion by the hairy scalp, has now been rightly abandoned, for artificial local irritation as a means of combating cerebral irritation seems contrary to all reason. To-day, cold applications to the head and mild counterirritation to the mastoid or the nape of the neck, suffice; the author prefers acetum cantharidis to any other preparation for this purpose. To calm the pains in the head, antipyrine is useful; while sulphonal or trional will procure for the little patient the repose of which he so much stands in need. In combination with the bromides, ergot may be prescribed to diminish the hyperæmia of the nervous centres. For convulsions, chloral may be associated with bromide injections *per rectum*. Nearly all authors recommend the use of potassium iodide as an alterant at the outset. For this purpose the author has often used with advantage the iodized solution of quinine iodide, but he has never dared to give potassium iodide, because it seems to him that in a disease such as this, in which one of the chief objects of the physician is to disperse every source of irritation, the prolonged use of iodide, such as would be necessary here, is a dangerous measure, owing to its liability to cause serious irritation of the organs of digestion, particularly the stomach.

To Prevent Nasal and Throat Complications in Scarlatina.—J. A. Le Sage (*Union médicale du Canada*, January) recommends intermittent use of boric or mentholated ointments:

℞ Menthol.....0.20 grammes (3 grains);
Boric acid.....4.00 grammes (60 grains);
Petrolatum.....30.00 grammes (1 ounce).
M. ft. ungt.

Or this:

℞ Resorcin.....0.30 grammes (4½ grains);
Petrolatum.....30.00 grammes (1 ounce).
M. ft. ungt.

Injectations of the following oil are also recommended:

℞ Essential oil of mint.....11 drops;
Resorcin.....1 gramme (15 grains);
Sterilized olive oil.....20 grammes (5 drachms).
M. Ten drops to be injected into each nostril, night and morning.

These measures will obviate the purulent rhinitis the result of which is uncertain and rarely remains localized to the nasal mucous membrane.

The throat demands equal care. Antisepsis may be obtained by gargles of borated, naphtholated, or saline water. If the tonsils are affected they may be touched with resorcin, or with a weak (2 per cent.) solution of silver nitrate.

For Soft Chancre.—According to *Médecine orientale* for January 10th, Szanto recommends the following procedure: Wash the sore with a sublimate solution, then apply a dressing of salicylic ointment on gauze. The dressing should be renewed every two days, or more frequently if the state of the secretion requires it. The secretion disappears very quickly under this treatment, which is just as effectual as the iodoform treatment, and is devoid of its objectionable odor. The author's formula for the ointment is as follows:

R Salicylic acid.....1 gramme (15 grains);
 Petrolatum.....30 grammes (1 ounce);
 Tincture of benzoin.....2 grammes (½ drachm).
 M. ft. unguent.

Treatment of Acute Bronchitis.—The *Revue française de médecine et de chirurgie* for January 19th recommends the administration during the first stage, characterized by dryness and cough, of opium, with, if fever is present, antipyrine or pyramidon.

During the second stage, characterized by severe cough and the easy expectoration of mucopurulent sputa, balsamics should be given, *e. g.*:

R Terpin hydrate.....0.15 gramme (2¼ grains);
 Sodium benzoate.....0.20 gramme (3 grains).
 M. For one powder. Send xii. Three powders daily.
 Frictions of the chest with turpentine should also be used.

For Hypochlorhydria.—Dr. G. Lemoine (*Journal médical de Bruxelles*, January 15th) prescribes at the beginning of each meal a tablespoonful of the following solution:

R Hydrochloric acid.....4 grammes (60 minims);
 Distilled water.....300 grammes (10 ounces).

As this mixture is very acid, he adds:

Tincture of orange "zests".10 grammes (150 minims).

To render the mixture still more pleasant, it may be modified by the addition of

Syrup.....40 grammes (10 drachms);
 distilled water.....250 grammes (8 ounces).

M.

["Zests" of orange or lemon peel refers, we presume, to the white inner part of the peel, which also sends dissepiments inward into the pulp, and which contains a very bitter principle. In the manufacture of flavoring syrups, this white part is very carefully stripped from the yellow part of the peel before use; in the present instance it is the yellow part that is rejected.]

Helenine in Laryngismus Stridulus.—According to the *Progrès médicale* for January 3rd, Dr. Grasset asserts that helenine markedly diminishes the laryngo-pharyngeal excitability. It is a moderator and calmative of the nervous system. According to Valenzuela (*Siglo medico*, of Madrid), helenine, when introduced into the stomach, acts after the fashion of the aromatic bitters, and checks the frequent and painful vomitings that so often follow on attacks of coughing.

The Treatment of Eclampsia.—The *Revue médicale* for November 12th, citing the *Journal des*

praticiens, ascribes the following to Maygrier: Albuminuria being often the first threatening of eclampsia, every pregnant woman with albuminuria should be kept in repose and put on an exclusive milk regimen. This should be continued for at least eight days; at the end of which time the woman will be protected against eclampsia (Tarnier). When once eclampsia is declared, the organism must be disembarassed of the toxic principles encumbering it, and the excitability of the nervous system calmed. The author recommends bleeding to the extent of from 300 to 500 grammes (approximately about 10 to 17 ounces). He then follows the bleeding by a subcutaneous injection of the following, of an amount equivalent to the blood withdrawn:

R Sodium chloride 8 grammes (2 drachms);
 Distilled water 1,000 grammes (33 ounces).
 M.

A full enema, followed by a purgative enema is then given, and from 150 to 200 grammes (5 to 7 ounces) of milk are administered. If the patient is unable to swallow, gavage must be practised, and if the teeth are set the tube must be introduced through the nasal passages.

The excitability of the nerve centres must be calmed by chloroform and chloral. But chloroform must not be administered in large doses, for fear of adding a drug intoxication to that of eclampsia: a few drops on a handkerchief during the accesses will suffice. Likewise, as regards chloral, the large doses now recommended are too great. The following may be used as an enema:

R Chloral hydrate 4 grammes (60 grains);
 Yolk of egg no. 1;
 Milk 200 grammes (7 ounces).
 M.

The Germans recommend morphine, but recourse must only be had to it with great caution. As regards the hot baths recommended by Bar, the author says that while they advantageously stimulate the renal function, they are often difficult of administration. During the attacks the patient must be kept in bed, and care must be taken to prevent her biting her tongue.

Should the uterus be emptied? In the author's opinion there is no ground for inducing labor prematurely, for the eclampsia may persist after parturition, while pregnancy may continue after the eclampsia is over. Some authors, especially Halberstma, who consider that eclampsia is often connected with compression of the ureters, are in favor of Cæsarean section, but in Maygrier's opinion this view is hardly sustainable. To justify intervention grave accidents must have supervened, anuria or high fever, for example; without such conditions, we must not interrupt pregnancy, but await its completion. But with the advent of labor, expectant treatment has no further place. As soon as it is possible to penetrate into the uterus, delivery must be effected by forceps, version, or extraction, according to the nature of the case. Here, there must be no holding back; decision and promptitude in terminating labor now must be just as great as was the repugnance to interfere during pregnancy.

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THE WOMAN'S POINT OF VIEW.

We are glad that a woman has had the courage to write to the editor of the *New York Herald* a letter in which she sets forth much to refute an undeserved stigma on her sex. The imputation which she combats is one that we often hear uttered, but seldom questioned, that of being averse to bearing children. Doubtless it is the women alone who betake themselves to the vile abortionist. They do not take their husbands with them on such occasions, but we believe that in the majority of instances it is the husband that has virtually forced the wife to a step which, much as she may deplore it, she does not realize to be criminal or even sinful. Most of us who have practised medicine for any considerable length of time have occasionally been consulted by women who feared that they were pregnant, and how often has the tacit or spoken prayer for interference been accompanied by the remark, "My husband says he can't stand the expense of any more children!" It is not from the poor, as a rule, that this comes, but from a woman whose hard lot it is to be the wife of a brute who prefers to spend money in his own selfish indulgences rather than to straiten himself a little in order that his wife's holy instinct of motherhood may be gratified and the way paved for both his and her solace in their declining years.

We are not of those who believe that noticeable fecundity is a mark of excellence, for, if it were, any she-frog might put to shame the most prolific of women. It is our impression that notable progress in civilization is accompanied by a decline in fertility, and that communities noted for small

families and for childless marriages are in the lead in the race for refinement and intellectual achievement. But the natural approach to barrenness which seems to be the accompaniment of high culture is no excuse for foeticide, of which revolting practice, indeed, there is rarely, if ever, any real justification. Nature herself may sometimes err in reducing the childbearing capacity, as now seems to be the case in France, but practices that lead artificially to the same end are founded on motives unutterably base—quite as base as that which, pointing to the opposite result, once prompted a potentate to exclaim unblushingly, when his wife was in labor and it had been represented to him by the misguided obstetricians that probably the life of the mother or that of the child would have to be sacrificed: "Save the child; I can get all the wives I want!"

But it is not the avoidance of children alone that these brutal husbands seek; they would shirk the proper care of those that come to them. "Is it not possible," asks the author of the letter to the *Herald*, "that some children languish under inherited disease while the father in the privacy of his sleeping room forbids his wife sending for a doctor, reiterating the statement that the child does not need one, and he will not pay the bill?" It is to be feared that this thrust would make some men quiver if their consciences had not been so toughened.

FACTS FIRST; OPINIONS LATER!

Science implies exactitude. Unfortunately, there is much in medicine which is problematic, but fortunately for humankind that "much" is daily lessening. The microscope and the laboratory are every day literally mowing great furrows in the weed forests of medical doubt and of lay ignorance. The struggle is a continuous one. Much of the ignorance prevalent regarding disease and its causes is because of the carelessness of medical men in giving to the public, through the public press, "half-baked," and, therefore, unscientific views on topics of medical importance and of grave interest to citizens generally. The latest exploitation of this kind occurred at the recent annual meeting of the Homœopathic Medical Society of the State of New York. A well known practitioner of medicine in a western city of the State read a paper regarding the

physical effects of the regents' examinations on school children, and was vehement in his denunciation of term examinations as applied to children between the ages of ten and seventeen years, "that delicate period of pubescence when the developing nervous system should be more closely guarded than at any other period during life." In support of his contention he quoted from letters from other practitioners of medicine to the number of thirty-four, who thought as he did on the subject. These thirty-four letters came as the result of correspondence with 700 physicians throughout the State (presumably of his own sect), proving that the evil is not a crying one (if an evil at all) if only five per cent. of those importuned for an opinion found fault. The entire paper was devoid of any statement as to exact facts regarding the subject under discussion. No one specific case was cited showing that harm had come to the pupil because of these examinations—and still this article, which is all conclusions, is published in the lay press and doubtless helps many a layman to take it for granted that the great weight of authority among medical practitioners is against the continuance of regents' tests for those under seventeen years of age and to conclude that his child must avoid all such tests. Fortunately for the interests of education and for the enlightenment of those in attendance, the head inspector of the regents' office was a listener, and, gaining the privilege of the floor, expounded a few facts which helped to enlighten the audience so that when he concluded a round of hand clapping applause indicated how well his remarks were appreciated.

Our purpose, however, was not to discuss the merits of the contention made by the doctor in question, but to hold up to the profession the utter absurdity of treating issues of this kind from any other than a scientific standpoint. If Dr. A. or Dr. B. wishes to learn what evil effects, if any, coming from the regents' examination of children, let him select a school district, study the health of the children before attending school, follow them through their scholastic year, observe them during and after these examination tests, eliminate other factors which might have a bearing on those under inspection, then make a similar study of school children in a district where there are no regents' examinations,

and thus, with the facts at his disposal, his conclusions would be of some importance if verified by the conclusions of others studying and investigating along similar lines. It is high time that the antiquated methods of rendering an opinion from general observation when specific facts are attainable were relegated to desuetude.

THE GROWTH OF MEDICAL LIBRARIES IN THE UNITED STATES.

While it would be fallacious to gauge the progress of American physicians in learning by any increase of the numbers of volumes in medical libraries, we think it not unreasonable to trace a parallel between such progress and the establishment of new libraries, the infusion of activity into languishing libraries, and the housing of libraries in quarters suited to their unrestricted increment and adapted to their highest attainable degree of utility. These three things have been accomplished in the United States to a remarkable extent during the last forty years. We are reminded of the matter by the appearance of the first number of a handsome quarterly periodical, the *Medical Library and Historical Journal*, devoted to medical history and literature. It is edited by the librarian of the Medical Society of the County of Kings and the librarian of the New York Academy of Medicine, and it is published in Brooklyn.

There can be little doubt, we think, of the great influence of the *Index-Catalogue of the Library of the Surgeon General's Office, United States Army*, and the *Index Medicus* in bringing about this result, and we feel that too much commendation of the men who have conceived and conducted those publications cannot be expressed. We are proud that our government has continued the appropriations necessary for the regular publication of the *Index-Catalogue*, and we are thankful that the Carnegie Institute has undertaken to revive the *Index Medicus*. In no other way than by these two measures, we believe, could general interest in medical libraries be more effectively stimulated and sustained.

Probably the Library of the Surgeon General's Office occupies a unique position among the medical libraries of the world, in that its cataloguing is of immense value to great numbers of men who can

rarely if ever personally visit the library. In order that it may continue to perform this service, it should be supplied with every medical publication that appears. We doubt, however, if it is desirable that medical libraries in general should be so supplied, and, in particular, we are inclined to think that they had better not devote a great part of their resources to the acquisition of current textbooks, for that tempts men who ought to be buyers of such books to hold back from acquiring them. The prime function of a public medical library, as it seems to us, is that of a depository of rare and unusually expensive books, such as the individual physician seldom needs to consult, but occasionally has urgent need of. If more of the funds at the disposal of such libraries were devoted to obtaining possession of books that are costly to produce and virtually sure not to meet with sufficient sale to cover the expense of production, authors of works requiring elaborate illustration, etc., would less often than now fail to get them published. The various libraries might even associate themselves together for the purpose of publishing such works, thus materially supplementing the function of the New Sydenham Society.

OUR MEDICAL EXCHANGE BUREAU.

It is a well known fact that many men graduate in medicine who, after a brief period, abandon the profession for some other walk in life. This is by no means always the result of either lack of interest in or capacity for their chosen profession, but is often due to lack of opportunity. To put up one's card and wait for practice is a procedure that calls for considerable capital. The physician must live meanwhile. For competent men so situated there are scattered throughout the country numerous opportunities of earning their way during this waiting period by rendering assistance of one kind or another to physicians already established, if only those needing assistance and those capable and willing to offer it could be brought into touch. To aid in bringing about this desirable result is the object of the establishment of the *New York Medical Journal's* Medical Exchange Bureau. We invite those who wish for such employment and those who have it to offer, to aid themselves in satisfying their respective wants through this column, which appears on page 41 of our advertising columns. For this purpose the rate of charges is purposely fixed at a low scale.

TAGLIACOTIAN RECIPROCITY IN THERAPEUTICS.

We have not the slightest doubt that originality is to be accorded to an idea that has occurred to an Italian physician resident in Brooklyn. He has issued a circular—filed a caveat, so to speak—which must forever proclaim that his is the credit for it. The circular is printed in very queer English, but that is not to the doctor's discredit. His scheme is to join together two individuals by a bond of blood, setting up a sort of mutual transfusion. For example, he would denude for a small area the finger of a vigorous young man with ulcer of the stomach and that of a feeble old man presumed to have acquired immunity to tuberculous infection, and unite the two denuded areas. He expects that the result would be to confer the like immunity upon the young man and to rejuvenate the old man's system. As to what, if anything, is to happen to the gastric ulcer he does not inform us. The two individuals are to remain in vascular continuity, for as much as a year's time, each circulating the other's blood mingled with his own. This, it seems to us, is the very poetry of therapeutics, a veritable exchange of life-prolonging forces. In ordinary transfusion, as we all know, there is the semblance of heroism in one of the parties, but nothing more stirring than stolid receptivity on the part of the other. How does our Brooklyn friend's conception tower above such tameness!

PYROGALLOL TRIACETATE IN ECZEMA.

This compound, which appears to be an irritant, introduced into dermatological use by Kromayer, has been found by W. N. Clemm (*Therapeutische Monatshefte*, 1902, No. 9; *Zentralblatt für innere Medizin*, January 17th) to be very efficient in the treatment of chronic eczema, especially in scrofulous and rachitic subjects. He applies it continuously in the form of a paste or dusts on the dry drug. We may perhaps take it for granted that it is most efficacious in cases characterized by a decided element of infiltration.

GERMS AND THE BOOTBLACK'S BOOTH.

Not a few of the bootblacks of New York ply their trade in enclosed spaces. This, of course, is desirable from several points of view, but it seems probable that such booths must harbor a good deal of dust arising from the dried mud removed from customers' foot gear, and consequently more than their due proportion of microorganisms. It is to be presumed that something might be done to remedy this drawback—by some such device, perhaps, as an ordinance requiring the preliminary cleansing to be done with wet rags, the rags to be regularly destroyed or sterilized.

News Items.

Society Meetings for the Coming Week:

MONDAY, February 23rd.—Medical Society of the County of New York; Lawrence, Mass., Medical Club (private); Cambridge, Mass., Society for Medical Improvement; Baltimore Medical Association.

TUESDAY, February 24th.—Metropolitan Medical Society, New York (private); Buffalo Academy of Medicine (Section in Obstetrics and Gynecology); Richmond, Va., Academy of Medicine and Surgery; New York Medical Union (private); Rome, N. Y., Medical Society; Boston Society of Medical Sciences.

WEDNESDAY, February 25th.—New York Academy of Medicine (Section in Laryngology and Rhinology); New York Pathological Society; New York Surgical Society; American Microscopical Society of the City of New York; Philadelphia County Medical Society; New York Dermatological Society (private); Auburn, N. Y., City Medical Association; Berkshire, Mass., District Medical Society (Pittsfield).

THURSDAY, February 26th.—New York Academy of Medicine (Section in Obstetrics and Gynecology); New York Orthopaedic Society; Brooklyn Pathological Society; Brooklyn Society for Neurology; Roxbury, Mass., Society for Medical Improvement (private); Pathological Society of Philadelphia; Church Hill Medical Society of Richmond, Va.; New York Celtic Medical Society.

FRIDAY, February 27th.—New York Clinical Society (private); New York Society of German Physicians; Yorkville Medical Association, New York (private); Philadelphia Clinical Society; Philadelphia Laryngological Society.

SATURDAY, February 28th.—New York Medical and Surgical Society; Harvard Medical Society, New York (private).

Medical Legislation in Arkansas.—A bill regulating the practice of medicine has been enacted despite the opposition of the osteopaths. The bill was so amended as not to go into effect until ninety days after its enactment.

A Large Medical Fee.—A singular case is cited in the *British Medical Journal* in which a Dr. Gale, a doctor of philosophy and not of medicine, who is spoken of as a "consulting medical electrician," received a fee of \$50,000.

An Explosion at the Medico-Chirurgical Hospital at Philadelphia on February 12th caused some damage and created a good deal of excitement. The hot-water tank in the basement exploded. Fortunately no lives were lost.

More Medical Inspectors Dismissed.—Three more medical school inspectors have been dismissed by the Department of Health of the City of New York, making a total of seven who have been dismissed on the charge of falsification in vaccination reports.

For a Municipal Sanatorium for Consumptives.—A conference was held recently between the Health Officer of the port of New York and the Health Commissioner of the city of New York concerning the establishment of a municipal sanatorium for the treatment of tuberculosis. The Charity Organization Society proposes to issue an appeal for funds for the erection of such a sanatorium.

To Abolish the Office of Coroner.—At a meeting of the New York County Branch, of the New York State Medical Association held at the Academy of Medicine on February 16th, resolutions were adopted favoring the abolition of the office of coroner.

The Chicago Children's Hospital Society has recently been organized in the city of Chicago, Dr. Frank Billings being elected president. It is proposed by the society to raise funds by popular subscription for the erection and maintenance of the hospital for children.

An Eclectic Medical Board for Missouri.—A bill has been introduced into the Missouri legislature providing for the appointment of three separate medical examining boards by the governor, one to represent the regular practitioners, one the eclectic, and one the homœopathic school.

Long Island College Hospital.—Dr. John McCorkle has been elected president of the college. Dr. Walter C. Wood has been added to the faculty and will lecture to the senior and junior classes on surgery. Dr. Tracy Clark has been appointed lecturer of inorganic chemistry and qualitative analysis.

Chronic Alcoholics.—The example set by the authorities of Bellevue Hospital in this city in turning over to the police for punishment patients who repeatedly appear at the hospital for treatment for alcoholism is being followed in other cities. The movement is a good one and may have a salutary effect on chronic inebriates.

Arrested for Dispensing Drugs Without a License.—Dr. S. A. D. Young, of San Francisco, was arrested on January 29th, on the charge of violating the State pharmacy law. It is charged that he sold drugs other than prescriptions of his own writing without holding a license as a pharmacist though he is registered as a practising physician.

Vaccination Physicians Dismissed.—The Health Commissioner of the city of New York has dismissed three physicians attached to the Bronx Borough branch of the Board of Health, charging them with having made false reports as to the number of vaccinations performed by them. A health inspector has also been dismissed for accepting a fee while working for the department.

Eighteen Thousand Dollars Damages have been awarded to Miss Augusta Auckshank, of Chicago, in a suit brought by her against Dr. George W. Webster, president of the Illinois Board of Health. The plaintiff alleges that in 1895, when a child of ten she fell and hurt her knee. Dr. Webster, the family physician, was called in, but being called away he left the patient in charge of Dr. Graves. On returning he found that inflammation had set in which eventually caused the loss of the leg. The case will be appealed.

The Detroit Academy of Medicine at the annual meeting on February 10th elected the following officers: President, Dr. Louis A. Roller; vice-president, Dr. C. E. Hooker; treasurer, Dr. Earl Bigham; secretary, Dr. John R. Rogers; committee on ethics, Dr. O. E. Herrick, Dr. Alexander Campbell, Dr. Bessie Earl, Dr. J. B. Whinnery, and Dr. Henry Hulst.

The Prohibition of Child Labor.—The Marshall bill, prohibiting the labor of children under twelve years of age, recently passed the House of Representatives at Columbia, S. C. It will go into effect gradually. Children wholly dependent on their own labor, or with only widowed mothers to support them, are exempt. None are to work between 7 p. m. and 7 a. m. The employment of children under the specified age is punishable by fine and imprisonment, and parents falsely reporting the ages of their children are also liable to punishment.

The Sanitary Conditions in Washington have grown so bad that recently a public meeting was held by the board of trade to discuss the subject and to set on foot an agitation for its improvement. Addresses were delivered by Surgeon-General Sternberg, Charles F. Weller, the president of the Associated Charities, Dr. William C. Woodward, health commissioner of the District of Columbia, Dr. George M. Kober, and others. Resolutions were adopted authorizing the committee on health to cooperate with the board of education in stamping out infectious and contagious diseases among school children.

The Michigan Board of Registration.—The annual report of the Michigan State Board of Registration in Medicine has added the following names to its list of approved colleges: The Universities of Virginia and Nashville, Memphis Hospital, Pulte Medical College of Cincinnati, Medical College of Ohio, Tufts Medical College. The board recommends that the law be amended so as to require all candidates for examination to be graduates in good standing of legally authorized and reputable medical colleges, approved and listed by the board. The receipts for the year were \$4,327, and the disbursements \$3,766.21. The present balance is \$2,616.57.

A Laboratory for the Rockefeller Institute.—Mr. John D. Rockefeller, the founder of the Rockefeller Institute for Medical Research, has recently authorized the institute to purchase a suitable site and erect thereon a laboratory for research work. It is reported that the laboratory will be located on the plot bounded by Sixty-fourth and Sixty-eighth Streets, Avenue A and the East River, in New York City, and that the purchase price of the land is about \$700,000. The Schermerhorn estate which owns the site in question has not yet been settled, and the authorities of the institute decline to make any positive statement concerning the sale. There is no doubt, however, that provision has been made for the erection of such a laboratory.

Legal Restoration of the Insane to the Status of Sanity.—Dr. A. B. Richardson, Superintendent of the U. S. Government Hospital for the Insane, at Washington, D. C., has begun an agitation for

the enactment of a law providing for the reinstatement of a person who has once been declared insane by due process of law, but who has since recovered his sanity, to his full legal rights and powers. According to Dr. Richardson, a strict interpretation of the laws as they now stand would show that in the eyes of the law in force in the District of Columbia, a person who is once a lunatic is always a lunatic, and is therefore forever incapable of taking any legal action whatever save through a guardian. As a matter of fact, this construction of the law has never been officially recognized, but it is believed that a bank paying money to such a person on his own order would run grave risks of being held liable for the money so drawn by the estate on the ground that the individual in question had been duly declared insane by process of law, and that in the absence of any legal provision for counter declaration to the effect that the patient has regained his sanity the verdict of the jury or commission *de lunatico inquirendo* must remain in force.

The Plague Situation in San Francisco.—Under the influence of the threats of quarantine made at the Conference of Boards of Health held recently at Washington, the Chamber of Commerce and the Board of Trade of the city of San Francisco each appointed committees to cooperate with the officials of the U. S. Public Health and Marine Hospital Service in securing prompt and vigorous action in the direction of eradicating the bubonic plague. The governor of the State has given a formal pledge that he will give his active cooperation in such steps as are deemed necessary. A bill has been introduced into the House of Congress by Mr. Slayden, of Texas, appropriating \$50,000 to aid in the suppression of the bubonic plague in Mexico and to prevent its spread in the United States. For this purpose the bill authorizes and directs the President of the United States to send a commission of three medical officers of the army and navy to investigate and report the conditions as to this disease there prevalent.

The Army Medical School Entertains.—One of the most brilliant social functions of the season in Washington was the military ball of the Army Medical School on February 6th at the New Willard Hotel. Mrs. Corbin, wife of the adjutant general of the army, headed the receiving party, standing near the entrance of the pink ball room. Assisting Mrs. Corbin, who made a very charming and gracious hostess, were Mrs. Sternberg, wife of the former Surgeon General; Mrs. Leonard Wood, Mrs. Dewitt, and Miss Kean. Mrs. William Cary Sanger, wife of the assistant secretary of war, who was to have been one of the hostesses, being absent by reason of illness. Lieutenant Gilchrist, president of the class, made the introductions. Dr. Coffin, Dr. Dewitt, Dr. Moore and Dr. Conner constituted the committee in charge of the invitations, while the officers of the committee of arrangements, to whom the success of the evening was due in a considerable degree, were Lieutenant Devereux, Lieutenant Blanchard, Lieutenant Gressinger, Lieutenant Scott, Lieutenant Fife, Lieutenant Powell, Lieutenant Hansell, Lieutenant Talbott, and Lieutenant Snoddy.

Extending the Nursing Service in the Schools.

—As reported in these columns at the time the Department of Health of the City of New York, some months ago, assigned trained nurses to duty as assistants to the medical inspectors of the public schools. This service has proved so satisfactory that the service is about to be extended to cover thirty-nine public schools in the congested districts of the East and West Sides of the Borough of Manhattan. These nurses are to examine the children as to cleanliness, and to instruct the mothers at their homes how to treat all cases of sickness. The school authorities are pleased with the assignments, and Dr. Maxwell believes that much good will result.

Higher Fees for Physicians.—At a recent meeting of the Wayne County, Mich., Medical Society, Dr. A. N. Collins read a paper advocating a higher rate of payment for the services of general practitioners. He did not think that the fees of specialists were excessive, but that the fees of the general practitioner were too low. He said: "The fat fees of the specialists are reasonable, because a market value is placed on their work on account of its scarcity. They are wholesome, and I may say a benefit rather than a detriment to the general practitioner. It is a mistake for the general practitioner to cry down the specialist and try to make a patient think that he has been bled. Cooperation and harmony are necessary to the success of the profession as a whole, in both the departments of the specialist and the general practitioner. The specialist is generally more scrupulous in guarding the interests of the general man than the general man is in guarding the interests of the specialist. Fees between the two classes of physicians cannot be equalized, but the general practitioner can make his fees higher, and this ought to be done. In many cases we do not get more than a tradesman, a tinker, by the hour, and our services are worth much more, as we carry the responsibility of life and death. We should make those who are able to pay, pay more, and in this way we shall be in a better position to be lenient with the needy, and so serve the highest aim of the medical profession in society."

The Foot and Mouth Disease, which made its appearance in August of last year among the cattle of the State of Massachusetts, and extended to the cattle of the States of New Hampshire, Vermont and Rhode Island, formed the subject of an address before the Massachusetts Association of Boards of Health in Boston, on January 28th, by Dr. Daniel E. Salmon, Chief of the United States Bureau of Animal Industry. This disease which is more accurately designated as epizootic apthæ, has been almost constantly present on the continent of Europe, but has made its appearance in America only a few times. In 1870 there was a rather extensive outbreak affecting the New England States and New York. The type of the disease at that time was mild, and the dissemination of the contagion was quite easily arrested. About 1880 there were two or three lots of cattle and sheep brought to the United States affected with this disease, but there was no extension from the animals originally affected. In 1884 there was a small outbreak at Portland, Me, caused by imported cattle, and the disease

spread to a few herds outside of the quarantine station. Owing to the small number of animals affected and the limited area of territory covered by the disease, it was easily controlled by the ordinary measures of quarantine and disinfection. Dr. Salmon explained the necessity of stamping out the disease by the most radical measures, and, since the contagion can be carried by persons or even dogs which visit the premises in which the infected cattle live, to uninfected herds, the only absolutely safe method is to destroy a herd as soon as it is found to be infected.

The American Medico-Psychological Association in accordance with resolutions adopted at the Richmond meeting of this association in 1900, has become affiliated with the Congress of American Physicians and Surgeons, and will therefore meet with that body every third year. The congress meets in Washington, D. C., on May 12th, 13th, and 14th, and the association will continue in session on the following day, the 15th. In the preliminary programme issued the following titles of papers are given as having been already promised: Treatment of Morphine Habit by Hyoscine, by Dr. J. M. Buchanan; Report of a Case of Cerebral Lues, by Dr. J. E. Courtney; Dementia Præcox, by Dr. A. R. Defendorf; Report of a Case: Was He a Paranoiac? by Dr. C. A. Drew; The Toxæmic Basis of Certain Brain Diseases, by Dr. W. E. Dold; Some Observations on the Insane; Blood Pressure, by Dr. W. R. Dunton, Jr.; Blood Conditions of the Insane, by Dr. H. C. Eyman; Psychology of Epilepsy, by Dr. Everett Flood; Delusions, Hallucinations, and Illusions of the Pubic Nerve, Cerebro-Spinal Areas, by C. H. Hughes; An Epidemic of Typhoid Fever Due to Impure Ice, by Dr. R. H. Hutchings; The Physiological Demands in Hospital Food Supply, by Dr. W. H. Kidder; Insanity in the Negro, by Dr. J. F. Miller; Paranoid Dementia, by Dr. C. W. Page; Drill for Patients, by Dr. G. A. Smith; How Dr. Brigham Met the Challenge to Diagnose Insanity at Sight, by Dr. Stephen Smith; Pathology of Acute Delirium, by Dr. H. A. Tomlinson; The Paranoiac Forms of Manic-depressive Insanity, by Dr. Aug. Hoch.

Responsibility for Death under an Operation.

—A decision which will be regarded with a great deal of interest by members of the medical profession was handed down on February 11th by the Appellate Division of the Supreme Court in the suit of Alice Wood, as administratrix of the estate of Robert Wood, against Dr. John A. Wyeth and Dr. W. H. Landon White, both well-known city physicians and surgeons. The suit was brought under the provisions of section 1,902 of the Code of Civil Procedure, to recover damages for the alleged negligent treatment of a boy named Robert Wood by the defendants as physicians and surgeons, resulting in his death. The plaintiff contended that the child died while under the influence of chloroform carelessly administered. The trial of the action resulted in a verdict in favor of Dr. White, but the jury disagreed as to Dr. Wyeth, and the trial justice finally dismissed the complaint upon the merits as to the latter. A motion by the plaintiff for a

new trial was denied, and counsel for the administratrix took an appeal to the Appellate Division. The judgment and orders have now been reversed and a new trial granted on the ground that the trial court was right in leaving the case to the jury, and erred in subsequently dismissing the complaint, after the jury failed to agree. The judgment, however, is rendered by a divided court, Justices Bartlett, Hirschberg and Jenks agreeing on the question of the propriety of the reversal, Justice John Woodward and Presiding Justice W. W. Goodrich dissenting.

Bellevue Hospital Alumni Association held its seventh annual reunion and dinner at Delmonico's on the evening of February 4th. Dr. Robert T. Morris, president of the society, presided. Dr. John Winters Brannan, president of the board of trustees of Bellevue, responding to the toast "The Trustees," announced that within the present year the trustees would start on plans for a new building to be several years in course of construction, and to cost \$3,000,000. Dr. Brannan spoke of other important changes accomplished or projected, such as improvement in the insane pavilion, under which Bellevue patients now received the same treatment as that administered at the State hospitals; of the organization of a fire brigade, with frequent and regular drills, and of changes in the house staff. He also spoke of the charges against nurses and attendants in the alcoholic ward of the hospital. These, he maintained, were absurd in their nature and utterly unfounded. "Let the other hospitals," he said, "continue to send alcoholics, wounded burglars, attempted suicides and insane patients to Bellevue, which is an emergency hospital. We will take care of them all, and incidentally we will give young medical men opportunities for training such as they can get nowhere else in town." Other speakers were Dr. D. Alexander Smith, Dr. Homer Folks, Dr. D. B. St. John Roosa and Dr. Ramon Guiteras. In the course of the evening a presentation of silver was made to Dr. Gouley in commemoration of his fifty years of service as an attending physician at Bellevue.

New York State Hospitals Overcrowded.—In the report of the visitors to the State Hospitals which has been submitted to the State Charities Aid Association, the conditions existing in a number of the State institutions are said to be most deplorable. In many of these the ventilation is poor, the plumbing and sewerage systems inadequate and imperfect, and the food and water furnished both open to criticism, while most of the hospitals are much crowded. In the Willard State Hospital there are 2,250 patients. There is proper sleeping room for but 1,950, the beds for the 300 in excess have to occupy corridors and similar places greatly needed for other uses. There are also more beds placed in the sleeping apartments than the space would admit of for securing, during cold weather, proper warmth with adequate ventilation. The water supply of the hospital is taken from Seneca Lake, only a short distance away. A very short distance from the point where the water is taken in the sewage from the entire community empties into the lake,

making the water impure and dangerous to all who drink it. The association recommends that this be looked into and remedies be made. In the Hudson River Hospital there are 300 more patients than the prescribed complement of the buildings call for, otherwise it is in a very good condition. The Long Island State Hospital, at Flatbush, has at various times been severely criticized for being overcrowded and at the present time has 250 more patients than it can properly care for. In the "annex" alone there are 400 women of the chronic class. The building is also in a very bad condition.

Official News.

Public Health and Marine Hospital Service:

Official List of Changes of Station and Duties of Commissioned and Non-commissioned officers of the Public Health and Marine-Hospital Service for the Seven Days ended February 12, 1903:

MAGRUDER, G. M., Surgeon. Granted leave of absence for one day, February 6, 1903.

DECKER, C. E., Assistant Surgeon. Granted leave of absence, on account of sickness, for ten days, from February 10, 1903.

PARKER, H. B., Assistant Surgeon. To proceed to New Orleans, La., for special temporary duty, from February 6, 1903.

HAMILTON, H. J., Acting Assistant Surgeon. Granted leave of absence, on account of sickness, for thirty days, from December 27, 1902. Granted fifteen days' extension of leave of absence, on account of sickness, from January 27th.

SIBREE, H. C., Acting Assistant Surgeon. Granted leave of absence for six days, from February 7.

ULRICH, C. F., Acting Assistant Surgeon. Granted leave of absence for twenty-five days, from February 15.

GAHN, HENRY, Pharmacist. Granted leave of absence for five days, from February 6, 1903, under provisions of paragraph 210 of the regulations.

Resignation.

Acting Assistant Surgeon PEDRO MALARET resigned, to take effect January 31, 1903.

Board Convened.

Board convened to meet at Washington, D. C., February 9, 1903, to consider an outline plan for the marine hospital to be erected at Savannah, Ga. Detail for the board: Assistant Surgeon General J. H. WHITE, chairman; Assistant Surgeon General L. D. WILLIAMS; Assistant Surgeon General W. J. PETTUS, recorder.

Army Intelligence:

Official List of Changes in the Station and Duties of Officers serving in the Medical Department of the United States Army for the week ending February 14, 1903:

DE SHON, GEORGE D., Captain and Assistant Surgeon. Having reported his arrival at San Francisco, Cal., in compliance with orders heretofore issued, will proceed to Boston, Mass., and assume the duties of attending surgeon and examiner of recruits in that city.

MARROW, CHARLES E., First Lieutenant and Assistant Surgeon. Granted leave of absence for one month.

WINN, ROBERT N., First Lieutenant and Assistant Surgeon. Relieved from further duty at Fort Riley, Kansas, and ordered to proceed to Fort Grant, Arizona, and report in person to the Commanding Officer of that post for duty.

WOODBURY, FRANK T., First Lieutenant and Assistant Surgeon. Ordered to accompany the Twenty-third Infantry from Plattsburg Barracks, N. Y., to San Francisco, Cal., and upon completion of this duty to return to his station.

Infectious Diseases in New York:

We are indebted to the Sanitary Bureau of the Health Department for the following statement of cases and deaths reported for the two weeks ending February 14, 1903:

DISEASES.	Week end'g Feb. 7.		Week end'g Feb. 14	
	Cases.	Deaths.	Cases.	Deaths.
Typhoid fever.....	55	12	37	11
Scarlet fever.....	278	16	247	23
Cerebro-spinal meningitis....	0	0	0	3
Measles.....	203	10	190	17
Diphtheria and Croup.....	399	47	345	45
Small-pox.....	2	0	3	0
Tuberculosis.....	343	174	282	173
Chicken-pox.....	119	0	135	0

Public Health and Marine-Hospital Service Health Reports:

The following cases of smallpox, yellow fever, cholera, and plague were reported to the surgeon-general during the week ending February 14, 1903:

Smallpox—United States.

Location.	Date.	Cases.	Deaths.
Alabama—Mobile	Feb. 6	2	
California—Los Angeles	Jan. 17-24	4	
California—Sacramento	Jan. 24-31	4	
California—Stockton	Jan. 1-31	10	
Colorado—Denver	Jan. 17-24	17	
Illinois—Chicago	Jan. 31-Feb. 7	16	
Illinois—Galesburg	Jan. 24-31	5	
Indiana—Indianapolis	Jan. 17-24	152	36
Maine—Biddeford	Jan. 31-Feb. 7	16	
Maine—Eastport	Jan. 31	7	
Maryland—Baltimore	Jan. 31-Feb. 7	4	
Maryland—Cumberland	Jan. 24-31	1	
Massachusetts—Boston	Jan. 31-Feb. 7	6	
Massachusetts—Haverhill	Jan. 31-Feb. 7	1	
Massachusetts—New Bedford	Jan. 31-Feb. 7	1	
Michigan—Detroit	Jan. 24-31	43	
Michigan—Grand Rapids	Jan. 31-Feb. 7	14	
Missouri—St. Louis	Jan. 24-Feb. 1	26	
Nebraska—South Omaha	Jan. 1-31	1	
New Jersey—Camden	Jan. 27-Feb. 3	2	
New Jersey—Newark	Jan. 31-Feb. 7	2	
New York—New York	Jan. 31-Feb. 7	2	
Ohio—Cincinnati	Jan. 30-Feb. 6	11	1
Ohio—Dayton	Jan. 31-Feb. 7	6	
Ohio—East Liverpool	Jan. 1-31	2	
Ohio—Hamilton	Jan. 1-31	5	
Ohio—Toledo	Jan. 10-31	19	
Pennsylvania—Altoona	Jan. 31-Feb. 7	1	
Pennsylvania—Philadelphia	Jan. 31-Feb. 7	33	2
South Carolina—Greenville	Jan. 24-31	1	
Utah—Salt Lake City	Jan. 24-31	19	1

Smallpox—Foreign.

Austria—Prague	Jan. 3-17	14	
Barbados	Jan. 2-16	4	
Belgium—Antwerp	Jan. 3-17	10	3
Brazil—Rio de Janeiro	Dec. 27-Jan. 10	9	
Canada—Winnipeg	Jan. 1-31	2	
Canary Islands—Las Palmas	Dec. 27-Jan. 17	31	1
Germany—Altona	To Jan. 22	11	1
Great Britain—Birmingham	Jan. 17-24	5	
Great Britain—Leeds	Jan. 10-24	19	
Great Britain—Leith	Jan. 10-17	2	
Great Britain—Liverpool	Jan. 17-24	51	1
Great Britain—Nottingham	Jan. 3-10	1	
Great Britain—Sheffield	Jan. 10-24	3	
Mexico—City of Mexico	Jan. 18-25	5	2
Russia—Moscow	Dec. 27-Jan. 3	1	
Russia—Odessa	Jan. 3-17	12	
Russia—St. Petersburg	Jan. 3-10	49	6
Straits Settlements—Singapore	Dec. 20-27	3	
Turkey—Constantinople	Jan. 4-11	3	

Yellow Fever.

Brazil—Rio de Janeiro	Dec. 27-Jan. 10	56	
Mexico—Tampico	Jan. 18-31	3	
Mexico—Vera Cruz	Jan. 24-31	6	3

Cholera—Foreign

Egypt—Alexandria	Jan. 12-19	4	3
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Plague—Insular.

Hawaii—Honolulu	Jan. 29	1	
Hawaii—Honolulu	Jan. 30	1	

Plague—Foreign.

Brazil—Rio de Janeiro	Dec. 27-Jan. 10	6	
Mexico—Mazatlan	To Feb. 4	278	217

Naval Intelligence:

Official List of Changes in the Medical Corps of the United States Navy for the week ending February 14, 1903:

- BELL, W. L., Passed Assistant Surgeon. Detached from the Naval Hospital, Mare Island, California, and ordered to the *Marblehead*.
- BLOCK, W. H., Acting Assistant Surgeon. Ordered to the Naval Recruiting Office, Chicago, Ill.
- BRIGGS, R. E., Assistant Surgeon. Appointed assistant surgeon with rank of lieutenant, junior grade, from January 19, 1903.
- DEAN, F. W. S., Assistant Surgeon. Appointed Assistant Surgeon, with rank of lieutenant, junior grade, from January 26, 1903.
- GROW, E. J., Passed Assistant Surgeon. Detached from the *Marblehead* and directed to wait orders.
- PLUMMER, R. W., Passed Assistant Surgeon. Commissioned Passed Assistant Surgeon, with rank of lieutenant, junior grade, from June 17, 1902.
- SUTTON, R. L., Assistant Surgeon. Appointed Assistant Surgeon, with rank of lieutenant, junior grade, from January 26, 1903.

Births, Marriages, and Deaths.

Married.

KELLY—CARTY.—In Philadelphia, Pennsylvania, on Wednesday, February 11th, Dr. Francis Kelly and Miss Marie Elizabeth Carty.

PEABODY—WRIGHT.—In South Orange, New Jersey, on Wednesday, February 11th, Dr. C. Morris Peabody, of Caldwell, New Jersey, and Miss Rosa Nell Wright, of Denver, Colorado.

ROCKWELL—HAIGHT.—In New York, on Saturday, February 14th, Dr. William Hayden Rockwell, Jr., and Miss Mary J. W. Haight.

Died.

CONWAY.—In Brooklyn, N. Y., on Friday, February 13th, Dr. John J. Conway, in the forty-fourth year of his age.

CRAM.—In Philadelphia, Pa., on Thursday, February 5th, Dr. J. S. Cram, in the seventy-fifth year of his age.

DUPONT.—In Montreal, Canada, on Thursday, February 12th, Dr. Flavien Dupont, of Boston, Mass., in the fortieth year of his age.

GALLAGHER.—In Baltimore, Maryland, on Saturday, February 14th, Dr. Charles Ridgely Gallagher, in the eightieth year of his age.

GRAY.—In Laurel, Maryland, on Friday, January 30th, Dr. Samuel Gray, in the seventy-third year of his age.

HINISH.—In Chicago, Illinois, on Tuesday, February 10th, Dr. William W. Hinish, in the sixtieth year of his age.

HOMANS.—In Boston, Mass., on Saturday, February 7th, Dr. John Homans, in the sixty-seventh year of his age.

HODGKINSON.—In Toronto, Canada, on Thursday, January 30th, Dr. E. J. Hodgkinson, in the seventy-eighth year of his age.

HOWARD.—In Louisville, Kentucky, on Monday, February 2d, Dr. William Howard, in the thirty-fifth year of his age.

KOCH.—In Egg Harbor, N. J., on Thursday, February 5th, Dr. G. Koch, in the sixty-second year of his age.

MAHNKE.—In Appleton, Wisconsin, on Thursday, January 29th, Dr. Charles Mahnke.

MANDEVILLE.—In South Orange, N. J., on Saturday, January 31st, Dr. Henry Addison Mandeville, in the forty-fifth year of his age.

NEWLAND.—In Los Angeles, California, on Monday, February 9th, Dr. Henry Newland, in the seventy-third year of his age.

NELSON.—In Frederick, Maryland, on Saturday, February 7th, Dr. Edward Nelson, in the sixty-second year of his age.

SULLIVAN.—In Pocahontas, Arkansas, on Tuesday, February 3d, Dr. James E. Sullivan, in the forty-first year of his age.

Pith of Current Literature.

PRACTICE OF MEDICINE.

Paludism.—M. E. Schoull (*Journal des praticiens*, January 3rd) says that even though it is proved that anopheles mosquitoes can transport and inoculate malarial poison, it must not be forgotten that the disease can be acquired in certain localities with the air as the transmitting vehicle, and that public and private measures against malaria must therefore be instituted in such places. Quinine is, of course, the best and most active measure of treatment, and intramuscular injections are the most rapid and efficacious means of introducing the drug into the system. In cases of malaria, abscesses do not follow the injections when they are made aseptically; but in other acute infectious diseases, the site of injection of quinine may be a focus for any number of abscesses. Prophylactically, small doses of quinine are sufficient, except in the cases of old sufferers from the disease, to whom larger doses must be given.

Antistreptococcus Serum in Scarlatina.—Professor A. Baginsky (*Berliner klinische Wochenschrift*, December 1st and 8th) says that Aronson's new serum is free from any deleterious after effects. It does not work so promptly and so brilliantly as the diphtheria antitoxine, but it is nevertheless useful and beneficial. The fall in temperature is slow but permanent, and cases which appeared grave at the beginning, on account of the high fever, slowly defervesced and went through the disease with no complications. The immunizing action of the serum is not yet perfected. Of complications, otitis was seen twice, nephritis twice, endocarditis four times, and pleurisy once. Arthritis and mastoid complications were not observed. Euphoria was noted at once after the injection of the serum. The author, in concluding, recommends the use of Aronson's serum as early as possible in cases of scarlatina.

A Case of Acute Pancreatitis, and Necrosis of Fat Tissue; Laparotomy; Drainage; Death Nine Days after the Operation; Autopsy. By George H. Monks, M. D., and David D. Scannell, M. D. (*Boston Medical and Surgical Journal*, January 22nd).—The chief points of interest in the case are: (1) The previous existence of two attacks, presumably due to gallstones, the connection of which with a subsequent pancreatitis is rendered probable by constantly accumulating evidence. (2) The extension of the fat necrosis toward the left adrenal and kidney, emphasizing the value of posterior drainage in such cases. (3) The possible importance of the adrenal in producing the fatal issue. (4) The negative results of bacteriological examination in extensive necrosis of the pancreas and fat tissue.

Serumtherapy in Typhoid Fever.—M. Chantemesse (*Presse médicale*, December 24th) says that antityphoid serum acts in such a way that the virus of the disease is attacked in a more efficient manner by the cells, and that it aids in destroying the tox-

ines. It increases the activity of the phagocytes, and acts upon the leucopoietic centres of generation of the phagocytes. It is therefore self-infectious and antitoxic, but above all, it is a phagocytic excitant. It is especially useful at the beginning of the disease before a profound intoxication has taken place, but if this has occurred, the serum must be given unsparingly. In grave cases, large doses are not demanded—especially if nervous symptoms are present—but a small dose will be sufficient to enable the patient to cross the dangerous period. The results obtained justify placing serumtherapy next to hydrotherapeutics. Chantemesse believes that, with this adjuvant, the mortality should fall from twelve to four or five per cent.

SURGERY AND ANATOMY.

On the Operative Treatment of Perforative Peritonitis in Typhoid Fever.—Dr. E. S. Kantzell (*Khirurgia*, December, 1902) discusses this subject from the surgeon's point of view and reports a number of cases. Statistics show that of every ten or fifteen deaths from typhoid fever, one is due to perforating peritonitis. Leyden suggested, in 1884, the surgical treatment of this complication, and Mikulicz was the first to practise this method in the same year. Since then the operation for typhoid ulcers of the intestine has been frequently performed, but unfortunately it is impossible to state definitely what improvement in the mortality of the disease has been attained by the introduction of this method, for unsuccessful cases are not so likely to be reported as successful ones. The largest collections of cases seem to be those of Keen, who in 83 cases, found 14 recoveries, and of Gerhardy, who found 11 successful cases in a series of 80. Fuerbringer lost all the patients on whom he performed this operation, and therefore he is an ardent enemy of the procedure. The first cases operated on in Russia were that of Alexandroff and Podrez, in 1890, and that of Zeidler, in 1891. Two Russian authors, Hesselevitch and Vanach, collected all the cases of which sufficient information had been published, and of 65 thus found there were 12 recoveries. The present author reports four cases which he operated on during the past year. Of these, two died soon after the operation, the other two recovered. In speaking of the indications for this operation, as they appear from a study of these cases and of the literature of the subject, the author says that no one can dispute the advisability of operation in those cases in which the clinical picture is that of a localized peritonitis, just as in certain cases of appendicitis. The only question is regarding the cases with general diffuse peritonitis. If 12 cases ended happily out of the 65 collected by Russian authors, then these twelve recoveries were undoubtedly due to the operation. Some authors, however, regard recovery in such cases as a lucky coincidence, but even then, if this occurs with a certain frequency, it would justify operation. The question as to when to operate in these cases is not easy to solve. Keen, citing his statistics of 80 cases, says that the chances for recovery are the better the earlier the operation is performed. Jalaquier and most

other operators are of the opinion that the operation should be performed at the earliest possible moment after the diagnosis is established. A number of surgeons think, however, that it is best to wait; that the patients who die under the influence of the initial shock could not be saved by the operation, and that after twelve or twenty-four hours, the first acute symptoms having subsided and the localization having become more definite, a positive diagnosis can be made more easily. Rochet believes that a case of general peritonitis following the perforation of a typhoid abscess cannot be cured by a laparotomy, and that the chief danger of the perforating peritonitis lies in the paralysis of the intestines that follows it. The present author thinks that the operation is indicated when the first acute signs of rupture have disappeared, and when the patient is no longer suffering from collapse, especially in cases in which the disease has progressed beyond the third week. A number of hours, even days, may be allowed to elapse after the rupture before operating, although the surgeon must be at all times ready to operate the minute the patient begins to get worse. In all cases of general peritonitis following ruptures of typhoid ulcers, the internal treatment should be laid aside and a laparotomy performed if the patient's strength allows. In most cases the operation under these circumstances will prove of no avail, but in some instances it will save life.

Avoidance of Hernia after Laparotomy.—Dr. Oscar Wolff (*Centralblatt für chirurgie*, December 13th) asserts that the method of suture is unimportant in the avoidance of a hernia. The important element is the prevention of meteorism immediately after operation, as meteorism and hernia stand in the relation of cause and effect. Following this principle, for the last two years he has completely sutured the abdominal wall only in those cases in which he was sure there would be no reaction; but in cases in which some transudation was to be expected, in which a raw peritoneal surface was left behind, or in which evidences of inflammation were present at the time of operation, he has left a small iodoform gauze drain in the angle of the wound, by which meteorism was prevented. He believes that his results as to subsequent hernias have been materially improved by this technics, though the time of complete healing has been slightly increased.

The Technique of Mechanical Disinfection of the Hands.—Dr. N. I. Napalkoff (*Khirurgia*, December) describes a method of mechanical cleansing of the hands which he has found of value. The two chief requisites for the thorough disinfection of the surgeon's hands are the care of the hand so as to render them particularly adapted for disinfection and their mechanical cleansing. The brush is without question the best means of accomplishing mechanical cleansing of the skin, but before use, hand brushes should be disinfected by boiling or by steam at high pressure. The great difficulty of handling brushes after they have been sterilized has been a source of comment by many surgeons.

It is impossible to take a brush from a receptacle containing a supply of brushes without contaminating the remainder of the contents, and of course it is necessary for the servant to use a brush before his hands are sterile. In order to overcome this difficulty, the author has had constructed a tall metallic box in which a column of brushes is placed one atop of the other. The front wall of the box can be removed when it is necessary to fill. A door working on springs is provided at the bottom of the front wall which is just large enough to allow one brush to come out, and by an arrangement, working by means of a pedal, the brush is pushed out of the door into the hands of the surgeon ready to receive it. Openings are provided in the box for sterilizing the whole column of brushes by means of steam, and the whole apparatus can be taken apart and boiled.

Chronic Obstruction of the Cæcum and Ascending Colon. By W. A. Lane, F. R. C. S. (*Lancet*, January 17th).—The author calls attention to a condition of the cæcum and ascending colon which is not infrequently associated with moveable kidney and which results from chronic constipation. The interference with the free passage of the intestinal contents occurs at the hepatic flexure of the colon, and is brought about by the development of a mesentery which is attached to the outer surface of the cæcum, ascending colon, and hepatic flexure. Any distention of the cæcum causes a kink in the hepatic flexure with consequent obstruction. This may be so absolute and persistent as to produce symptoms of acute intestinal obstruction. In other cases the signs and symptoms may be those of stone in the kidney, and many cases have been operated upon for that condition. The operation usually relieves the pain, as it frees the mesenteric adhesion of the ascending colon. Obstruction of the hepatic flexure is a primary factor in the production of many cases of so-called appendicitis. This fact explains the pain which so often remains after the mere removal of an appendix and shows the necessity, not only of excising a diseased appendix, but also of dividing freely the mesentery and liberating the hepatic flexure. Moveable kidney is another condition simulated by obstruction of the hepatic flexure. It may be difficult to determine whether the moveable kidney or the distended cæcum forms the source of the patient's symptoms.

Sialolithiasis.—Dr. Friedrich Hanszel (*Wiener klinische Wochenschrift*, January 1st) places the following symptoms as the most important in differentiating sialolithiasis from inflammatory and especially from solid tumors: (1) The more or less pronounced inflammatory signs at the beginning of the disease; (2) periodically recurring pains (salivary colic) with possible symptoms of salivary retention; (3) the frequent changes in the size of the tumor. The Röntgen rays may be of value in determining the presence of a calculus, especially since symptoms other than those mentioned have no diagnostic significance.

Influence of Nephrectomy upon Absorption. By S. J. Meltzer, M. D., and W. Salant, B. S., M. D. (*American Medicine*, January 24th).—The conclusions drawn are based upon data obtained by experimental nephrectomies performed upon rabbits and guinea pigs. The experiments seem to show that nephrectomy favors absorption. This rather unexpected result is probably due to increased osmotic blood pressure and the fact that the 0.8 per cent. solution of sodium chloride which was used to test the absorptive power, instead of being isotonic in relation to the blood of the animal operated on, as it probably is in relation to the blood of a normal animal, was actually hypotonic; hence the better absorption in the animals on which nephrectomy had been performed. "Our experiments demonstrate clearly that after nephrectomy absorption is considerably improved. They clear up the mystery why no oedema was observed after nephrectomy in animals or in pathological cases of acute anuria in human beings lasting sometimes from five to six days. The first effect of complete anuria is, not an increase in the normal transudation, but an increase of the power of absorption, of the blood." A complete report will soon appear in the *Journal of Medical Research*.

Three Cases of Acute Intussusception in the Same Family. By Dr. R. G. Riddell. (*British Medical Journal*, January 10th).—The author reports an instance of three cases of intussusception occurring in a family of four children, one ending fatally and two being relieved by operation. It is difficult to account for the occurrence of these cases in one family. In all three there was a history of digestive troubles, due to careless feeding. There must have been some congenital condition common to all three, which, in the presence of an exciting cause, would be sufficient to determine the occurrence of intussusception. It has been suggested that an abnormally movable cæcum predisposes to ileocæcal invagination.

Four Cases of Duodenal Ulcer Perforating Acutely. By D'Arcy Power. (*British Medical Journal*, January 10th).—The author reports four cases of duodenal ulcer perforating acutely, and from them draws the following conclusions: (1) Duodenal ulcer occurs more often in men than in women. (2) The extravasated fluid trickles into the iliac fossa, and causes a local peritonitis which may be mistaken for an acute appendicitis. (3) The transparent or bile-stained succus entericus found in the peritoneal cavity is diagnostic of a perforated duodenal ulcer. It is quite different from the gastric contents escaping at a perforating ulcer of the stomach. (4) The prognosis of a duodenal ulcer is worse than that of a perforated gastric ulcer, on account of the greater difficulty of closing it satisfactorily. (5) The prognosis should not be too sanguine until after the lapse of the eighth day, and it is always bad, however well the patient may appear, if the pulse rate continues bad. The pulse is a much better guide than the temperature. (6) Free drainage is imperative, both iliac fossæ, the rectovesical pouch, and the space below the liver more

particularly, need tubes. It is better for the patient to recover with a scarred belly than that he should die with an abdomen full of pus. The feeding of the patient is a matter of great importance. Small quantities of food should be given frequently, and if the patient feels nauseated the amount must be reduced at once. It is better to give nutrient enemata for some days after the operation than to administer food by the mouth. In three of the four cases death occurred shortly after operation.

OBSTETRICS AND DISEASES OF WOMEN.

A Case of Pyometra.—Dr. N. G. Bondarieff (*Journal Akouschérstva i Zhénskikh Boliésney*, October, 1902) reports a case in which the difficulty of diagnosing pyometra was well shown. The patient was a woman aged thirty-one years, whose second labor had been very difficult, and involved some operation, the nature of which was unknown. The patient remained in bed one month but had no fever. Ten months before admission she fell, and noticed a slight bloody discharge and a prolapse of some reddish mass from the vulva, but this mass disappeared after the second labor. Three weeks before admission she noted an increase in size and hardness in her abdomen. Since then she had complained of increasing weakness, of pain in the abdomen and the right lumbar region, and constipation. On examination, the abdomen was found to contain a tumor of considerable size, extending from the umbilicus downward, with dullness continuous above with the liver dullness. On bimanual examination, it was impossible to outline the internal genitals, and on rectal palpation, a mass was felt to press on the bowel, which was continuous with the tumor. The cervix was short, the fornices depressed and hard to the touch. The diagnosis lay between pregnancy, which was suspected on account of the absence of menstruation, etc., and an ovarian cyst. The patient grew weaker, her pulse rose to 120, and a laparotomy was performed. A large grayish tumor was revealed, which was taken for a cyst. On puncturing it with a trocar, a quantity of greenish pus came out. The tumor was then opened and was found to contract suddenly to one-third its size, allowing an enormous amount of pus to issue. This tumor was found to be nothing else than a uterus with its appendages, and the condition was therefore a pyometra. The cavity of the uterus was reached through the vagina with great difficulty, as there was practically no cervix but flaps of scar tissue, which had to be divided before the cavity could be entered. The uterus was then washed out with bichloride solution, and the proper drainage established by means of a long rubber tube. The patient improved rapidly and the abdominal stitches were removed on the eighth day, the wound having healed by first intention. The drain was shortened gradually at each dressing, but on the eleventh day it was found in the vagina, having fallen out of the uterus. A strip of gauze was introduced into the uterine cavity, but from this time on the patient began to get worse, so that a puncture was made in the vaginal vault through the cicatrix of the cervix, which had again grown together. A quantity of

pus came out, and a metallic cannula was left in the puncture as a drain. This did not prove of much avail, however, and the patient continued to get worse until a second operation was performed, opening the pouch of Douglas, as it was suspected that there was a collection of pus beyond the uterus. Five litres of pus came out, and the patient at once began to improve and continued steadily to recovery. The after treatment consisted of irrigations of the cavity with normal salt solution.

Two Cases of Mitral Stenosis Complicated by Pregnancy. By Dr. G. A. Wilkes. (*British Medical Journal*, January 27th).—The author reports two cases which illustrate the liability to fatal loss of compensation in mitral stenosis when associated with pregnancy. During gestation the work of the heart is increased, the presence of the placental circulation increasing the amount of blood and raising the blood pressure. The cavities of the heart become dilated and the left ventricle is usually slightly hypertrophied. The right ventricle, being thinner and weaker, does not take on compensatory changes so rapidly; now in mitral stenosis the compensation ultimately depends on the integrity of the right ventricle, and in severe cases of the disease there is no reserve force left. A breakdown is almost sure to occur when such a patient becomes pregnant; premature labor results, and the earlier in pregnancy the right ventricle becomes unable to cope with its difficulties, the sooner is the pregnancy likely to be brought to a close. Such premature labor is directly due to venous obstruction, congestion of the placenta, and the lack of oxygenated blood in that structure; hæmorrhage results or the foetus dies from asphyxia, either event bringing on premature labor.

The severest tax on compensation is during the second stage of labor, whether premature or not. In the two cases here reported death took place shortly after delivery from embarrassment of the right heart. Women with severe mitral stenosis should be advised not to marry. In the case of patients who present symptoms of serious circulatory disturbance in the early months of pregnancy, or in the case of those who have with difficulty escaped a fatal issue from cardiac failure in a previous labor, the induction of abortion should be considered in preference to premature labor.

Twenty-four Cases of Myomotomy.—Dr. L. Kessler (*Journál Akouschérstva i Zhénskikh Bo-létsney*, October, 1902) reports a series of twenty-four hysterectomies for fibroid tumors of the uterus, in which there was only one death, and this was caused not by the operation, but entirely independently of the surgical procedure. He therefore concludes that, with proper asepsis and care to details, the operation can be done with a very small mortality. The series reported were the first operations of this kind that the author had performed; his assistants were for the most part not well trained in laparatomies, and the patients included women in very bad condition of general health. The operations were performed in a room in which septic cases of all kinds were also operated on, and in

which surgical dressings were applied. The operations were of long duration, lasting from two to four hours in most of the cases, on account of the difficulties with lack of facilities and untrained assistants. The author regards two factors as essential to success in these operations, namely, the observance of complete asepsis and the complete arrest of hæmorrhage. He recommends ether anæsthesia in preference to chloroform, which is used in most cases of this kind in Europe, because the blood vessels do not dilate after ether as they do after chloroform. In conclusion he urges the necessity of better and more thorough training for the young surgeon, but even without this training he believes that one can acquire the needed dexterity by practice, even without any loss to patients.

A Clinical Lecture on Two Cases of Chorea Gravidarum. By Dr. D. B. Hart. (*British Medical Journal*, January 17th).—By chorea gravidarum is meant that during pregnancy the patient has irregular spasmodic movements—a want of coordination of voluntary movements with muscular and mental weakness. It is due to involvement of the motor cortex and not of the spinal cord. The mortality is about one in five: about one half the cases that recover do so before labor. Insanity as a result is infrequent. About half the cases occur in primiparæ. In one of the cases here reported all medical treatment was of no avail, but abortion was induced at the end of the second month. The patient immediately improved and the chorea soon disappeared. In the second and milder case, the administration of large doses of antipyrine brought about recovery in about two weeks.

DISEASES OF CHILDREN.

A New Method of Percussing the Spleen in Children.—Dr. Francesco Sarcinelli (*Riforma medica*, December 20th) finds that the ordinary methods of percussing the spleen in children, with the patient in the classical position, enable us to define clearly only the boundaries of that portion of the spleen which is uncovered by the lung. He therefore adopts the following method of examining children's spleens. The little patient is held suspended by an attendant, in such a way that the right flank bulges out. The patient is held in a position intermediate between dorsal decubitus and the left lateral position. One arm of the attendant is held bent under the child's left shoulder, the other arm under his pelvis, and the percussion is performed from below, passing from the surrounding resonant areas into the dulness of the spleen which is to be delineated. By this simple manœuvre the spleen is sunk by force of gravity toward the abdominal parietes, its ligaments being lax enough to permit this sinking, and thus percussion is made possible where it cannot be performed with success in the ordinary position. In older children two supports can be used under the left shoulder and the left side of the pelvis respectively, but it is difficult to make the patients hold their bodies rigidly in this position for any length of time, so the assistance of an attendant is required. In rhachitic children, and in other cases in which the

stomach is very much distended, this method is of value as it eliminates the gastric tympany. The author has been able by this method to outline the entire circumference of the spleen, and recommends it as a practical modification of the usual mode of examining the spleen in children. He has proved his measurements *intra vitam* in some cases in which the child died, by the measurements of the spleen found at autopsy. By this method he is able to distinguish the slightest variations in the size and shape of the spleen.

On Reflex Convulsions in Growing Boys and Girls. By Dr. E. Smith. (*Lancet*, January 24th).—The author calls attention to the fact that convulsions, due to pure reflex worry, may be found in children as late as the eleventh or twelfth year. There is usually a neurotic family history, and there may be a history of convulsions in infancy. Such children are usually high-strung and excitable. The cases are apt to be classed as epileptic and treated accordingly, but premonitory symptoms common to all the attacks can often be detected. The seat of trouble is usually the alimentary canal, and the irritation is excited by undigested and fermenting food. The children suffer from languid circulation and cold feet. As a rule, the nervous attacks are separated by long intervals; in most cases they are single convulsive seizures, in others they fall into groups. The isolated attacks are probably purely reflex. The special feature lies in the fact that the attacks invariably coincide either with a digestive disturbance, or with some other form of local irritant, and cease at once when the local condition is relieved. The irritant need not be violent—for instance in children with adenoids, the addition of a post nasal catarrh may be enough to determine the onset of convulsions. The author cites a number of cases illustrating the above-mentioned facts.

GENITO-URINARY DISEASES.

The Operative Treatment of Perforations of the Bladder by Flaps of Muscle and Serous Membrane.—Dr. L. Baldassati and Dr. R. Finotti (*Riforma medica*, December 18th) have transplanted in a series of animals portions of muscular and serous tissue to close vesical perforations, and they recommend this method in preference to the plastic operation which involves the use of the omentum. The muscular structure of the bladder is well imitated by the tissue transplanted, and gives a strong and resistant bladder wall, the bladders of the animals experimented upon being apparently of normal size and shape on autopsy.

A Case of Foreign Body in the Bladder.—Dr. M. S. Margulies (*Roussky Vrach*, December 14th) reports the following case: A young woman, aged twenty-two years, single, milliner, of markedly neurasthenic predisposition, had been suffering from a series of hysterical attacks. Her menstruation began at fifteen years of age, the menses lasting two or three days and being very painful. During these periods the patient had hallucinations of both hearing and sight—bloody scenes, without any erotic ideas. From time to time she had felt a

strong sexual desire, which was manifested, according to her statement, by itching in the vulva, which she attempted to allay by masturbation. Some days before admission she, for the first time, used a lead pencil for this purpose, and this pencil slipped out of her hand and disappeared in the vulva. Three days later she began to feel pain on urination and to pass bloody urine. The foreign body was not felt through the vagina, but on cystoscopic examination, the two halves of the wooden shell of the pencil were found floating in the liquid injected into the bladder (boric acid solution), so that they appeared near the top of the organ, but the graphite of the pencil could not be found. The urethra was dilated by Simon's speculum, the little finger was introduced into the bladder, and the wooden shells were brought close enough to the urethral opening to permit of their being seized by ordinary forceps used for the removal of foreign bodies in the urethra. It remained to determine where the graphite of the pencil had disappeared. It might have been passed in some way through the urethra and was not noticed in the bloody urine, or it might have become dissolved in the urine; at any rate it could not be found in the bladder by a careful cystoscopic search.

Separating the Urine of the Two Kidneys.—M. G. Luys (*Gazette hebdomadaire de médecine et de chirurgie*, December 11th) describes his new instrument, which acts by dividing the bladder into two halves and thus permitting the escape of the urine only through the catheter-like arrangement of each side corresponding to the division of the bladder into which it is inserted. [The apparatus is plainly a modification of Harris's separator, and the whole tone of the article is vainglorious, no credit being given to the American inventor for the establishment of the principle.]

The Open-air Treatment of Syphilis. By Edward H. Douty, M. A., M. D. (*Medical Record*, January 31st).—Dr. Douty bases his recommendation of the open air treatment of syphilis on the following considerations: (1) Neither mercury nor potassium iodide is a true specific in the treatment of the disease. It is therefore necessary to resort to other measures if good results are to be obtained. (2) The gravity of the disease depends on the resisting power of the individual to the poison of the disease, and the best way to increase this resistance is by the same methods that have proved most efficacious in combating an analogous infection, viz., tuberculosis. (3) Experience while residing and practising for ten years in the university town of Cambridge, England, taught these two facts: First, that when the disease was contracted by one of the poor, underfed scholars, it was sure to be of a serious type, while if it were contracted by one of the well-to-do, hunting, or athletic undergraduates it was rarely of a severe type. And this was true notwithstanding the fact that the poor hard students were always conscientious in the taking of their mercury, while the sporting undergraduates were extremely lax in the carrying out of the prescribed treatment. This same observation had also been

made in his Cambridge practice by Sir George Humphry. Syphilitic athletes who chronically poison themselves with alcohol and dissolute living eventually come to grief. (4) Experience in Switzerland, during a period of five years, has convinced the author that 30 per cent. of the tuberculous male patients who are there for the treatment of their tuberculosis, are syphilitics. Many directors and assistants at various continental sanatoria with whom Dr. Douty has discussed the question, place the proportion of syphilitics among the phthisical men at from 30 to 40 per cent. Dr. Douty has noticed that syphilitics in the early stages of the disease do remarkably well in the Alps, and that little mercury is needed in their treatment. He believes that every syphilitic "should devote certainly one year to an open air life, and, if he can afford it, two years." With reference to the crusade that is now going on with the purpose of stamping out tuberculosis, he has this to say: "I believe there is no hope of stamping out 'this scourge' without also taking means to stamp out the other even greater scourge—syphilis."

Tumors of the Bladder. By Dr. P. J. Freyer. (*Lancet*, January 24th).—Tumors of the bladder may be primary or secondary. The former alone are of importance to the surgeon. There are four classes of primary tumors, according to the tissue from which they originate or of which they are composed: 1. Epithelial tumors; 2. connective tissue tumors; 3. dermoids; 4. cysts. The latter two groups are very rare.

(1) *Epithelial tumors.* These are the most common bladder tumors. The most important as well as the most frequent variety is the papilloma, of which there are two typical forms: (1) Villous papilloma, and (2) fibropapilloma. Papillomata originate in an overgrowth of the normal mucous membrane and are analogous to cutaneous warts. The pedunculated villous papilloma consists of a fleshy mass, varying in size from that of a walnut to that of a cherry, attached to the bladder wall by means of a pedicle, and covered partially or entirely by villous processes or papillæ. There is no infiltration of the adjacent mucous membrane or submucous tissue. The villousities vary greatly in length and shape. Papillomata are most frequently found in the vicinity of the ureteral openings. They vary in size from that of a pea to an enormous mass almost filling the bladder. They occur singly in the vast majority of cases. When multiple the number does not usually exceed three or four. A pedunculated growth may from time to time be carried during the urinary flow against the neck of the bladder, and block the passage, giving rise at first to hypertrophy, and eventually to atrophy and pouching of the wall of the bladder. Cystitis is a not infrequent sequela of the presence of a tumor in the bladder. But simply because a growth is seen by means of the cystoscope to be covered with villi, it is not necessarily benign, for malignant tumors may be villous. Intermediate between the typically benign papillomata and malignant tumors comes a type known as "transitional." They have a tendency to recur after removal, becoming more and more fleshy, with infiltration of the mucous mem-

brane, and the patient eventually dies of true cancer. Adenomata rarely if ever occur in the bladder. Epithelioma as a primary disease of the bladder is not uncommon. It is rare before the age of forty years, and originates in the mucous membrane as a warty growth or an ulcer. The disease advances rapidly, soon involving all the tissues of the bladder.

2. *Tumors of the connective-tissue type.* (a) Fibromata arise from the submucosa or fibrous tissues in the muscular coat. They are rarely pedunculated, are usually single, and are almost exclusively found in adults. As a rule they spring from the base of the bladder. (b) Myxomata are soft gelatinous polypi, similar to nasal polypi. They occur only in children, may be sessile or pedunculated, and are generally multiple. (c) Myomata are composed mainly of unstriped muscle fibres, interspersed with scanty fibrous tissue. They correspond to uterine myomata. (d) Sarcoma is the most common of the tumors of the connective tissue type found in the bladder. It may occur at any age, arise in any part of the bladder, and is invariably sessile.

Symptoms and Diagnosis. Hæmaturia is the earliest and most important symptom of bladder tumor. If it is painless the growth is probably benign. Early in the disease there may be long intervals between the attacks of bleeding, but as the disease progresses they increase in frequency and intensity. Subsequently the urine will never be quite free from blood. The urine is not uniformly mixed with blood, and clots are frequently present. The hæmaturia is generally independent of position and motion. Profuse hæmaturia is rare in connection with stone, whereas with tumor it is the rule. Soft growths bleed more profusely than the dense and hard varieties. Increased frequency of micturition occurs sooner or later with all vesical growth, and does not disappear until the tumor is removed. Pain is nearly always present in the later stages, sessile and infiltrating growths being more painful than pedunculated ones. The pain is usually referred to the perinæum or along the urethra. Shreds of tumor tissue may be found in the urine, examination of which will give important information. Pus is present in the urine when cystitis occurs. The one means of diagnosis now employed is the cystoscope, which provides us with a scientific and accurate means of arriving at a definite diagnosis as to the presence of a tumor as well as to its size, physical characters, position, and form of attachment to the bladder wall, as also to a fairly accurate forecast as to its nature.

Treatment. The only line of treatment offering a prospect of permanent relief consists in complete removal of the growth, by means of suprapubic cystotomy.

On Hernias of the Bladder.—Dr. Giulio Baroni (*Riforma medica*, December 19th and 20th) reports eight cases of vesical hernia in which he has operated successfully. He believes that hernias of the bladder are more frequent than is generally supposed, but it is often overlooked on account of the difficulty of making a diagnosis in such cases. By vesical hernia is meant the protrusion through

the abdominal wall, by means of a natural or artificial opening of a portion of the bladder wall, which may or may not be covered by peritonæum according to the portion protruding. The most common site of these hernias is the inguinal, but the vaginal protrusion (cystocele) should also be remembered. The other sites are very rare. The perineal variety is not so rare in multiparous women, for there the bladder insinuates itself between the uterus and the vagina on one side of the womb, and forms a tumor in the perinæum. These hernias are rarely congenital, but generally acquired, the causes being the same as those of an intestinal or other hernia, and anything that may cause distention and over filling of the bladder. The symptoms of vesical hernias are unfortunately far from constant; they may indeed be entirely absent and the case be taken for common hernia. A diagnosis before the operation is, therefore, rarely made, and even during the operation we are by no means always sure that we are dealing with the bladder. The objective symptoms of vesical hernia vary according as the tumor is a simple cystocele or a cystocele and enterocele combined. In a simple cystocele we have a soft, indolent tumor, which may be flaccid if empty, or tense if full of urine. The volume is influenced by the position of the patient and by cough, and the tumor is almost always reducible. But if there are adhesions, or if there is a complicating enterocele, these symptoms are not clearly defined. By passing a sound into the bladder and by trying to reach the part that has prolapsed through the abdominal wall, we can make the diagnosis certain. Filling the bladder with fluid may also help in distinguishing these hernias. In all cases the condition of the prostate and of the urethra should be investigated, as the presence of prostatic hypertrophy and of strictures points to the possibility of vesical hernias from distention. Owing to the difficulties of diagnosis just set forth, wounds of the bladder are common in radical hernia operations. The treatment may be palliative if the hernia is reducible and if there is no profound change in the muscular tissues of its walls. Such measures as reducing the hernia and keeping it in place with pads or bandages, securing thorough drainage of the bladder by means of permanent catheters, and by electricity, etc., may be tried. If the walls of the bladder are very much weakened, and if there are adhesions preventing the reduction of the hernia, however, a radical operation is needed. This consists of the same steps as an enterocele operation, but the question arises as to whether the bladder should be simply reduced or resected. Reduction alone is advisable in most cases, unless the bladder has been wounded during the operation, or unless it is very much distended. Resection produces a marked diminution in the capacity of the bladder, which reacts unfavorably on the kidneys. If the walls of the bladder are found to be sufficiently thick and if there is no cystitis, then we may suture a wound made accidentally and replace the organ, but if the walls are too thin and if there is a cystitis, the best plan is to leave a vesical fistula and let it heal. The author calls attention particularly to the pain in the renal region of the corresponding side, which occurred in his cases of vesical hernia, and states that this helped him in his diagnosis.

LEGAL MEDICINE.

Contribution to the Study of Putrefaction in the Lungs of Fœtuses without Respiration.—J. A. Clark (*Revista de la Asociación Médico-Farmacéutica de la Isla de Cuba*, Year III, No. 1) has sought to determine experimentally whether putrefaction might take place in the lungs without the presence of air; and incidentally to prove the fallacy of the theory that respiration must necessarily have taken place if the lungs float upon water. He accordingly experimented with the lungs of fourteen fœtuses, in which it was certain that air had not entered the lungs, either through respiration or insufflation, in the following manner: After placing the lungs in water and finding that they sank, they were next placed in vessels of equal size and containing an equal amount of water. All air was withdrawn from the vessels and they were hermetically sealed and kept at a uniform temperature. In the majority of cases, gaseous putrefaction apparently took place after a length of time varying from a few hours to thirty-eight days, as indicated by the fact that nine floated to the surface of the water; and of this number, gaseous vesicles were visible upon the exterior of four lungs. While not considering these findings as a final decision of the questions under investigation, the author feels justified in concluding that it has not been fully proved that gaseous putrefaction does not occur in the lungs of fœtuses which have not breathed; and that the assertion that respiration has taken place, when based solely upon the fact that the lungs float, is not justifiable.

HYGIENE AND SANITARY SCIENCE.

On a Dangerous and Little-known Change in Preserved Meat.—Dr. Giovanni Grixoni (*Riforma medica*, December 3rd) finds that simple peptonization of preserved or canned meats is a sign of great importance. According to the Italian Minister of War, the meat should not be considered as spoiled because a sound of splashing fluid is heard on shaking the can, unless, on opening, some fluid of unwholesome odor issues. The author doubted this statement and investigated a series of cans of preserved meat, to show that the liquefaction of the gelatin in these products was a sign of decomposition and a sufficient ground for the rejection of the can in question. The cans tested were all in perfect condition, none was leaking, but all had a part of the gelatin melted at below 18° C. He found that his supposition proved to be correct, for the liquefaction of the gelatin had been the work of bacteria, and of trypsin-like ferments generated by these germs. The preserved meats investigated were found to have a toxic power, for when inoculated into animals they caused death to take place by slow poisoning. When eaten by rats and mice they also caused death. The toxins produced in the liquefied preserved meats have a powerful bactericidal action, prevent putrefaction, and are soluble in water. A temperature of 100° C. destroys these substances, and they lose their property of killing animals when eaten, and of arresting microbial life after being brought to a boiling point. By means of serum diagnosis the source of the poisoning by animal food can be determined, and in

this way the diagnosis of such cases can be made. The prolonged presence of the microbes in cans of preserved meats causes great changes in their biological characteristics, and in time diminishes their activity and even may cause their death. Cans which show evidences of liquefaction should be examined bacteriologically, and those which contain living germs should be rejected.

Is Any Diseased Condition Necessarily Self-limited? By Edwin R. Maxson, A. M., M. D., LL. D. (*Medical News*, January 31st).—The paper does not treat of the subject set forth in the title, but is rather a plea for the use of antiseptics in the treatment of various "putrid, septic, and contagious diseases." Dr. Maxson believes he can abort about one third of all cases of typhoid fever by the internal administration of from two to four grains of sodium sulphocarbolate every six hours, aided by hot foot baths and a cathartic. Patients that are seen a little later, under the same treatment will be able to get back to light work at the end of one week, and those that come under his care later, still recover at the end of two weeks. Similarly brilliant results can, according to the author, be obtained in scarlet fever and diphtheria.

Malaria and Anopheles.—Favr (*Roussky Vrach*, i, No. 37) has made experiments in many malarious districts in Russia with the following results. Wherever malaria is prevalent, there he has found anopheles. In one mosquito he found a zygote. He also infected mosquitoes with malarious blood and observed the development of the plasmodium in the insect.

OPHTHALMOLOGY.

On the Changes in the Eye in Poisoning by Ergot and its Preparations.—Dr. K. Ch. Orloff (*Roussky Vrach*, December 14th) has studied the changes produced by ergot poisoning in the eye. This organ, being connected very intimately with the rest of the organism, does not remain unaffected in the rare disease known as ergotism. As early as 1770, Traube noted amaurosis and amblyopia accompanied by dilated pupils, in some patients, and in others double vision and photophobia. Some investigators obtained, after experimental inoculations in animals double cataracts from ergot poisoning. But few observations, aside from these, have been published on the subject. In order to determine the effects of ergot and its derivatives on the eye, the author inoculated a series of 21 animals with ergotine, ergot infusion, sclerotinic acid, sphacelinic acid, and cornuto-sphacelinic infusion. In all the injected animals, symptoms of poisoning appeared, and in some they were followed by death. Special attention was paid to the condition of the eyes, and in four animals cataracts were found as the result of the injections. There was also dilatation of the pupils and absence of reaction to light, and in some animals a distinct impairment of vision. Microscopically, the changes noted in the ganglion cells of the retinae of these animals were: (1) Disintegration of Nissl's bodies; (2) destruction of these bodies at the circumference; (3) complete dissolution of these bodies, so that the cells stained diffusely with the specific dyes; (4) indistinctly out-

lined nuclei; (5) vacuolization of the protoplasm; and (6) complete disintegration of the ganglion cells.

PHYSIOLOGY AND PATHOLOGY.

The Side Chain Theory. By Addison S. Thayer, M. D. (*Boston Medical and Surgical Journal*, January 29th).—The side chain theory of Ehrlich serves to outline in a diagrammatic sort of way the various phases of immunity. Among a number of processes that are concerned in the production of immunity three demand special attention. (1) *Bacteriolysis*. By this is meant the liquefaction of bacteria by the action of certain immune sera. This, the so-called "Pfeiffer phenomenon," was announced in 1894, by Pfeiffer. He demonstrated the fact as follows: A guinea pig immunized against cholera had living cholera cultures injected into its peritoneal cavity. It was found that at the end of forty minutes the vibrios had been dissolved by the immune serum. This is what is known as the bacteriolytic action of immune sera. (2) *Agglutination*. This phenomenon was first observed by Grüber, of Vienna, while working with the typhoid bacillus. It is the basis of the well known Widal test. Agglutinins are separate and specific constituents of the blood. During the agglutination reaction, agglutinin is absorbed by the bacteria. (3) *Hæmolysis*. By this is meant the hæmolytic action that certain sera exert on foreign bloods. This action is due to the presence of a substance which has been named hæmolysin and is one of the so-called antibodies. Hæmolysis and bacteriolysis are strikingly analogous processes. Ehrlich's theory has to do with the production of antibodies. Antibodies can be produced only in the living body: it is the resistance of the living tissues that makes the production of the antibody, or antitoxine, possible. It was for the purpose of explaining how this occurred that the side chain theory was devised. The theory is as follows: When a toxine is introduced into the living body it does not become bound to the functioning centre of the cells, but to certain side chains or receptors of the cells. The normal function of these receptors is to receive and appropriate food. The molecule of toxine, by its so-called haptophoric group, "catches on" to the side chains of the cells, and after a time, by the action of its toxophoric group, produces a defect in the cells. The pre-existing side chains having been diverted from their normal function, the cells produce new side chains. These proliferated side chains have the same affinity for toxines, after they have been cast off by the cells, as they had before; and so when present in the blood, they constitute an antitoxine. The difference in the way a toxine acts when introduced into the living body and the way in which a bacterium or a foreign blood cell acts, lies in this, that while there is a direct affinity between a toxine and the side chain, the bacterium or foreign blood cell can only be attracted through the intervention of another body which acts as a sort of fixer, or mordant, by means of which the cell ferment, which is normally present in protoplasm, is able to take a part in the production of an antibody. In the case of blood the fixer must have a double affinity, &c.

must be attracted both by the red blood cells of the host and by the cells of the invading blood. Such a fixer has been called by Ehrlich an amboceptor, and he has named the ferment that is normally present in protoplasm, and without which the antibody can not be formed, the complement. All writers do not use the same nomenclature. The following terms are synonymous with amboceptor: preparative, sensitizer, immune body, intermediary body, and desmon. The cell ferment, or complement, is also known as end body, cytase, and alexine. Ehrlich contends that every toxine, every parasitic bacterium, and every variety of animal cell has its own specific affinity in side chains of the corporeal protoplasm; or, to state the same thing conversely, that the cells of the animal body are endowed with separate, specific receptors, having affinities for every kind of invading cell or poison.

A Study on the Ehrlich Diazo-Reaction.—Dr. Gedgovd (*Kronika Lekarska*, November 15th and December 1st) has studied the diazo-reaction in 533 patients and 100 healthy persons, making a total of 4,593 examinations. Of this number 202 were patients with typhoid fever, in whom the author made 2,860 examinations. He found that the diazo-reaction was present in 82 per cent. of cases of typhoid fever, and appears most frequently between the fifth and eighth days of the disease. This reaction was a more constant symptom of typhoid fever than the rash, and it lasted in proportion to the duration of the disease. It appeared at the time of a generalized swelling of the lymphoid tissue of the gastrointestinal tract, and during the disintegration of the swollen parts. It disappeared with the cessation of the pathological process, and the healing of the lesions. In 75 per cent. of 30 cases of typhus fever, the author obtained a positive diazo-reaction. In 33 cases of tuberculosis the diazo-reaction appeared constantly, but those in which it was marked ended fatally, while in those in which it was not pronounced, the patients lived longer. In all cases of suspected tuberculosis in which there was no diazo-reaction, the post-mortem findings showed an absence of tuberculous lesions. In 91 cases of lobar pneumonia there was usually no diazo-reaction. A weak reaction is of no significance in this disease, but a marked one makes the prognosis unfavorable. In 66 cases of malaria no connection could be established between the occurrence and intensity of the reaction and the severity of the disease, nor was the reaction present in any of the relapses or the intervals between the attacks. The diazo-reaction was obtained, in addition, in the following diseases: (1) In measles during the desquamation; (2) in a case of gangrene of the scrotum in an old man; (3) in exfoliative dermatitis associated with erysipelas. A mild diazo-reaction occurs in scurvy, empyema, and erysipelas. The author believes that the reaction is produced by bacteria and their toxins.

On the Rectal Temperature in Experimental Tetanus.—Messrs. A. Mleefeld and J. Pinchart, students of medicine in Tizzoni's laboratory in Bologna (*Gazzetta degli ospedali e delle cliniche*,

December 28th), found that very little appeared in literature concerning the temperature curve in experimental tetanus, and they reported a series of experiments performed on dogs and rabbits. In the dogs they used the whole culture of the specific bacillus grown on blood and gelatin, and also a filtrate of this culture. In rabbits they used the same filtrate and also the toxine obtained by precipitating it with ammonium sulphate, separating the salt by dialysis, and drying. The results were the same whether a virulent culture or its filtrate or the dry toxine was used. Both Behring's and Tizzoni's toxins were employed, and the temperature curves of the animal were noted. The results of these various groups of experiments were noted: (1) Adult tetanized dogs die with an elevation of temperature. Young dogs may present a lowering of temperature. Tetanized rabbits die with a considerable subnormal temperature. These results were constant and did not differ with the material used for inoculation. (2) The blood serum of a rabbit tetanized with Tizzoni's toxine produces, both in dogs, and in rabbits, a temporary hypothermia. The blood serum of a tetanized dog produces a transitory hypothermia in both dogs and rabbits. The corresponding experiments with Behring's toxine did not give these results. The hypothermia does not take place in rabbits if the injection of tetanic serum is preceded twenty-four hours by an injection of Tizzoni's immunizing serum. (3) The muscular extract of a tetanized dog produces a rise of temperature in both animals experimented upon, while the muscular extract of the tetanized rabbit produces a subnormal temperature.

Some Notes on Pollacci's New Method of Detecting Albumin in the Urine. By Gordon Lindsay, B. S., Ph. G., and William J. Gies, Ph. D. (*American Medicine*, January 31st).—Pollacci's reagent is a modification of Spiegler's. The authors are of the following opinion so far as the usefulness of the method is concerned. (1) Pollacci's reagent readily precipitates various proteids—simple, compound, and albuminoid. (2) The test is too delicate for ordinary clinical purposes, since the normally occurring urinary proteids are precipitated by the reagent. (3) Various non-proteid substances occurring in the urine in health and disease are probably also precipitated by the reagent. (4) The latter possesses little or no advantage over Spiegler's fluid.

A New Stain for Gonococci.—Dr. A. von Wahl (*Journal Dermatológi i Sifilidológi*, 1902, 1, p. 3) calls attention to the fact that the secretion of chronic gonorrhœa is very difficult to stain, and that the basic aniline dyes are not convenient for this purpose, as they fade quickly and stain gonococci and nuclei alike. He therefore suggests a mixture of auramine and thionin, consisting of fifteen cubic centimetres of a saturated alcoholic solution of "auramine II" (1:10) and from eight to ten cubic centimetres of a saturated alcoholic solution of thionin (1:20), to which thirty cubic centimetres of distilled water are added after shaking. If a bright staining of the cellular elements is aimed at,

it is advisable to add a little watery solution of methyl green, 1:50 and a corresponding amount of thionin. The nuclei are then stained bluish-green, and the gonococci deep violet. The mixture without these additions stains (in from ten to fifteen seconds) the cellular elements a light green, and the gonococci a dark violet.

A New Differential Stain for the Klebs-Löffler Bacillus of Diphtheria. By J. W. Peck, F. C. S. (*Lancet*, January 10th).—The staining method used by the author is as follows: The film from the culture or swab is spread in the usual way, fixed in the flame, stained with Löffler's methylene blue for three or four seconds, washed quickly, and then stained with Vesuvian 0.2 per cent. aqueous solution for thirty seconds, again washed quickly, dried, and mounted. This method gives a better result than Neisser's acetic acid method, and has the advantage that it is reliable for staining bacilli from old cultures. It is also quite reliable for staining direct swabbings from the throat, whereas Neisser's or Löffler's stain used separately, gives very indistinct pictures. It is interesting that this new method, which may be called the "Löffler-Neisser method" is an alkaline stain, while Neisser's is acid. The common mouth organisms do not stain in the few seconds that the methylene blue is allowed to remain on the smear. Löffler's blood serum gives better results than serum agar, especially on old tubes. Agar is an unfavorable medium and produces involution forms so quickly, that films from this medium refuse to stain by either method.

The Variability in Virulence of the Pneumococcus. By Dr. H. Sinigar. (*Lancet*, January 17th).—The author describes an epidemic occurring in Leavesden Asylum, which throws light on the question of the variability in virulence of different strains of the pneumococcus. There was a pneumococcal epidemic among the house staff, at first of low virulence, causing a short indefinite illness much resembling influenza, gradually increasing in severity, and then causing a more protracted illness with occasional bronchial symptoms and culminating in a case of lobar pneumonia in a nurse. By the time the female patients were attacked, its virulence was such that pulmonary symptoms were most in evidence and the short vague illnesses were few; even at this time, however, the pulmonary signs were those of patchy consolidation only. When the maximum virulence was reached most of the cases were true lobar pneumonias with a high mortality. The author suggests that many of the cases of so-called influenza are really mild cases of pneumococcal infection, the virulence of the organism being relatively low.

A Contribution to the Pathogenesis of the Uræmic State; the Probability of its Physico-Electric Substratum. By Heinrich Stern, M. D. (*Medical Record*, January 24th).—It is universally admitted that the uræmic state always arises from kidney insufficiency. There is, however, discrepancy of opinion as to the nature of the immediate causative factors and as to the way in which the

retained metabolic substances act. The generally accepted theory is that the action of the retained substances is a chemically toxic one. The author writes to combat this theory and uphold the physico-electric one. The paper does not lend itself to systematic abstracting, so we give a few quotations merely to show the general trend of the argument. "Diminished electrical conductivity of the serum seems to be the direct ætiological substratum of the uræmic attack; the lowest conductivity of human blood yet found, 98.29, was demonstrated in the serum of a case of uræmia gravis cum coma." In healthy individuals the same observer found the conductivity of serum between the extremes 106.18 and 119. "The virulence of interstitial nephritis as compared with the parenchymatous, depends on the retention in the serum of a larger amount of nitrogenous products." . . . "While the retained nitrogen without any doubt reduces the physico-electric qualities of the serum, and while the co-ordinate and successive manifestations commonly designated as uræmic may be accounted for by the diminution or partial suspension of electrical conductivity in the serum, the accumulated albumin derivatives possibly call forth a secondary intoxication, which may be particularly noticeable when certain uræmic sera are intravenously injected into animals." "Diminished conductivity of the serum is such an inevitable and potent factor in the production of uræmic phenomena, that its importance overshadows the eventual occurrence of a secondary toxicosis."

The Ætiology of Endocarditis, with Especial Reference to Bacterial Agencies. By Sanford Blum, A. B., M. D. (*American Medicine*, January 17th).—Dr. Blum reviews the history of endocarditis and particularly the development of the study of its bacteriology. He reports one case of bacterial endocarditis due to the *Bacillus pyocyaneus*, which is the first case of the kind in an infant so far on record. The following summary ends the paper: (1) Bacterial agencies are active in the causation of endocarditis. (2) The presence of bacteria in the circulation is not alone a sufficient cause; but a predisposition—a *locus minoris resistentiæ*—must exist in order for them to secure a foothold. (3) Not all bacteria are capable of producing an endocarditis, but in general those that are pathogenic for the individual may cause endocarditis. (4) There are other causes of endocarditis besides bacteria.

Endocarditis may be classified according to its ætiology as follows: (1) Congenital and infantile endocarditis may be due to defective development, to reparative processes, as suggested by Parrot, and to other causes (unknown). (2) Endocarditis due to known bacterial agencies, *e. g.*, streptococcus, staphylococcus, tubercle bacillus, pyocyaneus bacillus. (3) Endocarditis of probable bacterial origin, associated with definite diseases presumably of a bacterial nature, but of which the bacterial agents are still undiscovered, *e. g.*, rheumatism, chorea, syphilis, exanthems, etc. (4) Endocarditis due to mechanical or chemical insults, *e. g.*, blows, strains, noxious excretory products in the blood, alcohol, atheroma.

Proceedings of Societies.

MISSISSIPPI VALLEY MEDICAL ASSOCIATION.

Twenty-eighth Annual Meeting, held in Kansas City, Mo., October 15, 16, and 17, 1902.

The President, Dr. S. P. COLLINGS, of Hot Springs, Ark., in the chair.

(Continued from page 305.)

Tent Life in the Treatment of Tuberculosis.—Dr. A. MANSFIELD HOLMES, of Denver, read a paper on this subject. He stated that pure air and sunshine were two important factors in effecting a cure of tuberculosis. Tent life was the most important means of securing the advantages of these factors. The author called attention to the essentials of an ideal tent cottage, and gave rules for governing tent life. Those who had had no experience with tent life invariably entertained an exaggerated idea of its dangers and inconveniences. A short experience soon dispelled this fear, and patients were with difficulty induced to return to an indoor life. Extended experience with tent life in Colorado justified him in making the following deductions: It increased the appetite; improved nutrition; diminished cough; caused night sweats to cease; improved sleep; increased weight; decreased fever; and diminished the tendency to take cold. A model of the tent cottage adopted by the Rocky Mountain Industrial Sanatorium was exhibited, showing improved methods of construction and ventilation.

How Not to be Nervous; the Address in Medicine.—This was delivered by Dr. HUGH T. PATRICK, of Chicago. He stated that the initiative of all therapeutics should be prophylaxis. Prevention was paramount to cure. The first and most effective preventive of nervousness was a reasonably long line of first rate ancestors. To be able to present a specific illustration of the force of inheritance in the genesis of functional nervous affections, he had tabulated from his office records one hundred consecutive cases which might be included under the general term nervousness, and he found that in 70 per cent. of them a neurotic heredity had been in evidence. While a bad heredity was the most frequent and most potent factor in the production of nervousness, knowledge of this fact should not lead the profession into apathetic resignation, but rather make it face the difficulty with wise determination.

Next to the omnipresent, inevitable laws of inheritance, came the never-ceasing formative power of environment. Reaction to extraneous influences began at birth, and ceased only with the extinction of life, but childhood and youth were the plastic stages.

For preventing nervousness in the child or removing that already present, there was nothing so effective as the toughening of the body and mind. A child who was made to have tough muscles, strong lungs, and a vigorous digestion, who could stand changes of temperature and endure pain, was already a long way from nervousness. More im-

portant still was toughness of psychic fibre. The child who could support disappointment, who could be crossed without a tantrum, and who habitually obeyed, was building a bulwark against "nerves," and the one who was not easily frightened, had self-control and a budding courage, had nipped half a dozen neuroses in the bud. But to procure this toughness a certain exposure to bodily discomfort and mental hardship was necessary.

The author discussed at length the prophylaxis of the neuroses in children, and then passed on to the consideration of adult life. He said a deal of nervousness was caused or helped along by misdirected energy, misplaced worry, longing for baubles, the fighting of phantoms, etc. To recognize the important things in life was one of the most difficult tasks of judgment that came to the individual.

To sum it all up, the author said: "If you wish never to be nervous, live with reason; have a purpose in life and work for it; play joyously; strive for the unattainable, never regret the unalterable; be not annoyed by trifles; aim to attain neither great knowledge nor great riches, but unlimited common sense; be not self-centred, but love the good, and thy neighbor as thyself."

Neurasthenia.—Dr. GEORGE F. BUTLER, of Alma, Mich., read a paper in which he said that neurasthenia was the expression of nerve tire of the central nervous system and its consequences. Nerve tire of the central nervous system implied acceleration of the action of the excitomotor ganglia of the organ, with, first, increased functioning of these organs, and, second, exhaustion with its consequences. In this way central nerve tire, finding expression along the line of least resistance, produced local organ expressions which were alleged as the cause of the constitutional condition. From these local expressions a vicious circle often resulted which aggravated the original condition. As overaction of the organs implied underelimination, auto-toxæmia, of necessity, followed nerve tire of a very poisonous type, like all products of nerve waste. From this, renal and hepatic disturbance was added to the clinical picture and intensified its blackness. Neurasthenia might occur alone, or might be an expression and complication of any constitutional disorder. In such case both the nerve tire and the constitutional disorder required treatment. The neurasthenia resultant on phthisis, nephritis, diabetes, and syphilis was a true neurasthenia which, if not treated, intensified the disorder which gave it birth.

The treatment of neurasthenia consisted in the relief of the nerve tire and conditions underlying it by proper diet, hydrotherapy, balneotherapy, relief of insomnia, and removal from an ætiological environment. Neurasthenia untreated might produce degenerate offspring, especially if the patient was a woman.

Dr. JOHN J. TAYLOR, of Streator, Ill., detailed a case of rheumatic neuritis complicated by neurasthenia and other affections.

The Criminal Responsibility of the Epileptic.—Dr. JOHN PUNTON, of Kansas City, Mo., in a paper on this subject, gave a brief summary of historical

data defining the line of demarcation between empiricism, on the one hand, and scientific knowledge, on the other, in reference to the study of epilepsy. A modern conception of epilepsy was based upon the science of cerebral localization. He drew the following deductions: 1. Epilepsy is a symptom of some brain disease. 2. Its continual presence tends toward mental deterioration. 3. The mental responsibility of the epileptic depends upon the extent to which mind or self-control has been impaired by the epilepsy. 4. The legal test of insanity is not sufficient, as mental irresponsibility is not incompatible with a knowledge of right from wrong. 5. Epileptics are, to some degree, at least, responsible for criminal acts, more especially when the epilepsy is produced by their own fault. 6. Criminal acts of epileptics appeal to medicine rather than law for their proper adjudication. 7. In all cases of murder where epilepsy is proved, the law should be amended to allow of life commitment to an insane asylum rather than to a penitentiary. 8. The mental responsibility of the epileptic in case of murder should be referred to a medical commission, appointed by the court, which again might be referred to local or county medical societies to name its members.

The Sudden Atrophic Influence of Craniospinal Nerves.—Dr. F. E. COULTER, of Omaha, read a paper thus entitled. He reported a case and described the areas involved. He also presented a report of normal and abnormal productions, mentioned the possible ætiological factors in the case, cited other cases, and then summarized as follows: Under certain conditions craniospinal nerves may exercise a sudden atrophic influence on the skin and the appendages thereof; the results in the case reported were due to a disturbance of this nature, he thought he was warranted in concluding, because of the following reasons: 1. All the hair was normal before the attack, but within three days after the attack all disappeared from the areas described. 2. The character of the new hair was like that of the natural product of a faulty nutrition: whether it was due to the production of a toxine or the sudden diminution of the normal elements, was difficult to decide. It was known, however, that the abnormal hair was smaller in length and diameter, and decidedly deficient in pigment substance. 3. The fact that this was a bilateral lesion would naturally indicate that one was dealing with a blood condition, possibly a toxine formed by the very sudden and severe convulsive state and manifesting itself on this particular nerve trunk because of some histological character in its composition that we, as yet, were unable to detect. 4. In this particular case we did not have an example of that strange, yet interesting, condition of change in color, a decolorization of the hair seen after a very great fright or severe mental anguish, which in a short time changed the color of the hair completely, but instead a definite nutritive alteration, acute in character.

Hebephrenia, or Childhood Insanities.—Dr. W. B. FLETCHER, of Indianapolis, in a paper with this title, spoke of the causes, character, prevention, and treatment of the various forms of insanity inci-

dent to children prior to and during the period of puberty. The writer had observed three hundred cases of hebephrenia in the city in which he lived. He cited some interesting cases.

Sympathetic Eye Diseases.—Dr. JAMES MOORES BALL, of St. Louis, in a paper on this subject, made a clinical division into sympathetic irritation and sympathetic ophthalmitis. He discussed the diagnosis, symptoms, ætiology, prognosis, and treatment of sympathetic irritation. Speaking of sympathetic ophthalmitis, he said it was one of the most formidable and obscure of ocular affections. Only uveal inflammation which was caused by bacterial infection could produce this disease. He mentioned the date of appearance, frequency, and symptoms, and divided the affection into uveitis serosa and sympathetic fibrinous uveitis, saying that the former was relatively mild, while the latter was a malignant affection. Sympathetic papilloretinitis, which rarely was the sole manifestation of sympathetic ophthalmitis, was likewise discussed. Other sympathetic affections had been described, without gaining recognition from ophthalmic authorities. He spoke at length on the prognosis of sympathetic affections, and then passed on to a consideration of the pathology and pathogenesis of sympathetic ophthalmitis, discussing the prophylaxis and treatment of these diseases.

Toxic Amblyopia.—Dr. J. W. SHERER, of Kansas City, Mo., followed with a paper on this subject. He presented a clinical report of five cases of toxic amblyopia from methyl alcohol that had been seen by him. In all a degree of blindness rapidly followed drinking the poison. The eyes appeared normal externally, with pupils slightly dilated. The media were clear. There were no hæmorrhages. Early there were no fundal signs, but later atrophy was visible. The fields were contracted and showed absolute central scotomata. One case was complicated by some involvement of the peripheral nerves of the lower limbs. The pupillary reaction corresponded to the description of Lauder Brunton, who found it to be the reverse of the Argyll Robertson reaction. Pathologically, the condition was that of peripheral neuritis affecting the optic nerves, or retrobulbar optic neuritis. Much work had been done by different observers to demonstrate experimentally the minute changes. Degeneration of the ganglion cells and macular layers of the retina occurred. This was partly due to vasoconstriction and diminished blood supply, and partly to the action of the poison. Consecutively the nerve fibres degenerated. In the experiments with quinine, there were, synchronously with the onset of the amblyopia, chromolysis of the retinal cells, œdema of the circumcellular spaces, and wasting of the ganglion cells. In one form of neuritis it was found that all the nerve fibres had melted away by the fourth day. Undoubtedly, the primary effect was on the fibres, but the cells were probably simultaneously attacked.

Bilateral Glaucoma.—A paper on this subject was presented by Dr. FLAVEL B. TIFFANY, of Kansas City, Mo., in which he reported the case of a patient upon whom he had performed double iridectomy.

Diseases Preceding and Following the Use of Alcohol and Opium.—Dr. T. D. CROTHERS, of Hartford, Conn., read a paper in which he said that the use of alcohol was regarded by him as one of the most subtle and serious causes of disease. Clinical study pointed out many distinct lines of disease which preceded inebriety, of which syphilis, trauma, dementia, and toxic states were most common. Neurasthenic conditions and the tuberculous diathesis preceded the use of spirits. Atrophic and hypertrophic sclerosis always followed the use of spirits. An early recognition of the organic changes which preceded and merged into inebriety would enable one to practically prevent the disease.

The Treatment of Typhoid Fever with Castor Oil.—Dr. C. C. BASS, of Columbia, Miss., in a paper on this subject, reported thirty-two cases of this disease treated with castor oil, and except in a very few of these cases, in which he gave some other medicine to meet some special symptom, he had given nothing else. Thirteen cases were treated with one dose every twenty-four hours, and nineteen cases with a dose every twelve hours. The results following the treatment were very gratifying. He commended this treatment as worthy of further investigation.

The Culture of Infusoria.—Dr. HENRY G. GRAHAM, of Chicago, discussed the subject under the following heads: 1. Preserving the identity of the individual organism while growing it, (a) in running water, (b) in stagnant water. 2. Isolation of the organism, (a) by means of the Petri dish, (b) by feeding to laboratory animals. 3. A transfer of the elementary form to fluid culture media. 4. A second transfer of the organism to fluid culture media more accessible to the atmospheric air. 5. Favoring the growth of the skeletal structure of a protozoan at the expense of the liquid protoplasm.

His deductions were that culture of infusoria would show that Müller's dust corpuscles were elementary infusoria, and that the exceedingly minute and actively motile forms were derived from the protozoa.

Croupous Pneumonia.—Dr. WILLIAM T. ENGLISH, of Pittsburgh, discussed some of the signs and symptoms of this affection. He also dwelt at length upon the easiest and best methods of speedily and certainly determining them. He mentioned the application of remedies suitable to the case and stage of the malady, the advantage of grouping some phenomena in securing a speedy diagnosis, and the necessity of observing all signs and symptoms.

Pneumonia.—Dr. WILLIAM F. BARCLAY, of Pittsburgh, contributed a paper on this subject. He considered the clinical history of pneumonitis, the close relationship between pneumonia and influenza, the similarity in pathology, initial stages, clinical history, mortality, and treatment.

The Treatment of Chronic Dysentery.—This paper was read by Dr. JOHN L. JELKS, of Memphis, Tenn. The disease was considered of microbic origin, although a specific organism had not received general acceptance as the sole causal factor. This was the basis of all treatment. No matter what the classification of the disease, the same gen-

eral idea as to treatment must obtain, namely, the destruction of the microorganism, drainage, cleanliness, rest, and restoration of the tissues. An erroneous idea had prevailed that the disease was beyond the reach of any possible topical medication, further than perhaps the use of the Wales metal bougie, which was not always a safe procedure. The sigmoidoscope and long rubber tube had a field in the treatment of this affection, and it was necessary to educate the profession as to the possibilities of this method. The patients should be placed in sanitary surroundings, free from unnecessary heat and moisture. The diet should be carefully selected. The stomach should receive careful attention. The portal engorgement should be relieved and the intestinal tract thoroughly cleansed. Hæmorrhage from the bowel, when profuse, could be controlled by styptic enemata given through the double tube. In using the sigmoidoscope, the author recommended the knee-chest position. The bowel should be thoroughly cleansed through this instrument with antiseptic washes applied very hot. If there was much excoriation or ulceration, nitrate of silver might be applied to bleeding and eroded surfaces with a cotton probang or in the form of a spray. Higher treatment might be administered through one or two tubes of soft rubber, which could be passed further into the colon and the antiseptic solution administered by enema through these. If necessary, boric acid or iodoform might be insufflated through the sigmoidoscope and the bowel thus thoroughly covered.

In the chronic state he had found most benefit from iodoform and ichthyol made into suppositories and passed through the sigmoidoscope into the sigmoid. This was especially indicated in tuberculous conditions, but had its use in any form of proctosigmoiditis or colitis. All toxic drugs must be used with caution.

(To be concluded.)

Letters to the Editor.

THE HYOSCINE TREATMENT OF THE MORPHINE DISEASE.

BROOKLYN, February 3, 1903.

To the Editor of the NEW YORK MEDICAL JOURNAL:

Sir: S. Ormond Goldan, in your journal of January 3rd, ends a paper with the statement that "in hyoscine hydrobromide in morphine habituation we possess a safe, certain, and painless method of treatment." More than thirty years' experience in the study and treatment of the morphine disease, compassing the care of many hundred cases, impels me to deny the correctness of that conclusion and to protest against its being accepted as a fact. Two cases were cited. Of the first, it may be said that the limited morphine, both time and amount, the fact that it was never self-taken, and the added fact that treatment was carried on unknown to the patient, suggestive therapeutics playing a large part—all these made an array of conditions that tended strongly to lessen the reflex sequelæ of morphine quitting, quite apart from hyoscine. Of the second case, it seems to me that a careful study will

quite disprove his assertion, and convince the prudent doctor that the method he commends is distinctly and decidedly *unsafe*. What was noted? This: "Active delirium." So much so, that "during the *entire period*"—several days, italics mine—"a nurse must be in constant attendance and the patient never left alone for a moment": and what is of still greater import, a heart and lung status so grave, that "strychnine was employed frequently, with occasional recourse to nitroglycerin and oxygen owing to the cyanosed condition." That statement alone settles, I think, the question of safety in this treatment, for it is a truism that any method which involves or induces a condition so perilous as to compel the frequent giving of strychnine, trinitrin, and oxygen, can *not* be called "safe."

It is not pleasant to think what a lethal tale might have been told had not oxygen been at command; and such a lack, in other cases hyoscine treated, is by no means remotely possible.

The hyoscine treatment, Dr. Goldan says, is "certain." Of course, it is "certain"—if the patient doesn't die. So, too, is certain, the brutal, monstrous method of abrupt and entire morphine quitting, vaunted, a quarter of a century since, by Levinstein and others, but which has given way—thank God—to methods quite as certain, far safer, and infinitely more humane.

The hyoscine treatment is styled "painless." Why? Because the patient, crazed by the drug—"active delirium"—is not conscious of pain!

Dr. Goldan thinks no protest against it has been made, and intimates, somewhat broadly, that they who decry it, do not know what they are talking about. He is mistaken. Dr. T. D. Crothers—the highest authority in the world on alcoholism—made large trial of it in that disease and in morphinism, and, "after very careful tests," condemns it as "a very unsafe and dangerous drug." (Vide *Medical News*, October 18, 1902.) My by no means small experience with it in morphine inebriates, in whom its ill effect is more likely than in the alcoholic, tallies with his; and while it is of value in one condition, rarely noted—and even then its use should be sharply limited—I feel bound to say there is no place in sound therapeutics of the morphine disease, for routine hyoscine treatment, that palsies and crazes, demands constant vigil, and compels the use of sparteine, strychnine, nitroglycerin, and oxygen to avert cardiac failure or death. It is inhumane, it is dangerous. I warn the profession against it.

J. B. MATTISON, M. D.,
Medical Director, Brooklyn Home for Narcotic Inebriates.

COMMON "COLDS."

AUBURN, N. Y., February 10, 1903.

To the Editor of the NEW YORK MEDICAL JOURNAL:

Sir: I have one suggestion as to the prophylaxis of common "colds" to add to the excellent ones made by Dr. Zahorsky, in your issue of February 7th, viz., the flushing of nasal and pharyngeal cavities by the salt solution or boric acid solution twice or thrice daily. Accepting his view that colds are infections by specific microorganisms, it seems reasonable that these should not be permitted to remain and get in their work in the cavities aforesaid.

I know no reason why the nose and throat should not be habitually flushed as a matter of the toilet, just as the teeth and mouth are cleansed twice daily. This is not a teaching of nature—at least savages don't do it—but the whole physical life of modern city dwellers rests on artificialities. We are constantly inhaling irritant germ-laden dust, which it is important to remove periodically from the mucous membrane of the pharynx, the nose, and the sinuses opening into the latter. This is excellent treatment of common catarrh, *i. e.*, catarrh not dependent on bony deformities, and the best prophylactic known to me for the prevention of common "colds."

I warn against all irritant proprietary combinations, and urge the non-irritant solutions recommended above.

WILLIAM S. CHEESMAN, M. D.

Book Notices.

A Textbook of Pathology and Pathological Anatomy. By Dr. HANS SCHMAUS; Extraordinary Professor and First Assistant in the Pathological Institute, Munich. Translated from the Sixth German Edition by A. E. THAYER, M. D., Instructor in Pathology, Cornell University Medical College, New York. Edited with Additions by JAMES EWING, M. D., Professor of Pathology, Cornell University Medical College. Illustrated with 351 Engravings, including 35 Colored Inset Plates. Philadelphia and New York: Lea Brothers & Company, 1902. Pp. xxii-17 to 602.

From the point of view of the pathologist who knows the German literature on the subject it is difficult to conceive why this work on pathological anatomy should be so popular among German students as to supersede the really great works of Ziegler and Orth, for instance, which easily held the palm among the German writers on this subject. The present work is by no means so comprehensive as either of the former, nor does it furnish the material in the shape of references which are of such great aid to the student who wishes to delve deeper into the subject of pathological anatomy than the mere acquisition of established data.

There is no doubt that Schmaus's work is an exceptionally good textbook and offers in a compact and fairly comprehensive manner the facts of pathological anatomy as they are received to-day. On this account the spirit which induced the translator to render the work into English, so as to place its material in the hands of the English-speaking medical students of this subject who cannot read German, is to be commended. The translation is an excellent one and does the translator, Dr. A. E. Thayer, a good deal of credit.

The editing of the work is by Dr. James Ewing. The amount of editing the book received is small, the additions to the original are correspondingly the same, notwithstanding which its American form appears as a very worthy exemplar of good book-making on whose cover is stamped Pathology and Pathological Anatomy—Schmaus and Ewing. This may have not been intended to indicate that the work was a joint product, for such it can hardly be called, but the title on the cover gives that impression.

A Textbook of Surgical Principles and Surgical Diseases of the Face, Mouth, and Jaws for Dental Students. By H. HORACE GRANT, A. M., M. D., Professor of Surgery and of Clinical Surgery in Hospital College of Medicine, Louisville, etc. Illustrated. Philadelphia and London: W. B. Saunders & Company, 1902. Pp. 5 to 231. (Price, \$2.50.)

It has been the aim of the author to provide the dental student with a handbook of such surgical affections as are on the border line of dentistry and surgery, the consideration of which is ordinarily to be found only in larger surgical works. The motive is good, but in its execution there is too much embodied that is absolutely foreign to dentistry, and not enough stress laid upon instances in which surgery is truly correlated to dentistry. To illustrate: of what concern to the dentist is an ulcer of the leg, and why pictorially present an osteomyelitis of the tibia and yet neglect to do the barest justice to osteomyelitis of the maxillæ? Why exemplify adenoma by so rare an affection as adenoma of the facial sweat glands, and yet fail to bring out the relationship of enlarged cervical glands, tuberculous and otherwise diseased, to carious teeth of the primary or permanent dentition? What need is there for the edification of the dentist to state that catheters and sounds should be kept in a one to thirty solution of carbolic acid, and to advise the dental student to use Monsell's solution for the control of hæmorrhage?

With such irrelevancy evident throughout the book, we can decide only that it falls short of its title.

A Manual of Medical Treatment or Clinical Therapeutics. By I. BURNEY YEO, M. D., F. R. C. P., Emeritus Professor of Medicine in King's College, London, etc. Tenth Edition. Volume I. Pp. xiii-696. Volume II. Pp. vii-818. Chicago: W. T. Keener & Company, 1902. (Price, \$5.)

This well known English manual has been subjected in this edition (the tenth) to a revision, the third since its first publication, in 1893. This was demanded by the increase in remedial agents, by the advance in our therapeutical knowledge, and by the necessary sifting process to which the avalanche of new drugs which have overwhelmed the profession with promises of remedial benefits had to be subjected to determine which of them had any real value. Inasmuch as this manual is and has been chiefly devoted to the treatment of disease, such a revision came as a necessity.

The character of the work remains unchanged, and in the form it assumes it must appeal to students and to those practitioners of medicine who are willing to be guided by the experiences and advice of others. The ready made formulæ and suggestions of drug treatment at the end of each chapter on disease furnishes them with a ready means of prescribing and supplies the thought which it would have been better for them to deduce from their own knowledge. Such methods, while they do not advance scientific medicine, have still a field of usefulness.

The new subjects considered in this edition are the treatment of hay fever, paralysis agitans, cerebral tumors, erysipelas, cerebrospinal fever, rickets, scurvy, and purpura. The treatment of the symptoms of disease rather than the cause still remains a prominent feature.

BOOKS, ETC., RECEIVED.

Surgical Diseases of the Kidney and Ureter, including Injuries, Malformations, and Misplacements. By Henry Morris, M. A., M. B. Lond., F. R. C. S., Fellow and Chairman of the Court of Examiners, of the Royal College of Surgeons, etc. With Two Colored Plates and Upward of Two Hundred Engravings. In Two Volumes. Volume I, Pp. xii-682. Volume II, Pp. vii-670. Chicago: W. T. Keener & Company, 1903. (Price, \$12.)

A Compend of Diseases of Children. Especially adapted for the Use of Medical Students. By Marcus P. Hatfield, A. M., M. D., Emeritus Professor of Diseases of Children, Northwestern University Medical School, etc. Third Edition, thoroughly Revised. With a Colored Plate. Philadelphia: P. Blakiston's Son & Company, 1903. Pp. viii-9 to 241. (Price, 80 cents.)

Thirty-eighth Annual Report of the Trustees of the Boston City Hospital, including the Report of the Superintendent. February 1, 1901, to January 31, 1902, inclusive.

Miscellany.

The True Wisdom of the Employer.—*Cedant omnia saluti*, was obviously the motto of the great Roman lawyer and philosopher, Cicero. In a letter to his freedman and private secretary, Tiro (ad fam. xvi. 11), he writes: "Although I feel the need of your assistance on all occasions, yet I am less concerned on my own account than on yours. But since, as Curius writes me, your illness has resolved itself into a quartan ague, I trust that, with proper care, you may soon become established in better health. So order yourself, therefore, as befits your obligation to me, that for the present nothing other than what shall conduce most to your convalescence shall engross your attention. I am not unmindful of how greatly your anxiety to return affects you, but all will go well when you are well yourself. Do not be in too great a hurry, before you are well, to subject yourself to sea-sickness and the dangers of a winter voyage." O, wise Cicero!

The Treatment of Placenta Prævia.—Dr. Joseph B. De Lee (*American Gynecology*, August) does not believe that Cæsarean section, as recommended by Gillette (*Journal of the American Medical Association*, 1901, p. 495) is needed as a routine measure in placenta prævia. According to the author's thirty cases reported herewith, the maternal mortality may be reduced to zero by the usual obstetric methods. To do a Cæsarean section simply to improve the percentage of the infant recoveries is not yet justifiable, and one may not be able to combat the hæmorrhage by it any better than from below. Retraction of the uterine muscle is not good in the cervix and, therefore, hæmostasis is uncertain. This is well appreciated by one, who, at a Cæsarean section, inadvertently makes the uterine incision too low, troublesome oozing from the womb resulting. It is probable, if Cæsarean section for placenta præ-

via were tried generally, that many extirpations of the uterus because of hæmorrhage would be necessary. Such mutilation is to be deprecated.

Accouchment forcé is deservedly unpopular; there is too much danger of rupture of the cervix and it is well known that even a superficial tear may open a sinus and may lead to fatal hæmorrhage. Whether the new instrument of Bossi, for rapid dilatation of the cervix, may be used successfully in placenta prævia remains to be seen.

The author, basing his judgment on thirty cases reported, feels justified in making the following statements: I. A woman with placenta prævia ought not to die, except in rare instances, such as air embolism or the hæmorrhagic diathesis. II. A case of placenta prævia should not be half-heartedly treated. If the child is viable, labor should be induced. When the hæmorrhage is very moderate one may wait, provided that the patient remains in bed and is in a well-appointed hospital. III. No one method of treatment will meet all cases. The accoucheur should have all known measures at his command. IV. The young practitioner should follow Schroeder, who says: "That accoucheur will have the best results in placenta prævia who has the least regard for the child." Medical writers whose words are read by the general profession, and medical teachers whose precepts are followed by, at first, blind and inexperienced hands, should be careful what they recommend for universal practice. One should recommend to those of less skill only such measures as in such hands may lead to the best results. The man with his first case of placenta prævia, therefore, should direct his efforts to saving the mother. Later on, when the parturient canal is no longer a blank space, when dexterity has been acquired and, rarest and most difficult of attainment of all, obstetric judgment has become a possession of the accoucheur, he may make an earnest effort to improve the mortality of the child. V. Placenta prævia is a formidable condition, more formidable than most laparotomies, and to insure the best results the patient should be in a well equipped obstetric operating room. VI. The best way to induce labor is to puncture the bag of waters and to put a colpeurynter in the uterus, resting on the placenta and pressing this against the cervix, and then to put traction on the tube. VII. After labor is inaugurated, or should the case be received when it is already begun and hæmorrhage more or less severe has occurred, the treatment should be pursued with vigor and the doctor must not leave his patient till she is delivered and all danger is past. VIII. The treatment then, is as follows:

The objects are, (1) to stop the hæmorrhage; (2) to empty the uterus; (3) to secure contraction and retraction of the uterus; and (4) to ensure complete hæmostasis. The state of the cervix and the degree of hæmorrhage indicate the course to pursue.

1. If the hæmorrhage is slight, the pains regular and strong, and the cervix dilating satisfactorily, these conditions usually being present with a marginal or only slightly lateral insertion, one must wait, watching the patient carefully. If the hæmorrhage becomes greater, although it may yet be very far from alarming, puncture the bag of waters.

This method has been called that of Puzos (1759). This usually will stop hæmorrhage, the placenta being allowed to retract with the uterocervical wall and the head slipping down, forcing it against the open sinuses. If this does not stop the hæmorrhage and if the cervix is completely dilated, deliver at once by forceps if the head presents; by the breech if the latter presents; by podalic version and extraction if the head is not engaged. If the cervix is not completely dilated the case falls into the second class.

2. The usual condition found is more or less profuse bleeding, the cervix admitting two fingers or more. Pains may or may not be present but some uterine action must have occurred to have caused the hæmorrhage. For these cases the tampon has been recommended (Wiegand), also detachment of the placenta (Simpson), Barnes's bags, ergot, and rupture of the membranes, alone or combined with other methods. The writer finds only two procedures worthy of mention: Braxton-Hicks's version, bringing down one foot; and metreuryesis, as recommended by Mäurer and Dührssen. The former method is the older, being mentioned by Rigby in 1775, but brought to perfection by Braxton-Hicks in 1865, and soon adopted by nearly all obstetricians. Braxton-Hicks's version is performed as usual, taking extra care to interfere with the placenta as little as possible. The leg is brought down, slight traction made upon it until the breech tampons the cervix and stops the hæmorrhage. The case is now left to Nature, assisted by such gentle efforts as one might render in a breech case, only still more gentle. The breech, besides tamponing the lower segment and cervix and pressing the placenta against the uterine wall, mechanically occluding the open sinuses, provokes pains and enables the uterus to act with advantage. If the bleeding recurs, a little traction is made on the leg and this may be continued until the cervix is ready for safe delivery.

Caution is urged against too great traction and too rapid or too early delivery. The cervix in cases of placenta prævia is altered so that it seems more distensible than it is. The placental site, with its large sinuses and immense blood supply, is in the zone of dilatation, and a laceration, however superficial, is bound to open a vessel of greater or less magnitude. The retractile power of the lower segment is slight, and, therefore, a hæmorrhage from such a laceration is often obstinate and sometimes furious. In a woman already anæmic or shocked, a fatal termination may easily be precipitated. Braxton-Hicks and Schroeder enjoin slow delivery on this account.

The only objection to this mode of treatment is the high infant mortality, and this gave rise to the treatment by metreuryesis. Mäurer, in 1887, brought out this method, but, owing to the labors of Dührssen, it became generalized. It is applicable at any stage of labor when the cervix is not large enough to permit delivery. It may be used to induce labor, as already mentioned, and it may be used if version has been tried and failed. After proper preparation of the parts, the bag, Carl Braun's colpeurynter, which is sterilized by boiling twenty minutes in plain water, is rolled into as compact a roll as possible, grasped by a long, blunt forceps and under the

guidance of one or two fingers is placed inside the membranes, resting on the foetal surface of the placenta and the lower part of the uterus and cervix. Still retained by the finger while the forceps is removed the bag is slowly filled by means of a Davidson syringe with a weak lysol solution, using twelve to sixteen ounces. As the bag unfolds, the finger can feel it press against the placenta. The head is pushed to one side or directly upward. The tube is clamped with an artery forceps and traction is made on the bag by means of it. The bag acts like the breech—stops hæmorrhage, excites pains, dilates the cervix. If the case promises to take a long time, a tape may be fastened to the forceps and attached under tension to the foot of the bed and a scale inserted to register the amount of tension. The author prefers to use the hand, relaxing the tension occasionally to allow the blood to enter the cervical tissues. Any organ under constant pressure become anæmic. The tension ought not to exceed two pounds; one pound is often enough. The pains wake up in from twenty to thirty minutes. They are usually irregular but strong, and the bag is expelled in from two to eight hours. This depends on the amount of water put in it, the pains and the traction. As the bag goes through the cervix, the patient complains of severe and sharper pains and often bears down. The physician now should stand ready, fully prepared for any operation. He should draw out the bag and immediately put the whole hand into the vagina, quickly determining if the cervix is completely dilated and if the head has followed the bag and engaged in the pelvis. If both have occurred the hæmorrhage has ceased and, if the foetal heart tones are normal, the case may be left to Nature. If the cervix is not dilated completely, the operator may do version or replace the colpeurynter and fill it with a quantity of water that will make it the size of a foetal head—about twenty ounces. The previous performance is repeated and then the child may be delivered without delay, by version or forceps, depending upon the conditions.

If, at any time before the cervix is dilated fully, there should arise an indication on the part of the child to deliver at once it will have to be disregarded. The danger is too great for the mother. An indication for rapid delivery will not arise on the part of the mother, because we can stop the hæmorrhage by making a breech presentation or by the colpeurynter. Great hæmorrhage and collapse do not indicate rapid delivery; on the contrary, the sudden emptying of the uterus may add to the shock and turn the delicate balance against the woman. In these cases, where the hæmorrhage is great, the quickest and most definite means of stopping the flow of blood is by version and tamponing the lower uterine segment with the breech. One then has the case entirely under control and in such an emergency this procedure cannot be too heartily recommended. The patient may now be stimulated and salt solution injected.

3. Should placenta prævia occur in a primipara or in others and the cervix be closed so that one finger cannot be inserted, the case becomes more formidable. For these cases tamponing and the vaginal application of the colpeurynter have been recom-

mended. There are objections to both, on the score of sepsis from the one and inefficiency of the other. The writer has never failed to pass the colpeurynter into the uterus, so that the method of Mäurer and Dührssen has been successful in the treatment of placenta prævia when the cervix was not large enough to permit a Braxton-Hicks's version.

4. Highly important is the treatment during the third stage. Not a few women have been safely piloted as far as this and then lost. Some laceration of the cervix occurs in every labor. In placenta prævia, for reasons already mentioned, even a tiny and superficial tear may cause severe hæmorrhage, and if the laceration is of any considerable extent a terrific hæmorrhage may be expected. The lower uterine segment being poorly supplied with muscular fibres, contracts poorly on the placental site, which therefore, bleeds from atony. The placenta being situated so close to the septic vagina, infection not rarely occurs during pregnancy, which makes the organ adherent in the lower pole of the uterus, and, therefore, the retention of the placenta or membrane is common and again there is hæmorrhage. The separation and expulsion of the placenta are for the same reason delayed and the manual removal of the afterbirth and membranes is not seldom necessary. It is advisable to remove the placenta at once in placenta prævia, and, if the usual means are not immediately successful, to insert the hand for that purpose.

Owing to the softness and vascularity of the cervix, it may be impossible to sew up a tear or to sew it up quickly enough to save an already exsanguinated woman. Therefore, in every placenta prævia be well prepared for hæmorrhage *post partum*. Have hot water, gauze for packing the uterus and the appropriate instruments close at hand, and *do not waste valuable seconds on uncertain methods of hæmostasis* but, if the bleeding is more profuse than it should be or even if it is only moderate (it should be but little), *tampon tightly the whole utero-vaginal tract*. For this purpose the author uses gauze wrung out of $\frac{1}{2}$ per cent. lysol solution.

Before, during, and after delivery in a case of placenta prævia it may be necessary to treat the attendant anæmia. If the woman has lost considerable blood, give her saline solution in large amounts under the skin—not *per rectum*, because the latter method interferes with the local treatment. Give it even if the hæmorrhage is going on, as the woman does not then lose pure blood; she loses blood mixed with salt solution, which is less valuable; also it is supposed by some that the salt solution increases the coagulability of the blood.

The author then reports thirty cases, with a maternal mortality of one ("due to sepsis contracted at the hands of midwives and physicians"), and a fatal mortality of fifteen. Four were premature and not viable, five died before the author's arrival, and of the remaining six one died as the result of the placenta becoming prolapsed before the delivery of the child, and in the other cases, the children died before the author deemed it safe to extract, the cervix not being sufficiently dilated. In future cases, the colpeurynter, by permitting dilatation of the cervix and immediate extraction, may save many children without increasing the risk to the mother.

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Original Communications.

NOTES ON PLAGUE AS OBSERVED BY THE HEALTH AUTHORITIES OF SYDNEY, NEW SOUTH WALES.

By G. FRANK LYDSTON, M. D.,
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GEON TO SAINT MARY'S HOSPITAL.

Plague in Australia has not been without redeeming features. The city of Sydney has had two epidemics, the first in 1900, and the second in 1902. The latter epidemic had subsided some weeks before my recent visit to Australasia, but the memory of it was still too fresh for the comfort of the population. The Sydney epidemics gave the only opportunity the world has thus far experienced for the study of plague among civilized white people, under modern scientific conditions, and by men fitted by experience and laboratory technique to make observations of true value. It was my good fortune to meet Dr. Ashburton Thompson, president of the Sydney Health Board—the right man in the right place. He is an indefatigable worker, and his investigations stamp him as one of the foremost sanitarians and epidemiologists of the day. To him I am indebted for most of the information upon which this article is based. That the points herein set forth are as recent as anything available upon the subject I am quite confident, as the report of the 1902 epidemic is not yet published, and Dr. Thompson was kind enough personally to communicate some of the most essential facts to me, placing his laboratory data and records at my disposal.

To illustrate the extraordinary facilities which Sydney has offered for the study of plague, it will be necessary to cover the first epidemic—the lessons of which have in the main been substantiated by the one just past.

The first epidemic comprised 303 cases, 293 whites and 10 Chinese. The mortality was a trifle less than 34 per cent., but the mortality rate among the Chinese taken alone was much greater, 80 per cent. This race seems comparatively non-resistant to the disease. Twenty-three cases occurred in West Aus-

tralia, 21 white and 2 Chinese. One white and both Chinese died. The 1902 epidemic comprised 141 cases. The proportion of Chinese and the mortality rate were not widely different from the 1900 epidemic. The Chinese population of Sydney is small. Nearly four times as many men were attacked as females. Occupation exposure probably explained this.

The origin of the plague in 1900 was probably Hong Kong, via Noumea, New Caledonia. The 1902 epidemic was also brought from the Orient. The method of transmission will shortly be mentioned. In 1900 the plague caused great popular excitement, resulting disastrously in that by it the government was impelled to interfere, with automatic regularity and asinine stupidity, with the work of the health board. Dr. Thompson's report for 1900 would be remarkable under any circumstances, but under the conditions then prevailing it is little short of marvellous. In 1902 a new administration was in power, and the board was given a free hand. Doubtless the forthcoming report will be the greatest contribution to plague literature yet written.

It is fair to assume that the Sydney epidemic is a safe criterion in plague. As Dr. Thompson remarks, "on comparing the Sydney epidemic with plague as reported from other parts of the world, it will be seen that its record might have been compiled from those made in China, India, Mauritius, Portugal, or Mongolia. The differences were non-essential, involving a difference in severity or fatality due to the influence of local life conditions."

The study of plague in Sydney has established the fact that the bubonic and septicæmic forms at least, are not "catching." That this is not true of "primary plague pneumonia" is probable, and great caution is to be observed here. The exact status of this form, however, is not clearly set forth. The bubonic type was the prevalent one in Sydney, a few cases only of the septicæmic form being noted. In the first epidemic, "contacts" were quarantined. In 1902, however, the patient's family was not even kept under surveillance. The former custom was to remove both patient and contacts to the Coast Hospital—the government quarantine hospital. Contacts were detained at first 10 days, and finally 5 days. Convalescents were allowed to leave in 20 days if there were no open lesions and the temperature was normal. At the time when quarantining of contacts was consid-

ered necessary, great trouble was experienced. There is no law in Sydney providing for the removal of contagious diseases, and a special governmental permit is necessary to remove such cases and quarantine the family.

The patients were treated at the hospital with the Yersin-Roux antiplague serum and the contacts were inoculated with the Haffkine prophylactic serum if they so desired. In regard to these serums the conclusions drawn by the health board are:

1. That the value of the prophylactic serum is doubtful.

2. That the use of the prophylactic serum is attended with obstacles which make it almost impracticable, irrespective of its intrinsic merit.

3. That the Yersin-Roux serum is also of doubtful value as a specific. Its action as a temporary "reviver" or cardiac stimulant seems to be demonstrated.

The report upon the prophylactic serum in the 1900 epidemic expresses essentially the situation at the end of that of 1902. "The opinion provisionally formed is that the serum has 'antitoxic' powers manifested by recovery of the circulation from the depression which is a natural feature of the disease, but that in its present state it can hardly be relied upon as a very active curative agent. Probably the dosage requires revision."

Of the subjects inoculated in the 1900 epidemic, 13 were attacked, but it is only fair to say that all but one of these patients not only recovered, but had very light attacks. It is obvious that preventive inoculation had little to do in protecting contacts. Of 1,832 contacts only 180 took advantage of inoculation. The rest refused to submit to it.

The clinical study of the preventive inoculations was quite interesting as showing their uniformity as employed in various parts of the world. The phenomena were briefly: Slight malaise and fever beginning a few hours later, with swelling at the site of puncture. Later there were slight headache, thirst, and two or three degrees of fever. The arm became painful, presenting a hard "lump" with more or less diffuse swelling, heat and redness. The general symptoms diminished by the end of the third day, but the redness, tenderness and swelling lasted some time longer, the indurated area lasting two or three weeks.

It is an amusing, yet instructive fact that in 1900 the public of Sydney, at first wary, afterward suddenly took the preventive inoculation bait, hook, and all. The health board simply could not handle the crowds of applicants after the work had been in progress for a few days. Interest soon began to wane, however, and the inoculation station was finally closed. Sydney has nearly 500,000 inhabitants, yet the preventive inoculations were only about 11,000 in

all. The method was not compulsory, which limited its scope. It was not much applied for by the class of people which was really in danger. The better classes, at first cautious and timid, probably made a fad of it so soon as it was shown to be safe. "How's your arm?" was undoubtedly a fashionable greeting. The fact that the treatment was gratuitous may have had its effect. When the novelty wore off, however, interest died out.

Apropos of the pains which are taken to inoculate against plague, it is amusing to note that it is impossible to awaken popular interest in typhoid and other infectious diseases, a thousandfold more important than plague. Here, as elsewhere, familiarity breeds contempt.

In the first epidemic there were 11,000 preventive inoculations. There was only one fatal case of plague in a "vaccinated" case—even this was doubtful—but this experience could hardly be said to prove anything. Apropos of the contagiousness of plague, the cases in which contagion from contact in families or otherwise could fairly be suspected, were very few indeed, and these few susceptible of logical explanation on other grounds. There have been no cases of physicians or attendants catching plague at Sydney. Two physicians and two "post mortem attendants" contracted it at Brisbane. Direct inoculation seemed the probable origin of these cases. In Sydney the nurses were not isolated. They bathed, changed clothing and went about as freely as any one else.

The conveyance of plague by fomites—mediate contagion—is utterly disproved by experience in Sydney. Ingestion of the germ in pure culture does not convey the disease to animals. Animals—rats, especially—fed on the viscera of animals or man dead of the disease, do, however, succumb. That the bubonic or septicæmic form can be conveyed by inhalation is doubtful. Nasal mucus from plague rats failed to convey the disease when transplanted to the nasal mucous membrane of healthy animals. The primary pneumonic plague is, however, as already remarked, considered extremely contagious and the most rigid quarantine and isolation are recommended for it.

With the probable exception of the primarily pneumonic type, plague is never communicated from the sick to the well save via skin atria of infection. This is brought about by such media as fleas and by wounds and abrasions, which subsequently become infected. This method, it is asserted, cannot prevail save when bacilli are in the circulation of the skin of the donor of the infection, as in the septicæmic form, or within 24 hours of death in the bubonic form. The septicæmic form, while rare in man, is the most frequent variety of all in rats. Plague is therefore

readily communicated from rat to rat, or rat to man, but with difficulty from man to man.

Experiments have shown that plague bacilli in or upon such materials as soil, cloth, etc., survive briefly. The deduction drawn in the Sydney laboratory—taking clinical facts and the results of other investigators into consideration—is that infection by fomites should not be accepted save where immediate contact of wounds or abrasions with articles recently infected can be proved.

The only case which is reported in detail by Dr. Thompson as apparently due to mediate infection was supposedly due to infection of abrasions of the hands by handling dressings discarded by convalescents. The case, however, lacks microscopical proof and seems to me to be not inconsistent with simple pus infection—the more probable condition. Dr. Thompson himself did not accept the case without qualification. The probability of mediate or even contact infection is dealt a heavy blow by the fact that in 1900, 276 infected households yielded only 10 apparently secondary cases, which occurred under circumstances so diverse that they cannot be classed together—nor, indeed, can they hardly be classed as “secondary.” Soil, water, food, and atmosphere having been excluded, the ordinary means of spreading infection are practically not to be considered.

The infection attaches itself to certain localities, and spreads from thence irregularly and not continuously. It may be transported to a considerable distance and form a new focus or foci of infection. It has no special proneness to occur in adjoining houses. There is the same irregularity of spreading among inmates of infected houses. The rarity of secondary cases in Sydney has already been shown.

The medium of infection seems fairly well established. The first case which appeared in Sydney was preceded by an epizootic epidemic in the rats of a certain locality—Darling Harbor—among the wharves and business houses in that vicinity. Practically all the cases in man were traced, directly or indirectly, to this focus of infection. The Sydney rats were undoubtedly infected by ship rats from infected Oriental, via New Caledonian, ports. The rat epidemic was proved to be plague. The epizootic and plague areas practically coincided. The rat and man epidemics died out simultaneously. Experiments proved that some medium between rat and man was necessary to the infection of the latter—experiment further showed that this was afforded by rat fleas, and fleas alone. Thus Simond's flea theory¹ and Hankin's rat theory² were proved and harmonized. It has been contended that the rat flea, *Pulex fasciatus*, does not bite man, but, as Dr. Thompson re-

marked, this view was untenable as regards the Sydney rat flea. That the flea was the most probable medium of contagion was shown by many experiments—not the least of which was a test inoculation of healthy rats by macerated fleas from plague rats. Death resulted, and characteristic clinically, post mortem, and microscopically plague was proved. It is very fortunate that dogs and cats are relatively immune to plague. It is probably also fortunate that rat fleas do not display a special predilection for cats and dogs. The *Pulex irritans*, however, does infest rats, although in very small proportion as compared with *Pulex fasciatus*. In view of the fact that cats may be infected by eating infected viscera, however, it is well to remember the possible secondary danger to man. A possible source of protection occurs to me in the fact that the cats which feed upon the rats of certain unsanitary areas are likely to limit themselves to such areas, while the aristocratic cat is not likely to go hunting, if at all, in such localities as plague most affects. Cats are somewhat more susceptible than dogs, but neither are affected through any but experimental channels, save in very rare instances. When infected rats are eaten by cats there is, of course, danger of infection of these animals—experimental ingestion of plague viscera by cats proves this, although such infection is rare—but, in order that they may infect man several conditions would seem necessary.

1. Fleas must be contracted by the cat from the rat or the cat must already have them.

2. These fleas must be infected.

3. These fleas must be fleas which attack man. Possibly the rat flea has no predilection for the cat, or the cat may resist infection by them altogether.

4. The infected fleas must retain their infectiousness until they leave the cat and attack the human being. As the cat is almost immune to the normal method of infection, and there are so many chances of slips in the conveyance of infected fleas, the danger of spreading by cats is greatly minimized. The cat is not likely to be the medium of infection of healthy rats, by bringing diseased bodies home, for he is not likely to go far afield for rats when they are to be had close at hand.

In view of the comparatively recent dissemination of the Hankin rat theory of plague, the rapid crystallization of evidence supporting it in Sydney is somewhat remarkable. It must be remembered that neither the International Convention, nor the Venice Plague Conference which preceded it in 1897, made any allusion to rats in their relation to plague. Another point which is decidedly creditable to the Sydney Health Board is that it had a supply of Haffkine prophylactic six months before plague appeared in Noumea, New Caledonia, the port whence Sydney

¹Annales d'Inst. Pasteur, 1899.

²Ibid.



FIG. 1.—Plague rat. Natural infection. Enlargement of liver and spleen.

derived the infection. This was the only supply available in that part of the world.

Quite a variety of animals have been shown to acquire plague in the natural way. Rats, mice, monkeys, cats, marmots, bandicoots, pigeons, rabbits, and guinea pigs have been shown to thus acquire it. Rats are the most susceptible of all, but in artificial inoculation the guinea pig and rabbit are found to press the rat closely in this regard. Strange to say, mice are less susceptible than rats. In the Sydney laboratory experiments rats, mice, cats and guinea pigs were used.

The pathological appearances in rats dead of naturally acquired plague, as shown by the Sydney investigations, are very interesting. Briefly, they are as follows: There was usually visceral congestion, general cedema, with occasional pleural, meningeal and peritoneal effusion, and hæmorrhages under the skin and into the various viscera. Adenopathy was common, not constant, and usually involved several regions, *e. g.*, the femoral, inguinal, bronchial, and lumbar. In several cases the cervical and in one case a single mesenteric gland were involved. There were occasional small intracapsular gland hæmorrhages, but characteristic buboes with periaidenitic extravasation were not found. The liver was usually greatly enlarged, sometimes with white, punctate mottling. The spleen was usually swollen, not always. Gen-

erally the lungs showed patchy pneumonia, sometimes with small hæmorrhages. The suprarenal bodies were often dark, with subcortical renal hæmorrhages in a few instances. The gastrointestinal tract was practically free of lesions. There were petechial hæmorrhages in the parietal pleura and peritonæum.

Plague bacilli were almost always found generally distributed throughout the body of the rat. The blood and lungs, however, did not always show them. Experimental inoculation never failed, the animals dying in three or four days. The lesions were the same as after natural infection, *save that bubo was produced in the glands corresponding to the site of inoculation*. This bears out the view that bubo is incidental rather than necessary to plague.

The specimens from human plague examined comprised material from buboes, carbuncles, blood, sputum, urine, fæces, and the viscera. The work was so thorough that one feels that but little of importance is likely to be hereafter added to the results.

Dr. Thompson is so sure of his ground as regards the ætiology of plague that he says: "I am not afraid if a ship brings in one or more plague cases; but very much afraid if she brings in infected rats. Even the pneumonic type in man does not cause an epidemic; the worst it does is to cause an epidemic in the immediate family."

The most rigid quarantine against human cases does not keep out plague. M. Borel (*Revue d'hygi-*



FIG. 2.—Plague rat. Natural infection. Pneumonia. Enlargement of spleen, liver, and axillary glands.

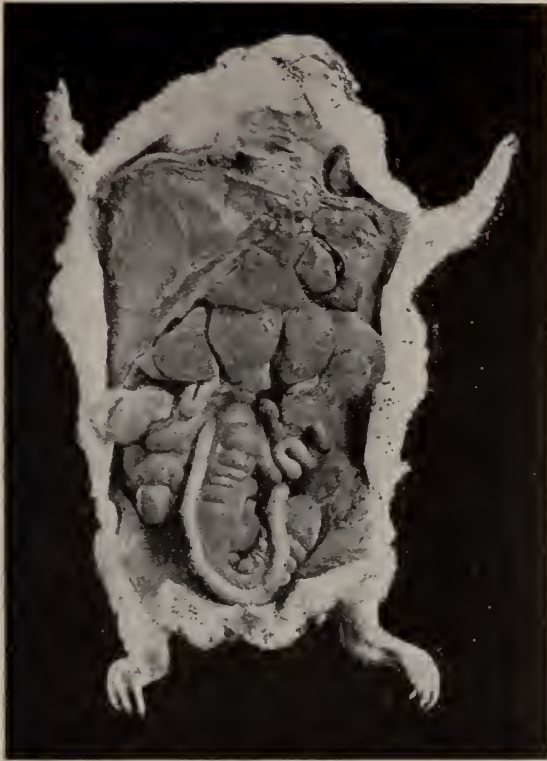


FIG. 3.—Plague guinea pig. Pneumonia. Enlargement of liver. Enlargement and miliary mottling of spleen. Bubo in left groin. Inoculation case.

ène et de police sanitaire) discourses interestingly of the propagation of plague as follows: Regarding the rôles played by rats and man in its propagation in a contaminated city, he says: "Mortality among the rats precedes by about a month the first human cases. The part played by inanimate objects in the contagion seems to be insignificant. Persons attacked by bubonic plague do not infect healthy men. Persons attacked with the septicæmic or pneumonic form may propagate it, but not beyond their immediate surroundings. Cases of this kind do not occur primarily, but always follow a preceding bubonic epidemic. Sick rats or other rodents alone play an active part in the propagation of the plague from one section of a city to another, but insects, mosquitoes, or bugs may transmit septicæmic plague in the neighborhood of a person suffering from this form of the disease.

"In the Yunnan region the plague is endemic, with a period of recrudescence in the spring; at this time it reaches the surrounding country little by little, through the emigration of rats which contaminate those in adjoining districts. Let us suppose that in a given year the climatic conditions were more favorable or of longer duration than in other years. The plague will then reach one of the numerous river ports of the interior of China, where it will find some junk or sampan that will take it to Canton or Hong Kong. . . . If Yunnan, like Persia, for instance, had no river navigation, the plague would

never leave it, but if we give the rats a means of transportation, a rapid dissemination of the epidemic to distant points will occur.

"The plague thus reaches Canton and Hong Kong, and mortality among the rats goes on for a month before any human case develops and without arousing the notice of the sanitary authorities. Ships thus continue to take on cargoes and sail with clean bills of health.

"One of these goes to Marseilles—a voyage of about thirty-five days; during this voyage the epidemic passes through its divers phases on board. From attacking rats it reaches men, since it has the requisite time, and on condition that the weather is favorable; upon the arrival at Marseilles, therefore, the authorities will be warned by finding human cases.

"But if this vessel, instead of going to Marseilles, clears for Bombay—a voyage taking not more than fifteen to eighteen days—the epidemic will not have had time to spread beyond the rats; the health authorities will not be warned, and Bombay will be infected. In the same way, in its turn, Alexandria, for instance, might be contaminated.

"The length of voyages is now becoming shorter and shorter; in the Mediterranean, for instance, the maximum is scarcely forty-eight hours. A ship starting from Alexandria may carry infected rats to



FIG. 4.—Plague guinea pig. Pneumonia, with necrotic points in lungs. Enlarged liver. Enlarged spleen with miliary mottling. Bubo in right groin. Inoculation case.

Smyrna, which will not have time to contaminate the passengers, and will thus cause a new outbreak of the epidemic there. This may travel to Constantinople, to Batavia, to Odessa, always in the same way and without leaving a trace of the causes of these successive infections.

"This is why we can never tell just what ship has infected a place. Contagion is in fact generally carried from a port not officially declared to be infected, where the mortality of rats in the docks would be the only thing to attract attention to the matter. When human cases appear, it is too late to act, for infected ships may have left the city a month previous. They have carried, not bacilli on clothes or other articles, but freshly infected animals, which will infect others during the voyage, if it is long enough, and will thus bring to another city a fresh and virulent culture of the fatal germ, in a living organism."

The efforts of the Sydney Health Board are chiefly concerned with the health of the Sydney rats. An enormous amount of work has been done. An aver-

tarians who know precisely what their work is intended to accomplish.

The view that the poorer classes are most subject to plague because of bad air, bad food and uncleanness is held in Sydney to be wrong. They are most subject to it because they most often live in rat-infested premises. It may be splitting hairs, but it would seem that bad sanitation has much to do with the prevalence of rats under all circumstances. The rat is a scavenger and selects his feeding grounds with an eye to his material comfort. He most abounds where the human scavenger least attends to business. This, regardless of filthy personal habits as offering boundless hospitality to fleas.

The germ origin of plague is of course established beyond cavil. I do not know in detail what progress was made during the 1902 epidemic in the morphology of the *Bacillus pestis bubonica*, but the type form was seemingly a little confused, as in 1900. In stained preparations the organism was a short, straight bacillus, but there was great variation in the

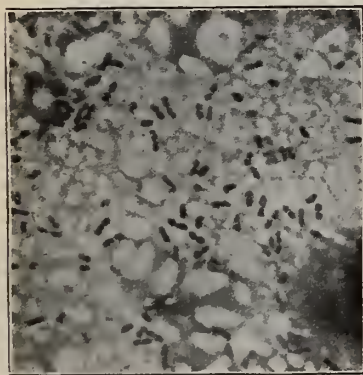


FIG. 5.—From the liver of a naturally infected rat.

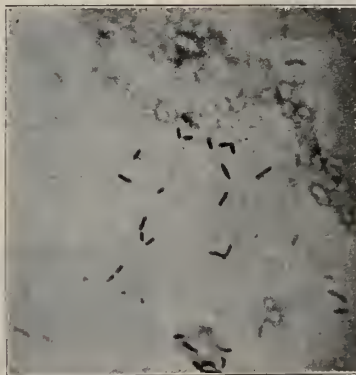


FIG. 6.—Smear preparation from a flea, x 1000.

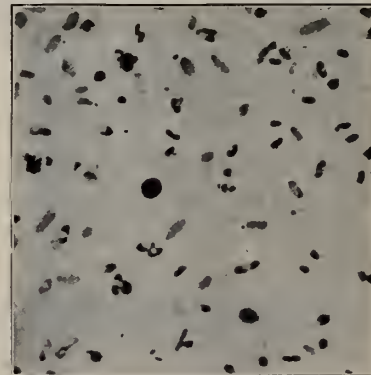


FIG. 7.—Involution forms from a dry Agar Culture, x 1000.

age of 800 rats had been examined weekly, for some weeks prior to September 28th, 1902. The last plague case was seen June 10th. The last plague rat July 14th, and there had been no cases in either man or rat for some time prior to these dates. The last rat was discovered in a neighborhood which, as Dr. Thompson expressed it, "was immediately torn upside down," and has since been under the closest surveillance, yet no plague rats have since been found. The last plague rat was found July 14th, and no plague rat has since been found, hence Sydney may be said to have been free from the disease since that date. It is obvious that the search for plague rats must needs be very thorough and sweeping. The rats of a number of adjoining premises may all be healthy save in one. This is a peculiar and most important feature of the disease. Sydney has a special staff of eighteen experienced rat catchers, who have become familiar with the dangerous localities. They are intelligent men, and practical sani-

elements in the same preparation. In the "mature form" the germ was either a typical bacillus (parallel-sided) or "whetstone or boat-shaped," the sides being bilaterally convex. Interspersed with these were rounded, oval or dumb-bell forms resembling micrococci or diplococci. Cultivation developed many polymorphous "involution forms."

The first case in 1900 characteristically occurred in a car-man whose work took him to and from a wharf at which vessels from Hong Kong lay. This wharf, the Central, was the first infected of many which border Darling Harbor, the undoubted centre from which the epidemic radiated. At these various wharves no less than 13 vessels from plague infected ports lay within 90 days after the first case was discovered. It is interesting to note the typicity of this first case. The case was bubonic in form. Bubo appeared in the lowest gland of the vertical chain in the left thigh. Behind the left external malleolus was a purplish red spot, 3 mm. in diameter. The cuticle

was adherent here and broken down at one point of the circumference of the spot. Here, then, was the probable atrium of infection. It is unfortunate that this cannot always be found. The degree of local reaction, however, is only exceptionally severe enough to produce a manifest lesion. Flea bites are quite small—on some skins practically invisible. Bubo is most frequent in the femoral or inguinal glands, because the flea most often bites the lower extremities. Wherever the bite, the glandular infection follows the usual course and affects the glands into which the lymphatics at the site of the primary infection drain.

The clinical history of plague has come to be quite familiar, but the description given by Dr. Thompson of the Sydney cases is so terse and practical that I venture to present it here in abstract: Prodromes were rare and ill-defined. When observed, they consisted of one or two days' malaise and weariness. The onset of the disease lasted from one to twenty-four hours, and occurred suddenly, usually with rigor, varying from slight chilliness to extreme shivering, sometimes lasting several hours and accompanied or followed by severe headache, usually frontal, sometimes vertical, but never occipital. Vertigo was occasional, pain in the back and abdomen common. Vomiting was almost constant, and of varying severity. The face was flushed, the eyes suffused and the pulse quick and full. The temperature varied between 100° and 102° F. Constipation was usual. Diarrhœa was an occasional early symptom of bad omen and generally accompanied with tympanites. Lymphatic enlargement, femoral, axillary, subpectoral or cervical, was only occasional thus early. In five cases only unexplainable adenopathy was the first symptom.

The foregoing symptoms increased and by the second day were well established. Often, not always, the patient was unable to rise. The suffused eyes were either closed or half open, the complexion was often sallow or livid, sometimes yellow, and the expression pinched. A peculiar smell about the patient was occasional. The tongue was white-coated, with clear edges, and moist, save in the severer cases. The skin was usually hot and dry. In severe cases it was bathed in cold perspiration from the first. The temperature ranged from 101° to 105° and sometimes reached its highest point on the second day. The pulse, still full, became very quick, and lost tension. In bad cases it was already very weak, perhaps dicrotic. Anorexia was marked, usually, and constipation continued. The expression often became dazed, but restlessness was occasional. Muscular incoordination resulting in staggering gait, and speech inhibition simulating alcoholism were observed. From mental hebetude the severer cases

passed into stupor or even coma. Oftener than not violent delirium developed. Insomnia was marked. One or more superficial glands enlarged and increased rapidly in size to the dimensions of a hazel nut, and was elastic, tender and painful.

The period of maximum intensity lasted from the end of the first forty-eight hours to the end of the fifth, and sometimes the sixth day. The temperature now fell to from 99° to 102°. Save in mild cases the typhoid state now supervened, with complete muscular and nervous prostration and muttering delirium, followed in fatal cases by coma. Diarrhœa sometimes set in, and if marked was a fatal sign. Hæmatemesis, melæna, hæmaturia, or purpura sometimes occurred. Bronchitis and occasionally pneumonia occurred; the pulse became weaker, more rapid and dicrotic. The tongue became dry and brown. Slight albuminuria was noticed. The bubo increased in size, often to the size of a walnut, and periadenitic effusion greatly increased its dimensions. More than half the deaths occurred from the third to the fifth day.

During the sixth to the eighth day, in favorable cases, the stage of decline became manifest. As a rule the temperature fell suddenly to approximately normal, the mind improved, and the tongue cleared. The bubo continued, and if destined to suppurate usually softened at this time. In many cases, however, the bubo remained stationary for six to eight weeks, only to suppurate at last. The pulse remained small and compressible and great weakness was complained of.

About the ninth or tenth day all the symptoms save weak heart and bubo disappeared in favorable cases, ushering in convalescence. The temperature often became subnormal. Suppuration, if existent, was now rapid, the abscess discharging about the thirteenth day. In the smaller proportion of cases the gland resolved gradually without suppuration. This was slow and often required many weeks. Convalescence was generally complete in three weeks, leaving only debility and slight bubonic discharge.

In some cases death occurred within a few hours after the onset of the disease.

Some very interesting points are suggested by a study of the clinical history of the disease as presented by Dr. Thompson.

1. Cerebral toxæmia is marked in plague.
2. The *status typhosus* closes the scene in fatal cases, just as in many cases of a primarily or secondarily septic or toxæmic character.
3. The decline in the mortality rate after the seventh day is phenomenal. Plague would seem to be characterized by a relatively large toxine dosage, acting quickly, but eliminated rapidly in subjects resisting it.

4. Cases of speedy death are susceptible of two explanations: (a) A relatively large dosage from multiple "bite" inoculations; (b) Individual susceptibility. Obviously these factors may be combined. It is noteworthy in this connection that the patients with violent toxæmia and speedy death were either very young or more or less advanced in years. The only case of sudden death which did not fall under either the one or the other heading was in a middle-aged person. What, if any, ailments already existed at the time of infection, does not appear.

5. Bubo seems to be a casual, rather than a necessary feature of plague. The purely incidental nature of the adenopathy in plague is of especial importance in view of its wide acceptance as the essential feature of the disease.

6. The trivial nature of the bubo as compared with the severity of the general disease is very striking, considering the stress that has been laid upon the adenopathy. A peculiar phase of the bubo is the disproportionate circumglandular phenomena, suggestive of an exaggerated elaboration of germ toxins *in loco*. A further peculiar fact is that the severest forms of plague, *i. e.*, the pneumonic and septicæmic, do not usually develop bubo. The disease is, from this standpoint, very like septic infection, in which, if the glands do not react, because either of glandular non-resistancy, large dosage, or extreme virulence of the infection, fatal general sepsis supervenes.

Simond practically supports this view.³ Thus he explains the infrequency of the primary phlyctenule on the ground that it is only produced when the inoculated bacilli are relatively mild in virulence or small in quantity. Under such conditions there is positive chemotaxis, local leucocytosis and reaction. When the bacilli are in large quantity or very virulent, chemotaxis is negative and there is no reaction. Obviously, the same argument applies to the presence or absence of bubo. Simond does not lay stress upon individual local resistancy.

It is important to know that plague must be chiefly diagnosed from clinical evidence alone. Rigid bacteriological evidence can rarely be adduced before the fifth day from beginning to seek it, and the patient is likely to die before the evidence is all in. In the Sydney epidemics the bacteriological diagnosis was established by examination of (1) juice from the bubo and its environs; (2) smears from enlarged glands; (3) smears from viscera; (4) animal inoculation; (5) the blood; (6) cultures. The organism stained with aqueous solutions of fuchsine, methyl blue and gentian violet and were decolorized by Gram's method. Inoculations were made chiefly in guinea pigs and rats. Guinea pigs succumbed in from two to ten days, rarely over six. *In re* the

diagnosis, the early serious aspect of the disease, before bubo appears in many cases, and the disproportionate severity of the general symptoms would seem to be very important points, especially if plague is known to be about.

The human post mortem appearances in the first epidemic in Sydney were studied in twenty-four cases. They were as follows: Petechiæ of the skin were found in ten cases, in four or five in the serous and in nineteen cases in the mucous membranes—the latter in the gastrointestinal tract especially. Circumvisceral extravasations were often found. The spleen was enlarged, dark and soft. In two cases only was it normal. Inflamed, swollen sometimes necrotic glands were found in twenty-one cases. In three none were found. They were surrounded by an area of blood extravasation and œdema. The buboes were sixteen in number—eight femoral, four inguinal, one axillary, and three cervical. The heart often contained soft, yellow gelatinous clots—with a pale, soft myocardium in four cases. In fourteen cases the liver was enlarged and fatty. In several cases necrotic spots were noted. The renal cortex was swollen and pale in twelve cases, with pin point hæmorrhages in some. In more than half the cases pulmonary congestion and œdema were marked. In one case there was lobular pneumonia. The distinctly toxæmic—*i. e.*, septic—nature of the morbid phenomena is somewhat obtrusive.

The prevention of plague seems to be reduced to very simple principles. They are as follows:

1. Prevent rats from getting ashore from vessels by mooring some little distance from the wharf and freshly tarring all ropes, fenders, and hawsers which extend from the ship to the wharf. All gangways should be drawn up when not in use. When used at night, gangways and the wharves should be brilliantly lighted. It is not easy, of course, to prevent rats from swimming ashore.

2. All ships should be thoroughly fumigated with sulphur or formalin before entry and departure. This is very effective in destroying rats.

3. Great pains should be taken by health officials to keep advised of the health of rats in exposed cities. Any unusual movements or mortality among them should be at once reported to the health authorities. Plague first appears among rats as an epidemic. Laboratory study should be constant during periods of known or of possible exposure.

4. The number of rats should be kept down so far as may be at all times, and especially when cases of plague are found. This is not so effective as might be supposed. Fully 50,000 rats were destroyed in Sydney within a few weeks, yet the number of rats remained seemingly the same. There are of course many sources of error here, and, admitting the appar-

³ *Op. cit.*

ent fact, a simple explanation would not be far to seek. Rats maintain a pretty constant equilibrium between their number and the means of subsistence. A reward was offered for rats in Sydney, 6d. apiece being finally given. This bounty was too high. Rats breed fast and mature quickly, and it would pay to breed them at that price. Probably this was not done. Yankee "thrif" is lacking in Sydney.

5. No matter how remote the chances of contagion, so infectious a disease as plague demands isolation and great care to avoid immediate infection.

6. A general cleaning up is required in districts characterized by bad sanitation. This is especially necessary because the complete destruction of scavenger rats demands in all fairness an equally efficient substitute for scavenger work.

7. Fumigation of all infected and suspected premises. If properly done, rats are destroyed at the same time.

Plague prevention means hard work. As Dr. Thompson tersely says, "there is no royal road to the prevention of plague." The importance of a knowledge of plague prevention is not limited alone to loss of life,—the cost of sanitation and the commercial loss during epidemics is something frightful. This, aside from the loss of time and cargo damage incidental to quarantining ships and passengers from infected ports. Even though but a single case exists at the port of departure, these losses are incurred just the same, and must continue until the port of departure is given a clean bill of health.

The tremendous expense incidental to the prevention and extermination of plague is demonstrated by the fact that Sydney has expended as high as £1,250 monthly in the extermination of rats alone.

Great assistance was rendered the authorities by the local profession. Realizing the danger of over-looking plague, early in the epidemic especially, the health board requested notification of all cases of illness which were in the slightest degree suspicious. Compliance was cheerfully rendered. To facilitate sanitation and rat destruction, disinfectants and rat poison with directions for using were gratuitously and extensively distributed.

The Sydney method of disposal of plague dead was very simple and should have been effective—although nothing but cremation should be seriously considered. The bodies were wrapped in a sheet wet with bichloride solution 1-1000 and placed in hermetically sealed coffins by special undertakers; a coarse cloth wet in the sublimate solution was wrapped about the coffin, which was then taken to the Maritime Quarantine Station and buried at a remote point on the coast, in sandy soil on a steep slope falling to cliffs above the Pacific.

There was nothing half-way in the action of the Australian health authorities in dealing with the plague. Even in many of the smaller towns, persons responsible for unsanitary conditions were threatened with criminal prosecution in the event that such conditions were not corrected. This brought offenders to time very promptly. An attempt was made to educate the public. Public lectures on plague were given by eminent medical men. In America, ethical asininity would severely censure this as "advertising."

That success crowned the efforts of the Australia health authorities is shown that in Melbourne, Victoria, only two days' travel from Sydney by sea and 24 hours by rail, and at Auckland, New Zealand, only three days' travel by sea, I heard of only two cases of plague. These cities are in constant communication with Sydney. The cases were probably contracted outside of the cities in which they occurred. It is noteworthy that in no case did plague, contracted in Sydney by persons who went thereafter to other cities, serve as a focus for new cases.

I take great pleasure in reproducing a number of beautiful plates from specimens prepared by Dr. Frank Tidswell, the able chief assistant of the Sydney Board of Health, upon whom much of the arduous laboratory work has devolved.

100 STATE STREET.

CASES OF INTESTINAL RESECTION, WITH END-TO-END UNION.

By C. S. HAMILTON, M. D.,

AND

W. D. HAMILTON, M. D.,

COLUMBUS, OHIO.

This report includes the histories of twelve intestinal resections with end-to-end sutures.

Cases I, II, III and IV appeared in the *Transactions of the Ohio State Medical Society* for 1900, while the eleventh case was published in the *Proceedings of the Academy of Medicine of Columbus*, October 7, 1901.

In the twelve cases operated upon, there were eight recoveries and four deaths. The ages of five of the patients were as follows: Sixty-one, sixty-four, sixty-four, seventy, and seventy-three, with three recoveries and two deaths. As to methods of resection employed, they were by suture, by the Murphy button, and by the Robson bobbin.

In the past year we have been using for intestinal suture Pagenstecher's thread, which offers many advantages. It is a linen thread coated with celluloid.

NO.	DATE.	INITIALS, AGE, SEX.	OPERATION.	DESCRIPTION.	Result.	AFTER-HISTORY.	WITH WHOM SEEN
I	June 20, '95.	M. G. 64. F.	Herniotomy. Excision of six inches of small intestine. End-to-end union by Murphy button.	Had had a left inguinal hernia for twenty years. It had been strangulated for forty-eight hours. Taxis had been unsuccessful. Her abdomen was distended, pulse 100, vomited frequently, but general condition was fair. One ounce of dark, turbid, blood-stained, offensive fluid escaped on opening the sac. Gut not gangrenous, but badly damaged. It was black, without lustre, and had a half-inch perforation on free border. The constriction, which was knifelike, was at the external ring. The 6 inches of intestine involved were excised and the Murphy button was used. The wound was closed with a gauze drain leading down to the site of the excision. Had had two strokes of apoplexy before the operation.	R.	Convalescence uneventful. Button found in the rectum on the 22nd day. Lived four years. Hernia cured. Died from fourth stroke of apoplexy.	Dr. T. K. Wissinger, of Columbus, O.
II	Aug. 25, '96.	T. F. B. 40. M.	Excision of nine inches of small intestine. End-to-end suture. Gauze drainage.	Aug. 6, '96, did a Bassini operation for irreducible inguinal hernia. Removed 2 pounds of omentum. Tied with kangaroo tendon before cutting it off. He had fever, mild sepsis, pain, tenderness, and induration over the retracted stumps. Under ether an incision was made in the right semilunar line above navel. The adherent, soft gut was torn in gentle banding. A coil was adherent to stumps and imprisoned. Two drachms of pus between parietes and stumps. Eight inches of lacerated, friable gut, too soft to suture. Excision of nine inches.	R.	Considerable shock ensued. P. 100. Enjoys perfect health.	Dr. Collins, of Toronto, O.
III	Sept. 27, '97.	Patient at county infirmary. 64. M.	Resection of 12 inches of jejunum; end-to-end suture. Wound closed with drainage.	Had had for several years a small irreducible left inguinal hernia. Strangulation began eight days before the visit. He had passed neither flatus nor stool. Vomiting was frequent and had a fecal odor. He had a feeble pulse of 100 and temperature of 97.8°F.; extremities were cool and general condition was very bad. A small hard mass could be felt in the left inguinal canal. Continuous with this could be felt a lump as large as an orange, occupying the left inguinal region and reaching to the median line. A median incision was made and the hernia was found to be peritoneal, including about ten inches of jejunum. The seat of the strangulation was at the internal ring and the greater part of the intestine lay between the peritoneum and the transversalis muscle. The gut was gangrenous. Resection and end-to-end suture were done. Patient's condition critical throughout the operation. The facilities for the operation were about as unfavorable as can be conceived.	D	Died in 8 hours.	Dr. T. K. Wissinger.
IV	Oct. 31, '99.	M. S. 70. F.	Herniotomy. Resection of 4 inches of small intestine, end-to-end suture. Drainage.	Had complete prolapsus uteri and two irreducible femoral hernia. The right one had been strangulated for 10 days. Incomplete obstruction. Fecal vomiting for 3 days. Condition about hopeless. Protrusion of the size of an orange, the seat of cellulitis. Gas and feces in sac. Inflamed omentum, gut about destroyed. It was a Littre's hernia, 2 inches of the free border being nipped. The incision was extended upward, omentum removed, and 4 inches of gut excised.	R	Patient's recovery retarded by slow healing of the infected wound and by albuminuria. The hernia was cured. She is now in better health than for years.	Dr. P. D. Shriner, of Columbus, O.
V	July 31, 1900.	W. L. 25. M.	V-shaped excision of jejunum to the mesentery. End-to-end suture.	Had suppurative appendicitis for six days. Appendix removed with provision for drainage June 2, 1900. A fecal fistula followed. The hole in the abdominal wall admitted a thumb. The skin about it was eczematous. There were violent peristalsis and obstructive symptoms. Patient emaciated. Lateral anastomosis was done. A spur was found adherent to lower end of parietal wound, and it was sharply knicked. A median incision was made and the adhesions freed. A coil of gut was anastomosed from above the fistula to one below it, and the fistula kept packed. Improvement in nutrition and abatement of the eczema followed. But the fistula was of the same size. At the final operation the parietal scar was excised and the adherent jejunum freed. It was too friable to stitch, hence the V-shaped excision. A half-inch tear in cæcum in separating adhesions was closed with stitches.	R.	Is in perfect health.	Dr. Reason, of Hillsards, O.

VI	Feb. 15, 1901.	W. K. 73. M.	Excision of 3 inches of small intestine with end-to-end suture.	Had had an irreducible femoral hernia for 35 years. Gut had often been pinched. Had been sick one week. Last stool 36 hours before operation. Sudden increase in pain and vomiting and distension. Was moved 30 miles to hospital. Operation same night. Herniotomy. Found pus external to sac. Small intestine in sac adherent to sac and omentum. Gut strictured from long residence in sac and from frequent strangulation. Gut ruptured in handling, not gangrenous, but beyond repair. Three inches excised. No attempt to cure hernia by closure, on account of pus and conditions present.	R.	Is in excellent health. Wears a truss, which controls the hernia.	Dr. Christopher, of London, O.
VII	July 18, 1901.	E. D. 61. M.	Excision of 4 inches of the sigmoid colon. End-to-end union with Robson bobbin.	He had had chronic intestinal obstruction for 3 months. Cachexia well marked. He had violent pain and peristaltic movement over sigmoid, where a vague lump could be felt through the parietes. Lateral and median sections were made through them. Malignant stricture of the sigmoid, with metastasis in anterior wall of gut 2 inches below. Mesosigmoid short and vascular. Colon distended with gas and faces above stricture. Operation very difficult. Moderate shock.	D.	He died in 48 hours from exhaustion and heart failure.	Dr. Early, Dr. Rankin, and Dr. Loving, of Columbus, O.
VIII	Jan. 24, 1902.	I. H. 29. F.	Supravaginal hysterectomy by Kelly's method. Removal of tubes and ovaries. Resection of six inches of ileum with end-to-end suture.	Had had dysmenorrhoea for 12 years. Had leucorrhoea and great perimetritic tenderness with pain in locomotion. She had chronic metritis and adherent pus tubes. At the operation the tubes were found to be firmly adherent to the ileum. The gut was injured beyond repair in freeing the adhesions.	R.	Is enjoying perfect health.	Private patient.
IX	Aug. 14, 1901.	D. T. 27. F.	Resection of two inches of ileum. End-to-end union with Robson bobbin. Drainage.	Had had a miscarriage with sepsis 6 years previously. She had chronic metritis and pyosalpinx. She had pain and leucorrhoea, was emaciated, and had marked perimetritic tenderness. At the operation firm, extensive parietal and visceral adhesions were found. The right tube, greatly enlarged, was full of putrid pus. It was adherent to small intestine, which was torn in separating them. Nothing less than excision would repair the damaged gut. Two inches of intestine were resected and the other tube, infected to a lesser degree, was removed.	D.	Died of peritonitis on the 3rd day after operation.	Dr. Marchant, of Millidgeville, O.
X	Sept. 27, 1901.	J. M. 28. F.	Resection of 1½ inches of ileum. End-to-end union by Murphy button. Suture of mesentery. Drainage.	Had had pus tubes removed by abdominal section 3 months before. Sept. 7th, 1901, was kicked on the abdomen. One week later had tympany with violent peristalsis, visible through the parietes below the navel. Intestinal obstruction was apparent. Rupture had been suspected just after the accident. Some fecal matter passed. The operation showed peritonitis; the ileum had been torn in two at right angles to its long axis. The corresponding mesentery had been ruptured on the same line with that in the gut. Complete occlusion of the ends of the ileum had been effected by contraction of the ends and by contiguous adhesions. The gut was greatly distended above the rupture. Slight fecal extravasation had occurred.	D.	Died on the 3rd day of peritonitis.	Dr. Jewett, of West Jefferson, O.
XI	Sept. 27, 1901.	M. W. 26. F.	Resection of 5 inches of ileum. End-to-end suture.	Had had subacute, partial intestinal obstruction with appendicitis. Treated by rectal feeding for some weeks by the Ochsner method. The incision across the omphaloepic line displayed a firm band from the tip of the appendix, lying across the strictured ileum. After removal of the appendix and division of the band it was deemed advisable to resect the strictured portion of gut. After division, the lumen of the gut was found to be such as only to admit a sound of the size of 26 French.	R.	Is in perfect health.	Dr. Woodlin, of Columbus, O.
XII	Oct. 10, 1901.	A. H. 32. M.	Resection of 8 inches of ileum. End-to-end union with Robson bobbin.	Had had for many years an irreducible inguinal hernia of the right side. Had had several attacks of threatened strangulation. Three months before, he had a genuine attack, requiring a herniotomy. A Bassini operation was done. Several inches of ileum had been caught in the funicular process. An annular tight constriction at the internal ring had caught the gut; while the sac in its length embraced very tightly the distal gut. It was badly discolored, though not gangrenous. Resection was considered lest the intestine should cause obstruction from paresis. The wound healed with radical cure of the hernia. He, however, developed obstructive symptoms within 90 days. A median abdominal section was done. Coils of ileum were found firmly adherent in the right inguinal region, to parietes and to each other. When separated, resection of 8 inches of the gut was found necessary.	R.	Enjoys fair health and no longer has hernial or intestinal annoyance.	Dr. Steinfeld, of Columbus, O.

THE DIAGNOSIS AND TREATMENT OF CONTRACTED PELVIS.

By WARREN R. GILMAN, M. D.,
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I am convinced that the general practitioner gives very little thought to the subject of deformity of the female pelvis. It may hold his attention occasionally for a few minutes while he reads his medical journal, but is passed over quickly as a matter which has not much practical value and interest.

I have no intention of entering upon a discussion of the whole subject, but wish to call attention to a few practical points in pelvimetry and the management of cases with contracted pelvises.

Contraction or deformity of the pelvis is not so uncommon as it is supposed to be, and it may be found now and again in the practice of every man who attends many confinements. It seems, then, that the general practitioner should not ignore it entirely, trusting to good fortune and a strong hand on the forceps to carry him through successfully.

Until within a few years, the statements as to the frequency of pelvic deformity were founded upon the statistics of foreign hospitals. Because these statistics were collected among people who were supposed to be of a different racial type and who lived under economic and industrial conditions not exactly like those of this country, they were not looked upon as trustworthy when applied to medical practice in our own land. Now, however, we have statistics from several cities of this country, which may be taken as a fair criterion for the practice of the American physician.

It appears to be established by reliable figures, that contraction of the pelvis exists in from four to six per cent. of all obstetrical cases.

It must not be assumed that in every case of contracted pelvis some operation is demanded. As a matter of fact, a large number of contractions are simply technical and offer no serious obstacle to the natural progress of labor. In the series of cases reported by Williams, of Baltimore, and by Edgar, of New York, about 70 per cent. had spontaneous delivery. In ordinary city practice we may expect from 1 to 2 per cent. of all obstetrical cases to present pelvic deformity of a character and degree which render operation of some sort necessary. This being the case, it is evidently important for a practitioner to obtain a certain amount of information as to the size of the pelvis in every obstetrical case before labor begins.

It may be taken for granted that a woman who has had a normal labor and been delivered of a baby of average size, has no considerable deformity of the pelvis. In all cases, however, in which the

history of previous labors shows the probability, or even the possibility, of a contracted pelvis, an examination should be made. Every primipara should be examined before labor begins; and preferably before the eighth month. There are several good reasons for doing this, and among them is the importance of finding out the size of the pelvis.

The external measurements of the pelvis are easily taken by the pelvimeter, an instrument which can be carried in any obstetrical bag. These measurements give us an idea of the general character of the pelvis, and from them we can make an estimation of the internal diameters. But it is not safe to rely upon them alone.

Of the three diameters of the pelvis, the antero-posterior, or conjugate, is the most important, because it is the shortest, and therefore the first to cause trouble when any shortening exists. Fortunately, we are able to measure quite accurately the distance between the anterior surface of the promontory of the sacrum and the symphysis pubis.

To do this, the patient is placed in the dorsal position and the first two fingers of the left hand are introduced into the vagina, and carried upward behind the symphysis, until the tip of the second finger touches the promontory of the sacrum. The point of the first finger which is then in contact with the lower edge of the symphysis, is marked by the nail of the forefinger of the right hand, and the distance between the tip of the second finger and the mark on the first finger is measured. This gives us the diagonal conjugate: the true or obstetrical conjugate is $\frac{3}{8}$ to $\frac{3}{4}$ of an inch less than this, according to the height and thickness of the symphysis.

In order to reach the promontory of the sacrum, it is necessary to direct the fingers well upward toward the abdominal cavity, not backward toward the concavity of the sacrum, and to have the elbow and forearm well below the level of the vulva. The ulnar side of the examining hand is forced against the perinæum; and it is evident that the examination is more easily made if the patient is a multipara with a patulous vaginal orifice and a relaxed perinæum. If the patient is a primipara with a firm perinæum, it may be necessary to give an anæsthetic. The obstetrical conjugate, being the shortest diameter of the pelvis, may properly be regarded as a guide or measure of the size of the pelvis; and for practical purposes it is the only measurement which it is absolutely necessary to make, except in unusual cases of very marked deformity. If it reaches the normal standard of 11 c. m. ($4\frac{1}{4}$ in.), it is safe to infer that the pelvis is of average size.

Another factor in determining the result of labor, is the size of the baby's head and the character of

the cranial bones. It is well known that a head of average size, with flexible bones and open sutures, can be forced through the pelvis, even when the pelvic diameters are somewhat contracted.

If the head is large and the bones do not easily overlap under pressure, the progress of labor may be seriously retarded, even when the pelvis is of normal size.

At first thought it would seem an easy matter to ascertain the size of the baby's head; as a matter of fact, it is very difficult. Digital examination of the head *per vaginam* gives one surprisingly little information in most cases. The size of the parents and of older children, if there are any, the duration of pregnancy and the size of the mother's abdomen are all to be considered; but I venture to say that it is quite impossible to determine the size of the head with any great degree of accuracy in most instances. Therefore it is best to look upon the head as one of average size for that period of pregnancy to which the mother has advanced.

If one advises pelvimetry as a routine practice, it is incumbent upon him to show the practical value of the procedure. Looking at the matter in a broad way, we can say that a physician will be better able to meet the responsibilities of labor cases if he has carefully investigated the physical condition of each woman before the end of pregnancy.

When a marked deformity exists, one which calls for induced labor or Cæsarean section, obviously it is of extreme importance that the physician should find it out as early as possible.

If it were possible to find out the exact size of the mother's pelvis, the size and character of the baby's head, and to estimate accurately the expulsive force of labor pains, we might be able to tell in advance just what would have to be done in any particular case of contracted pelvis. As it is, the best that can be done in the way of formulating principles to govern the treatment of labor in the various degrees of contracted pelvis, is to enumerate the possible operations and state the probable limitations of each.

In every case of slight or moderate contraction, it is best to let the patient alone as long as progress is being made. Theoretically, a patient with a pelvis of certain dimensions may be expected to require assistance; but very often, when labor comes on, she goes through it safely without any help. Statistics as to the results of labor in contracted pelvis are available and the subject has been so well discussed by men of experience, that it is possible to state certain general principles as to what should be done in the various degrees of contraction.

If the obstetrical conjugate is 9 c. m. ($3\frac{1}{2}$ inches), forceps or version may ordinarily be expected to

bring labor to a successful termination whenever the progress of the head is arrested. In Williams's tables, we find that in 220 cases with a conjugate of 9 c. m. there were 13 high forceps, 13 low forceps, 12 versions and 3 perforations.

On the relative merits of version and high forceps I wish to say this—that the high forceps operation is a difficult one, and, in the hands of any but the most experienced, a dangerous operation for the child. I very much prefer version whenever the conditions allow its performance.

When the conjugate is 7.5 c. m. (3 inches), forceps or version may occasionally be successful; but extraction through such a pelvis is usually very difficult and likely to prove fatal to the child. It is in pelves of this size that symphysiotomy is indicated. This operation is one which prepares the way for forceps or version. It increases the conjugate by 2 c. m. ($\frac{3}{4}$ inch), and makes delivery by forceps or version safe. It has a narrow range of usefulness and, as it is difficult to estimate the degree of dystocia of any case in advance, the operation should be restricted to those cases in which one is certain that only a very little more room is needed for a safe delivery by forceps or version. Although children have been delivered safely by symphysiotomy through a conjugate of 7 c. m. ($2\frac{3}{4}$ inches), it is safe to place 7.5 c. m. (3 inches) as a limit.

When the conjugate is 7 c. m. ($2\frac{3}{4}$ inches), or less, the choice of operation lies between induced labor and Cæsarean section. Induced labor at the thirty-sixth week carries with it very little more danger for the mother than labor at term; but the mortality for children is high—from 40 to 50 per cent.

In cases of very great deformity of the pelvis, there may not be room for the head, even at the thirty-sixth week; under such conditions, Cæsarean section is the only possible means of delivering a live child.

Cæsarean section is not limited or restricted by the pelvic diameters, however short they may be. The danger for the child is very slight and may be disregarded. Twenty-five years ago, the maternal mortality of the operation was practically prohibitive; but asepsis and improved technique have so reduced it during the past few years, that delivery by this method must be given careful consideration, in all cases with a conjugate of 7 c. m. or less. It is a question if it should not displace induced labor in all such cases, when the choice of operation is left to the physician and it is possible to secure the proper conditions.

When the operation is performed by a competent man and under proper conditions, the maternal mor-

tality is less than 5 per cent. It should never be performed upon a patient who is exhausted by a long labor or has been exposed to infection. The importance of restricting the operation to cases in which the proper conditions are present or can be provided, cannot be emphasized too strongly.

It may be asserted by some men that the subject Treatment of Contracted Pelvis, is not a very important one, and that disregard of pelvimetry and its lessons only entails the loss of a baby now and then. This view of the matter is not to be encouraged; for it is the duty of the physician who practises obstetrics to do everything possible in the way of assisting a pregnant woman to bring into the world a healthy baby.

Personally, I believe that the life and health of the woman should have the first consideration. If that can be assured, or if she is willing to assume the risk of an operation for the sake of the child, the duty of the attending physician is plain.

HYPODERMOCLYSIS; EXPERIMENTS, TECHNIQUE AND CLINICAL USES.*

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Hypodermoclysis, derived from the Greek—*ὑπό*—*δέρμα*—*κλύσις*—*a clyster beneath the skin*—*κλύω*—*to wash out*—from a clinical standpoint may be defined as the "injection of a normal saline solution into the subcutaneous (cellular) tissue."

Some authors incorrectly speak of hypodermoclysis as an infusion; it is no more so than is the enema, since both enter the circulation by similar routes, namely by the lymphatic system.

This valuable therapeutic measure was first brought into prominence by Cantani, during the cholera epidemic of 1892, so that the procedure is not new.

The technique is simple and comparatively safe, and I state this last advisedly, since a case has been reported to me in which sloughing of both breasts occurred, following a hypodermoclysis beneath them, and of such a severe type as to render necessary the amputation of both organs.

The injection had evidently been given too rapidly or in too large a quantity, with resulting interference with the blood supply and as a consequence the sloughing of the tissues. It is my purpose first to de-

scribe certain experiments with hypodermoclysis, which have an important bearing on the subject.

EXPERIMENT I.—*The Rapidity of Absorption and Commencement of Renal Secretion.*—A dog was anesthetized, the left ureter catheterized, and the drops of urine, passing through a tube, fell on a spatula and were caught in a vessel underneath; this spatula formed the end of a lever and this last was supported by a sensitive tambour. The impact of every drop of urine was transmitted to another tambour through a column of air. Supported on the second tambour, was a lever with a pen, and each drop of urine was registered on the smoked paper of the revolving drum of a kymograph, in the form of an inverted V.

The right ureter was also catheterized and the urine collected and measured.

The mercurial manometer was connected with the carotid artery and tracings of the heart impulses were thus secured.

Five cubic centimetres of a five-per-cent. solution of potassium ferrocyanide were added to three ounces of normal saline solution at a temperature of 104° F.

This solution was injected with a large syringe into the cubcutaneous tissue of the right groin. The urine was tested every fifteen seconds with iron chloride.

In three minutes and a half, the prussian blue reaction was noted, and it became marked at the end of four minutes. Renal secretion was increased, as was demonstrated by the increased number of drops registered on the one side and counted on the other, coincident with the prussian blue reaction.

EXPERIMENT II.—*The Specific Action of Normal Saline Solution in Promoting Renal Secretion.*—In another animal half an ounce of a similar solution was injected in the groin, and in from three minutes and a half to four minutes, increased renal secretion began, coincident with the prussian blue reaction. No perceptible rise of blood pressure was shown by the manometer tracings. If the renal nerves are sundered the same effects are produced.

This corresponds to the results secured by the eminent physiologist Foster, who first demonstrated that normal saline solution had a specific action on the kidney cells in promoting diuresis. He experimented with infusion alone, employing so small an amount, only two to three ounces of the solution, that no rise in the manometric tracings occurred. Profuse diuresis resulted, and this took place even after the renal nerves were sundered, thus demonstrating the specific action of normal saline solution on the renal cells. As heretofore stated, I have demonstrated the same effect by hypodermoclysis and also by enema or by enteroclysis.

EXPERIMENT III.—*Renal Congestion is Diminished by a Hypodermoclysis of Normal Saline Solution.*—Renal congestion was produced artificially in rabbits, by large hypodermic injections of antistreptococcus serum and of normal horse serum.

Normal kidneys were first examined microscopically; then congestion of the kidneys was artificially produced in other animals and the pathological condition noted.

Experimentally I found that if a serum injection as given above, was followed later by a hypodermocly-

* Read before the Manhattan Clinical Society, January 2, 1903.

sis with normal saline solution, renal congestion was much lessened.

These experiments have an important bearing on the therapeutics of hypodermoclysis.

TECHNIQUE.

Precautions.—1. Allow the fluid to flow slowly, so that the tissues may not be overdistended and that absorption may readily occur.

2. To avoid entrance of air into the tissues, the fluid should flow from the needle at the moment of puncture; also the vessel containing the fluid should never be allowed to become completely emptied.

3. Do not inject directly into œdematous tissue,—dropsy of the organs, or serous cavities is not a contraindication to hypodermoclysis, which is of value to aid elimination by its diuretic action.

4. Regarding the needle employed, it should be pushed in semi-obliquely and steadily, and not plunged in suddenly. Beware of injuring vessels and nerves. It is not advisable to inject into muscular tissue, as painful lumps, or even abscesses, may result.

5. If the flow from the needle ceases, push it in slightly and then withdraw it a little, or else rotate it. This will generally free it from the obstruction.

Site for the Injection.—Numerous sites have been advocated, such as beneath the breasts, in the chest wall, abdominal wall, axillary space, cellular tissue of the neck, back, groin, and thigh.

I would suggest the ilio-lumbar region, the space between the crest of the ilium and the twelfth rib, as most convenient. It is practically the point of least motion in the body and does not interfere with the dorsal position, or cause pain through movements of the limbs or from abdominal or thoracic respiratory movements.

Solution to Employ.—The ideal solution is normal, or more correctly speaking decinormal, saline solution, or 0.6 per cent. of salt water boiled and filtered.

Von Heinleth adds to the normal saline solution from one-tenth to one part of thymol to a thousand; Rumpf 1 to 1,000 of peroxide of hydrogen;

Hayem's artificial serum consists of

Sodium chloride 5 grammes,

Sodium sulphate 10 grammes,

Distilled water 1 litre;

others add small quantities of carbolic acid to the saline solution.

I employ normal saline solution alone, as being bland and less irritating to the kidneys.

Quantity of Solution to Employ.—Hildebrand, of San Francisco, states that one drachm of normal saline solution in proportion to one pound of body weight, is the maximum quantity that will be taken care of by the kidneys, every fifteen minutes; thus,

in a patient weighing one hundred pounds, one hundred drachms (or twelve and a half ounces) will be taken care of by the kidneys in the time stated. This gives us as a pretty good guide that we should not inject with greater rapidity than a litre in about forty-five minutes.

Furthermore the degree of tension of the fluid and the rapidity of absorption can be readily noted, and the condition of the circulation modifies the results. In other words

The Rapidity of Absorption is Modified by Existing Clinical Conditions. Thus, for example, though diuresis commences in from three minutes and a half to four minutes when normal saline solution is administered by hypodermoclysis under normal conditions, and the method is then second in rapidity to infusion in entering the circulation; yet with a rapid and feeble heart, with poor action of the capillaries, it is the slowest method of all, and the fluid may remain *in situ* for a long period of time with apparently little or no absorption. Under this condition, especially, the danger of overdistention of the tissues is manifest. If, however, we combine with the hypodermoclysis, enteroclysis with normal saline solution at 120° F., the heart is immediately started up and absorption occurs more rapidly.

One would never keep up a continuous hypodermoclysis as a clinical measure, deducing such method from the experiments of Hildebrand. His work, however, ably demonstrates to what extent the kidneys can take care of the fluid injected. For practical purposes the fluid would be injected once, twice, thrice, or even possibly four times in the twenty-four hours, the quantity of the injection and the proximity of the injections in point of time to each other depending on the rapidity of absorption and the conditions for which they are indicated.

In some cases, in oliguria or in uræmia, frequently repeated injections of moderate amount seem to promote the excretion of toxins better than the employment of a single large volume of saline solution; also there is less strain on the kidneys. This fact was clearly brought out in my experiments, and on page 164 of my manual *Enteroclysis Hypodermoclysis and Infusion*, published in November, 1900; and Lenhartz, in an article entitled *The Therapeutic Value of Saline Infusion in Acute Diseases in the Deutsches Archiv für klinische Medizin*, holds similar views to those mentioned in my book.

One may give a single large injection in one loin or half of it in each, and, as stated, several times a day, if indicated.

Thus, in an infant weighing eight pounds, as for the toxæmia, or excessive loss of fluid in cholera infantum, we employ from one to four ounces of normal saline solution on each occasion, once, twice, or

even three times in twenty-four hours, depending on the severity of the case.

If there is shock or hæmorrhage, we might use from four to twelve ounces in divided doses, and in several regions at one sitting.

In an adult, from six ounces to a pint is indicated in uræmia and allied conditions; from one pint to one quart if there is shock or hæmorrhage. Several injections may be required during the twenty-four hours.

In pulmonary hæmorrhage or in hæmorrhage from gastric, or intestinal ulcers, as in typhoid fever, hypodermoclysis is an excellent method.

An infusion or enteroclysis, might stimulate the heart too suddenly and forcibly and cause recurrence of the hæmorrhage. I have seen this occur, in pulmonary hæmorrhage, from the administration of alcohol; whereas the hypodermoclysis acting more slowly, being first collected by the lymphatic system, replaces the loss of fluid, while the danger to which I have alluded is eliminated.

The saline solution is also believed by some to have a certain styptic effect. On this same principle, salt water has been administered by mouth, by many of the Saranac physicians in cases of pulmonary hæmorrhage.

Method of Injection.—A Davidson's syringe, glass irritating jar, a funnel, or preferable a fountain syringe, can be employed. Dr. Kelly suggests the reversed aspirator. Fowler's apparatus made on the latter principle is a good method.

Height of the Fountain Syringe.—Two to three feet above the level of the patient, depending on the rapidity of the flow. The smaller the needle, the higher the syringe; if a small hypodermic needle is employed, the fountain syringe should be elevated to a height of five or six feet.

Needle.—An aspirating needle of moderate size is generally employed. A hypodermic needle can be used in an emergency. In the *Medical Record* for April 14, 1900, in an article entitled *Observations and Suggestions Concerning Hypodermoclysis*, I reported a simple attachment for hypodermoclysis, the screw thread of which will fit an average size hypodermic or aspirating needle. It also has an enlargement adapted to fit snugly the rubber tubing of a Davidson or fountain syringe. In this same article I also referred to the value of repeated small injections of normal saline solution in uræmia.

Some have suggested an attachment with several needles for simultaneous injection. There is no advantage in this, as the method is more painful, the flow too rapid, massage cannot be properly performed during the injection, and the dangers of infection are greater.

Massage.—During injection, the single needle

can be moved around in the arc of about three quarters of a circle; gentle peripheral massage should be carried on meanwhile to promote absorption.

I have already described the proper solution and the quantity to employ.

Temperature of the Solution.—There is a great loss of heat, 5°, 10°, or 15° F., while the fluid is passing through the tube and needle. We employ therefore, a temperature of 110° F. with a needle of moderate size, and a temperature of at least 115° F., or even 120° F., with a small, or very fine needle.

Antisepsis.—The instruments, the site of puncture, and the hands of the operator should be sterile. The solution should be boiled and filtered.

Local Anæsthesia.—One can employ ethyl chloride, ether spray, or ice; or touch the spot to be punctured with a drop of carbolic acid, and then neutralize the latter with alcohol. A strong ichthyol ointment, 50 per cent., has an anæsthetic effect, if applied several hours previously. Dr. Pryor suggested this method as preparatory to an infusion. In a majority of cases, however, local anæsthesia is unnecessary.

Dressing the Puncture.—As the needle is removed, a finger should be slipped over the site of puncture, to prevent the escape of fluid. After drying off the moisture with aseptic gauze, a small piece of sterile gauze should be placed over the puncture and flexible collodion painted on. This is preferable to adhesive plaster, which might be a source of infection through irritation of the skin. It is an excellent plan to anoint the entire œdematous area with ten-per-cent. ichthyol ointment. Since following this last procedure, I have never had trouble from infection. Often the single dressing to the puncture will suffice.

INDICATIONS FOR HYPODERMOCLYSIS.

These can readily be deduced from a statement of the effects produced by this procedure.

1. Hypodermoclysis increases the quantity of fluid in the vessels, by replacing that which has been lost, as from hæmorrhage or diarrhœa; it adds fluid to the circulation, and thereby acts as a stimulant to a rapid and feeble heart, as in shock.

2. It dilutes the poison of disease and aids in the elimination of toxic products through the diuretic action on the kidneys, as in sepsis, or in uræmia.

3. It causes profuse diuresis and relieves renal congestion, as in uræmia, oliguria, or in acute congestion of the kidneys.

4. The saline injection is asserted by many to have a hæmostatic effect, and is thus given in hæmorrhage, as from gastric ulcer, intestinal ulcer, or in pulmonary hæmorrhage. On the same principle, as heretofore noted, I have seen small quantities of salt water given by mouth in the Adirondacks, in

cases of pulmonary hæmorrhage.

There is often a multiple effect secured by the hypodermoclysis. Thus, in cholera, it replaces the loss of fluid, stimulates from shock, and also acts as an eliminant of the poison. Hypodermoclysis would therefore be of value in the following conditions:

In diarrhœas with excessive loss of fluid, as in dysentery, cholera, cholera morbus, cholera infantum, typhoid and allied diseases; pneumonia, septicæmia, pyæmia, peritonitis, pyelitis, septic endocarditis, puerperal sepsis, purpura hæmorrhagica, severe burns, toxæmia due to colon bacillus, tetanus, jaundice, plague, yellow-fever, scarlatina, measles, typhus, diabetes, shock; hæmorrhage from any cause; as an eliminant in diphtheria, following antitoxine injection; in toxæmia of diphtheria, or from any cause; in any coma due to toxæmia; in puerperal eclampsia—preceded by venesection; in oliguria, uræmia, suppression of urine, renal congestion; in pulmonary œdema, pleurisy with effusion, or ascites due to oliguria; in poisoning, as an eliminant, as from carbolic acid, alcohol, opium, carbonic acid gas, and especially in belladonna poisoning. In the last condition frequent catheterization should be employed.

The value of hypodermoclysis, therefore, embraces a wide field.

There are two matters of further interest to which I would call your attention.

First, Dr. S. J. Meltzer has suggested the value of hypodermoclysis with sodium salicylate, as a diuretic, stating that, both experimentally and clinically, he has found it of service.

Secondly, it has been asserted in France that incipient tuberculosis can be diagnosticated by means of the reaction which occurs when a hypodermoclysis of normal saline solution is administered to patients so afflicted, the diagnosis being confirmed later. This reaction, however, consisting in a rise of temperature, chilly feelings followed by sweating, with a subsequent fall of temperature and improvement in condition of the patient, often occurs when septic conditions exist. I have also noted in a few cases this reaction—the rise of temperature, etc.—when the hypodermoclysis has been given at too low a temperature, and what is practically a cool solution is injected beneath the skin. It is not, therefore, of value from a diagnostic standpoint, nor need these results cause any alarm.

Recently, assertions have been made as to the curative effects of hypodermoclysis with normal saline solution in the treatment of tuberculosis. My opinion was asked in this regard by Dr. J. L. Barton, of this city, and I replied that I believed it might be of value for the treatment of the toxæmia and high temperature, but that it was not likely to have

any specific effect on the disease itself. Dr. Barton has conducted some careful clinical experiments, to which he kindly allows me to refer, though he has not himself published them. He has found in a number of cases, a fall of temperature, an improvement of the appetite, and an evident lessening of the toxæmia. This method would, therefore, seem well worthy of further trial in selected cases, as an adjunct to other treatment.

In conclusion, I believe that this procedure of hypodermoclysis will be found to be of great value in many conditions as a therapeutic measure, and if I have succeeded in persuading you to advocate its more frequent employment, I feel that I have fulfilled my task.

107 EAST FIFTY-SEVENTH STREET.

Issues and Events of the Day.

MEDICAL ORGANIZATION AND THE PRESENT STATUS OF THE CODE OF ETHICS OF THE AMERICAN MEDICAL ASSOCIATION.*

By CHARLES A. L. REED, M. D.,
CINCINNATI.

The condition of medical organization in the United States at the time of my election to the presidency of the American Medical Association, in 1900, was far from satisfactory. Aside from the national body, there were then local, county, district, and State societies, the district society in many instances embracing areas that varied in extent from several counties to several States. It can thus be seen that the membership in one of these bodies was frequently made up, to an important degree, of the members of some other organization within the same territorial limits. This circumstance was of no importance so long as the respective local bodies devoted themselves to social and scientific proceedings, but it became a matter of very great importance when it came to the question of *pro rata* representation for legislative purposes in both the various State societies and the American Medical Association. Thus it frequently happened that the profession in certain parts of the country duplicated its representation in the various delegate bodies, while it utterly failed to secure concert of action in important matters pending before various State legislatures, or, for that matter, before the national Congress.

This state of affairs had become peculiarly embarrassing to the American Medical Association. This body, organized on the delegate plan in 1847,

* Remarks before the Cincinnati Academy of Medicine, February 16, 1903.

as an unincorporated and purely voluntary organization, at first, and for several years, received the delegates from practically every possible source, including the public services, medical societies, medical colleges, hospitals, and lunatic asylums. This wide-open policy was soon found to be impracticable, and there was a gradual restriction of the right to send delegates until, finally, no professional bodies except affiliated medical societies were granted the right of representation. There was but very little restriction, furthermore, in granting affiliation to medical societies. Many of the district societies, especially multi-State societies, were very properly cut out, the only condition imposed upon the remaining societies being that prescribed by the resolution of 1855. This resolution provided that no medical body should be recognized as an affiliated body that had not previously adopted the Code of Ethics of the American Medical Association. It subsequently appeared, without further recorded action, as Article IX of the old constitution, and was, at the time of its adoption, aimed at the Ohio State Medical Society.

It is important to state in this connection that the Code of Ethics thus enacted into law was a set of rules which, for nearly half a century, assumed to prescribe who were and who were not physicians, and to regulate in detail the conduct of members of the American Medical Association, not only toward each other and to the Association, but toward non-members. While, with equally surprising complacency, it assumed to control the conduct of non-members, of society in general, toward members. It was drawn from a book written by Dr. Percival, of England, a hundred or so years ago, and was adopted by the American Medical Association in 1847. Its original status was that of a purely advisory document, the only status that can be given to an ethical declaration and have it remain ethics. With the resolution of 1855, however, or rather with its surreptitious insertion into the constitution, the Code of Ethics ceased to be ethics—by which is meant the science of right conduct—and became law, by which is meant a rule of conduct prescribed by authority and containing a penal clause to be enforced by designated tribunals. The result of this action was that State and local societies all over the country, desiring to avoid the stigma of non-recognition by the national body, imitated its example and made the code a part of their own organic law. Judicial councils were elected, and everywhere men were liable to be subjected, and in many instances were subjected, to inquisitorial proceedings, resulting in the disgrace attending either censure, suspension, or expulsion, for such offenses as offering an opinion out of the prescribed turn at a

consultation, or for entering into consultation at all with anyone proscribed by the code. As a further result, many good physicians, with liberal education and with independence of spirit, recognizing the code as an unethical decree that reflected upon their intelligence and interfered with their individual liberty, declined to join the medical societies, while many others, equally intelligent, but accepting the code in a purely Pickwickian sense, joined the affiliated bodies—but continued to shape their own conduct as they still continue to shape it, not by a prescribed formula, but by the ethical inculcations of the high civilization of which the medical profession in general is a worthy product.

There were many results attributable to the unwise action of 1855, among the most clearly demonstrable of which was that the sectarian physicians, having been thus favored with the boon of persecution, appealed with increased effectiveness for the patronage of the public. Their schools multiplied and their number increased apace, while in many a city in the country their clientèle was made up of the wealth and the culture of society. The chagrin of the regular profession over this fact was not in the least lessened by the additional fact that the membership in the regular medical societies, and especially in the American Medical Association, in both numbers and influence, was far from representative of the great body of the American medical profession. In the meantime, however, under the inspiration of the code, and acting with the avowed purpose of protecting society by regulating the practice of medicine, the effort was made in more than one State to carry the proscriptive spirit into acts of legislature. But it required only a few preliminary skirmishes to discover that the sectarian physicians, stimulated into numbers and influence by the long sustained policy of ostracism, were in a position to thwart every effort at medical legislation. It was about this time that the people, having heard each class of physicians denounce the other as rascals, and concluding that each was telling the truth, evidently thought that the time had arrived to take a hand. Senators and legislators were made to say to the medical agitators: "Get together; pool your issues!" The tactical error of 1855 was then, there, and by that command, reduced to a demonstration.

The people continued to take a hand. The legislative committees from the medical societies ceased either to spar for wind or to jockey for place. Quackery, under the futile effort to control it by the code, had become rampant, while the sectarian schools were flourishing. The Medical Society of the State of New York, feeling that consistency demanded that it should modify its ethical creed to

meet the new and inevitable conditions, adopted a code of its own for which it was promptly excommunicated by the American Medical Association in 1882, although similar punishment was not meted out to Massachusetts, Rhode Island, or Mississippi, each of which had a code that was not identical with that of the American Medical Association. California and Illinois, with more worldly wisdom, simply ignored the code question, and contrary to the letter and spirit of the code itself, entered into negotiations with the representatives of the sectarian schools to secure the enactment of laws to govern the practice of medicine. This was the real beginning of medical reform in the United States, a reform based upon statutory provisions and that has continued until it has embraced in its wise provisions and its beneficent results every State and Territory in the Union. While this was going on, corresponding changes were observable in the personnel of the great body medical—only a fifth of which had ever subscribed to the code by accepting membership in medical societies governed by it. In that part of it, however, which had thus subscribed, the societies, and in many instances very important societies, contrary to the letter and spirit of the code, were receiving men of sectarian antecedents into membership, while many who were already members, contrary to the letter and spirit of the code, were exercising the largest possible liberty in the matter of consultations. The representatives of former sectarianism were, in fact, to be found among both the members and officers of the American Medical Association itself. The Illinois State Medical Society, contrary to the letter and spirit of the code, went so far as to resolve "that the school of graduation shall be no bar to membership in the Illinois State Medical Society, providing that such physician is recognized by the local societies as qualified and not claiming to practice any exclusive system of medicine." Members of the American Medical Association all over the country, contrary to the letter and spirit of the code, and, consequently, contrary to the organic law of the association itself, were engaged in the certification and licensure of the avowed practitioners of sectarian medicine. All of this occurred before 1900, from which it will be seen that the code, which had never been the "expression of the ethical sense" of but one fifth of the body medical of the country, had actually ceased in practice to be the "expression of the ethical sense" of the very organization that had formulated and adopted it.

This state of affairs had naturally enough exercised a deterrent influence on medical organization all over the country. The American Medical Association had, at that time, if my memory serves me

right, but a little over eight thousand members, while its affiliated societies, State and local, had an aggregate membership that embraced less than a fifth of the one hundred and thirty thousand physicians of the United States. With this small membership, however, the national body, being delegated on a basis of one in ten of local membership, was so unwieldy that deliberate action on any subject was out of the question. A still more serious feature, however, was the fact that there was no systematic arrangement between the national and the local bodies by which concert of action could be secured on any subject. This, then, was the condition of organization in our profession at the end of the nineteenth century.

The first act of my administration was to appoint a committee on reorganization, consisting of Dr. J. N. McCormick, Dr. George H. Simmons and Dr. P. Maxwell Foshay—names that the American medical profession ought always to remember with gratitude. Their report was adopted at St. Paul, in 1901, and provided for a house of delegates by which the legislative work of the association was placed in a representative body of a hundred men; it left the sections untrammelled in their scientific work; it provided for the recognition of State associations without imposing any ethical restrictions, either upon them, or upon their constituent county societies. There was nothing in the new constitution or by-laws that affirmed the code, although the thought was entertained by some that a phrase in the enacting clause of the by-laws which read that "nothing in these by-laws shall be construed to repeal the rules of conduct governing the relation of members to each other and to the association," referred to the code. There were others, however, who contended that if it did allude to the code, it only alluded to a part of it, excluding all that it didn't include, while still others, representative lawyers among them, contended that it meant nothing. Of course this was all quite bewildering, but fortunately the ambiguity was cleared up at the Saratoga meeting in 1902. On that occasion the trustees submitted to the house of delegates a revised constitution and by-laws, the revision having been made necessary by the incorporation laws of Illinois, under which the association was and is operating. This document, from which the ambiguous phrase to which I have referred, had been omitted under legal advice, was approved by a special committee, adopted by the house of delegates, and subsequently ratified at an adjourned meeting held *pro forma* under the law in Chicago. This eliminated the last reference to the code from the articles of incorporation which comprise the organic law of the association and which supplanted all previous enact-

ments by that body. As no affirmative action has been taken on the code, under and pursuant to the present corporate powers of the association, it follows that the American Medical Association is to-day without any formal expression on the question of ethics.

The effect of the reorganization at St. Paul, when the specific and familiarized ethical restrictions were taken from the constituent societies, has been almost magical. As the result of the influence of liberal legislation all over the country, but especially in New York, under the influence of the excommunicated Medical Society of the State of New York, sectarianism, the acknowledged evil of medicine of the last century, has already begun to disintegrate. In various parts of the country new societies are being formed and old ones are being recast on new lines at a rate that is unprecedented in our history. In the State of Kentucky, under the personal supervision of Dr. McCormick, one of our honored guests this evening, county societies are being formed without reference to the sectarian antecedents of their members. The same thing is being done in Ohio, notably at Dayton and at Canton, under the leadership, respectively, of Dr. Bonner and Dr. Walker, the former of whom is present this evening. The same thing is going on in other States. This, however, is only one phase of the impetus back of the organization movement, an impetus, which, if analyzed, will be found to have its mainspring in the consciousness that each local medical society can now do as it pleases about formulating its ethical restrictions, or, as Dr. Billings, the present president of the association has stated in a recent official utterance, affiliated medical societies can and do now "organize without a code at all or with a code differing from that of the American Medical Association." That is, to-day, and for the first time in nearly fifty years, the proud privilege of the Cincinnati Academy of Medicine!

How will you exercise that privilege? I have no desire to influence your course on this question, even if I had the power. I cannot, however, resist the temptation to urge that the proposed amendments to the constitution shall be adopted, as they seem in every way to meet the conditions of progress as mapped out by the American Medical Association. In placing the academy in line with the general forward movement now observable all over the country, it is to be remembered that, with the elimination of the Code of Ethics, the real cause of ethics is materially advanced. In this connection, remembering what the code was, it is well to recall the wise conclusion of Mr. Herbert Spencer, who affirmed that "a code of perfect personal conduct can never be made definite. Many forms of life,

diverging from one another in considerable degrees, may be so carried on in society as continually to fulfil the conditions to harmonious cooperation. And if various types of men adapted to various types of activities may thus lead lives that are severally complete after their kinds, no specific statement of the activities universally required for personal well being is possible." It thus happened that the Code of Ethics, in its attempted application to diverse conditions, physical, educational, political, social, and professional, became in many instances a most unethical document, with the inevitable result that the idea of ethics in general was brought into corresponding disrepute. Now, however, liberated from the restraining influence of a specific formula of conduct—from a mere creed—the profession will take up on a philosophical basis a studious consideration and a more faithful observance of the principles of right conduct, as applying, not merely to the medical profession itself, but to society in general.

THE ROCKEFELLER INSTITUTE FOR MEDICAL RESEARCH.

We have received the following announcement from the board of directors: The Rockefeller Institute for Medical Research was founded in 1901 by Mr. John D. Rockefeller, who gave for this purpose the sum of two hundred thousand dollars. The aims of the institute are the promotion of medical research, with special reference to the prevention and treatment of disease.

It was thought wise by the directors of the institute not, at first, to concentrate the work in any one locality, but to enlist the interest and cooperation of such investigators throughout the country as might be engaged in promising researches or who might enter upon new fields if suitable pecuniary assistance could be afforded them. It was the conviction of the directors that in this way it would be possible not only to stimulate and foster valuable contributions to science, but also to secure important practical suggestions as to the lines along which the institute might most wisely develop.

Among the large number of applications for assistance in carrying on original studies which relate to the cause, prevention, and cure of disease and to the problems upon which new knowledge on these subjects must be based, over twenty have been selected. The directors have secured counsel in these selections from the heads of departments or others in the universities of Harvard, Yale, Johns Hopkins, Pennsylvania, Columbia, New York, Chicago, Michigan, McGill, Wesleyan, California, and Western Reserve; and in many of these institutions work has been prosecuted. Two of the Rockefeller fellows have been working in Europe. Some of the workers under these Rockefeller Institute grants, which vary in amount from two hundred to fifteen hundred dollars, have completed and published their investigations; some are still engaged upon them.

It is the purpose of the directors from time to time to bring together, in the form of volumes of collected reprints, the results of these researches which may be published in various technical journals. An arrangement has been effected by which the institute will assume the publication of the *Journal of Experimental Medicine*, which will remain under the editorial supervision of Dr. William H. Welch, professor of pathology in the Johns Hopkins University, and president of the board of directors of the institute.

At the end of the first year of practical work, on careful study of the situation, it became clear to the directors that existing institutions in this country, while in many instances carrying on most valuable researches in medicine, did not afford adequate facilities for many phases of investigation which are of the utmost importance and urgency. This is in part due to the lack of sufficient endowment, in part to the large demands made upon the time and energy of the workers by their duties as teachers. It was further evident that such assistance as the institute had thus far been enabled to extend to selected investigators in various parts of the country had fostered work of great actual value as well as of high promise, and should be perpetuated along similar lines.

The directors, however, were united in the conviction that the highest aims of the institute could not be secured in this way alone. Useful as such individual studies are, and important as it is to enlist and to maintain the interest of research workers in established institutions of learning, it is not possible in this way to secure the unity of aim and the coordination and mutual stimulus and support which are essential to the highest achievements in research. These are to be secured, it was believed, only by the centralization of certain lines at least of the work of the institute under a competent head or series of heads of departments, in a fixed place, with adequate equipment and permanent endowment.

There is no lack of men of sufficient training and experience ready to devote their lives to the solution of medical problems which bear directly or indirectly upon the welfare of mankind. The widely open fields of research are many. Some of these relate to the application of existing knowledge to the prevention and cure of disease, others to the development of new knowledge along various lines of science which more than ever before give promise of great significance in the problems of physical life.

In a broad sense, the directions and methods for the study of disease may be classified as morphological, physiological, and chemical; and the institute, it was thought, should include departments providing for these divisions of the subject. For the morphological study of disease there should be a complete equipment for pathological anatomical research. For the physiological study of disease provision should be made for experimental pathology, for pharmacology and therapeutics, for the study of bacteria and other microorganisms, with special reference to their relation to the infectious diseases, and for other investigations in personal and public hygiene, including preventive medicine. Here belong especially the problems of infection and immunity,

and here also in large part such studies as require access to patients in hospitals. There should be a laboratory, well equipped for investigations in physiological and pathological chemistry.

It was the conviction of the directors that such an institute might wisely add to its aims in the direct increase of the knowledge of disease and its prevention and cure a phase of activity which should look toward the education of the people in the ways of healthful living, by popular lectures, by hygienic museums, by the diffusion of suitable literature, etc. For, in fact, the existing agencies for medical research for the most part stop short of those direct and widely diffused applications of newly won knowledge upon which the immediate practical fruitage of their work so largely depends.

In order that the causes and treatment of human disease may be studied to the best advantage, it was the opinion of the directors that there should be attached to the institute a hospital for the investigation of special groups of cases of disease. This hospital should be modern and fully equipped, but it need not be large. It should attempt to provide only for selected cases of disease, and the patients would thus secure the advantages of special and skilled attendance and such curative agencies as the institute might develop or foster.

It was thought that an institute for medical research of the largest promise would require a central institution, fully equipped and endowed, and with capacity for growth, in which the more comprehensive studies demanding the coordinated forces of various phases of science could be carried on from year to year; while at the same time, by means of such grants of assistance as had been offered during the initial year, it should continue to make available the resources of special workers all over the country, as well as in Europe.

In view of these considerations relating to its future, in June, 1902, Mr. Rockefeller gave to the institute the sum of one million dollars for the purchase of suitable land, the erection of buildings, and the organization of a working force along the broader lines which had been projected. It is the purpose of the directors to proceed at once to the erection of a laboratory building which will provide for the present requirements and will be capable of enlargement as the character and extent of the work of the institute may develop. Negotiations for a suitable plot are now under way.

A small hospital will also be built in the immediate future, which will be maintained in close association with the experimental work of the institute.

Provision will be made in the laboratory building for research in physiological chemistry, pharmacology, and therapeutics; in normal and pathological physiology; and in various phases of morphology; and for the study of bacteria and other microorganisms. It is hoped that the laboratory buildings may be completed and ready for the commencement of work in the autumn of 1904.

Dr. Simon Flexner, professor of pathology in the University of Pennsylvania, will direct the scientific work when the building is completed. His colleagues deem it of the highest importance that the institute has been able to secure so eminent an investigator as Dr. Flexner to shape the work of its

early years. Dr. Flexner will spend several months abroad while the new buildings are in course of erection.

It is proposed to organize the various sections and departments into which the work of the institute will naturally fall so that each of them, though in a measure autonomous, will still be so closely associated as to favor the conjoint investigation of comprehensive problems. Associated with the head of each of these departments it is proposed to have a staff of trained assistants.

Provision will also be made for research work by a group of trained men, to be designated fellows, scholars, etc., of the institute, under pecuniary grants of varying amounts.

Finally, opportunity will be offered to suitable investigators, not members of the regular staff of the institute, to pursue special lines of research.

The directors of the institute are:

Dr. WILLIAM H. WELCH, of Baltimore;
Dr. T. MITCHELL PRUDEN, of New York;
Dr. THEOBALD SMITH, of Boston;
Dr. SIMON FLEXNER, of Philadelphia;
Dr. HERMANN M. BIGGS, of New York;
Dr. C. A. HERTER, of New York;
Dr. L. EMMETT HOLT, of New York.

The officers are:

Dr. WILLIAM H. WELCH, president;
Dr. T. MITCHELL PRUDEN, vice-president;
Dr. L. EMMETT HOLT, secretary;
Dr. C. A. HERTER, treasurer.

Therapeutical Notes.

The Treatment of Metritides.—The *Union médicale du Canada* for January quotes Doléris as saying that the treatment of metritides should have as its objective the three terms of the pathology of the uterine cervix, *viz.*, inflammation, traumatism, and deformity.

I. *Treatment of Inflammation* at the outset is simple; it is divided into extracervical and intracervical.

Extracervical treatment consists in securing vaginal antisepsis by injections of hot sublimate (from 1 to 1,000, to 1 to 4,000) and in the application of iodoformized tampons, which stimulate the cervix and facilitate the return circulation. In case of thick secretions or of extreme swelling of the mucosa, one must have recourse to the useful dialytic properties of glycerin, with the subsequent use of iodoformized vaseline.

℞ Petrolatum.....30 parts;
Iodoform 10 parts;
Camphor 2 parts.
M. ft. unguent.

Or, if there are painful symptoms, the following preparation may be used:

℞ Petrolatum 30 parts;
Salol 5 parts;
Chloral 5 parts.
M. ft. unguentum.

Intracervical treatment consists especially in antiseptic dilatation of the cavity and in mild applica-

tions. In cases of lesser intensity repeated dilatation, followed by antiseptic tamponing, may be employed. It is, however, often insufficient, and recourse must then be had to scarification with a kind of scarificator with multiple parallel blades, cutting to a depth of from two to four millimetres (about $\frac{1}{12}$ to $\frac{1}{6}$ of an inch); to the use of the sharp spoon (*curage tranchant*), or to the use of topical applications, such as creosote, camphorated naphthol, or iodized glycerin:

℞ Iodine 1 part;
Glycerin 2 parts.
M.

In deeper lesions, ablation of the mucosa with the bistoury must be practised, followed by light thermocauterization of the bleeding surface, or by tracheloplasty, which is only a sort of flap amputation. The interstitial sclerocystic form is especially amenable to amputation. Puncture and cauterization of the cysts, which effect a transient cessation of the symptoms, are only palliatives of short duration.

II. *The Treatment of Traumatic Lesions.*—Emmet's method is applicable in cases in which the cervicitis, being in the early stage, is capable of yielding to slight measures. But when the endometritis is deep and accompanied with cysts, recourse must be had to Schroeder's amputation, in combination with the operation of wide freshening and the lateral sutures of Emmet.

III. *Treatment of Deformities.*—(1) In flexion, a series of repeated dilatations must be practised. (2) In conical cervix, recourse must be had to stomatoplasty or to bilateral section. (3) In hypertrophic lengthening, amputation must be practised. One cause of failure of curetting is the existence of a deviation of the womb; in this case the metritis becomes the secondary consideration. The use of dilatation and of the curette in a case of deviation is not to be neglected, but it is not curative. Failures in cases of this kind should not be laid to the charge of the curette. This also applies to lesions of the annexa—salpingitis, ovaritis, pelvic peritonitis, characterized by processes clearly hyperplastic. Curetting has an immediate and certain effect only on the mucosa. The future of gynæcology is in the physiological direction. The actual cautery and strong internal caustics are destructive of the physiological functions of the uterus, and must therefore be rejected.

In metritis of the body of the uterus, dilatation is sometimes of no account.

Puerperal metritis calls for curetting, and applications of absorbent cotton soaked in

℞ Creosote.....} of each equal parts.
Glycerin.....}
M.

Hot Water in Acute Eczema.—Dr. Gokislow (*Revue médicale* for January 28th, citing the *Bulletin médical*) says that, in cases of eczema caused by the local action of irritants, antiseptics, and even sometimes by hurried aseptic dressings, rapid amelioration ensues on plunging the part affected for a few instants at short intervals in a very hot bath.

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THE AMERICAN MEDICAL ASSOCIATION AND
THE STATE OF NEW YORK.

We lately expressed the hope that at the New Orleans meeting of the American Medical Association, which is now but little more than two months off, a way would be found to remedy the dead lock between the two New York State organizations in the matter of recognition by the association. It would not be surprising if at that meeting Dr. Charles A. L. Reed, of Cincinnati, an honored ex-president of the association, saved us in spite of ourselves. The profession in other parts of the country must find it difficult to understand what it is that really stands in the way of unification in the State of New York. During his presidency Dr. Reed was mainly instrumental in bringing about such a reorganization of the national body as, according to the lights of ordinary comprehension, left no difficulty in restoring harmony between the association and the entire non-sectarian profession of our State. We can well understand therefore that Dr. Reed would be quite justified in taking the position that he had done all that was incumbent upon him as a peacemaker and in saying to the Medical Society of the State of New York and to the New York State Medical Association "a plague on both your houses!" But Dr. Reed is not the man to settle down complacently into a defensible position; having set his hand to the plow, he will not turn back until the last square foot of soil has been made to yield all that it can in the way of the desired crop. This the reader will readily infer from his spirited speech at a recent meeting of the Cincinnati Academy of Medicine, which we publish in this issue.

We have not the slightest doubt that, if men representative of the two New York State organizations could be brought into direct conference with the officers of the American Medical Association, a way out of the difficulty would soon be found—a way honorable to everybody concerned. But we presume that such a conference is not feasible. However, two things will have to be cleared up at the New Orleans meeting, apparently—the question of how it came to pass some years ago that a resolution approving of certain teachings in the matter of ethics appeared soon afterward as an article of the association's constitution, and how it is now that such resolution or article, though not reenacted when the association was recently incorporated, has any life whatever. With these two things satisfactorily cleared up, and some side light shed on the discrimination between the States of Ohio, Illinois, Massachusetts and Mississippi on the one hand and the State of New York on the other, the way ought to be cleared for the long deferred unification of the profession. This certainly we expect to see accomplished at the New Orleans meeting.

THE ROCKEFELLER INSTITUTE.

It has been known in a general way that for several years past Mr. Rockefeller's endowment has enabled the institute which bears his name to do no inconsiderable amount of good work in medical research. It seems virtually settled now that the institute is to have a local habitation here in New York—indeed that it is in the way of speedily acquiring ample land on the East River at a commanding point about equidistant from the three great medical schools, and that on this land all the buildings necessary for its purposes will be supplied within a short time.

It is fitting that an institution so handsomely provided for should be situated in the metropolis, and it is eminently desirable, too, we think, that its independence should be preserved rather than that it should be made an appendage of any university or school. It is not to be doubted that its activity will be exerted in many places besides New York, but the centre of its beneficence will properly lie in the great city. It will draw upon the rest of the country for the men who are to make it what no amount of money alone could make it. It is true that, of the

seven directors, four—Dr. T. Mitchell Prudden, Dr. Christian A. Herter, Dr. Hermann M. Biggs, and Dr. L. Emmett Holt—are New Yorkers, but associated with them are Dr. William H. Welch, of Baltimore, Dr. Simon Flexner, of Philadelphia, and Dr. Theobald Smith, of Boston. We might wish that, to emphasize the broadly representative composition of the board, a Chicago man had been included, for Chicago is one of the prime medical centres of the country; but as it stands, we question if there exists anywhere a board of directors calculated to carry more weight with the profession or better fitted to achieve results that will clothe the institute with renown.

Speculation as to the multiplicity of ways in which the enlarged scope of the institute will make itself felt is uncalled for, for nothing in the way of medical research would be foreign to its purposes—nothing, we mean, undertaken by serious and well qualified persons, for the directors can hardly escape the importunities of cranks. We may fancy, however, that not the least feature of its usefulness will lie in furnishing individuals with means of research which without its aid they could not hope to attain. While, as we have said, we regard its independence as on all accounts desirable, we see no reason why it should not put its laboratory facilities at the disposal of the three diploma-granting schools and thus enable them to concentrate their resources on the practical branches of the school curriculum. Much unnecessary expense would thus be saved, and there would be a uniformity of laboratory teaching in New York that would soon mark New York graduates as persons who had had the advantages of unexcelled laboratories. But, whatever may turn out to be the leading path of usefulness followed by the institute, we may be sure that all its paths will lead to glorious achievement.

THE BOARD OF REGENTS OF THE UNIVERSITY OF THE STATE OF NEW YORK.

Possibly there are some of our readers who are not aware that the University of the State of New York is not a teaching body. It has offices in Albany—that is, its board of regents has—but it has no stately halls, no dormitories, no campus, none of the ordinary appurtenances of a university. It is as intangible as the British constitution. But,

destitute as it is of material parts, it is a great power for good in the educational affairs of the State, for it exercises a supervisory and guiding control over all the higher teaching institutions of the State. It touches medical education very closely, for it prescribes the entrance examinations of medical students. The board of regents is a body established by the constitution of the State, and its members hold their office for life.

Unfortunately there is friction between the regents and the State Department of Public Instruction. So far as open contention goes, it is understood to have had its origin in the question of which should have the distribution of a special allowance of State funds for the aid of public schools furnishing high school instruction. This, however, is but a minor manifestation of a clash which must be settled in its entirety, and we believe that the overwhelming feeling among those people of the State who are well informed as to educational matters is to the effect that the public interest would best be served by making it impossible to curtail the regents' authority. The board is a non-partisan body, necessarily free from political influences. Its members have always been selected with great care, and their life tenure, if nothing else, frees them from all dependence on politicians. Necessarily some of the members, as is the case in any other body of men working with a common object, are more forcible individuals than the others, and are capable, therefore, of doing more telling service. Among the strongest of the regents is Mr. St. Clair McKelway, the editor of the *Brooklyn Eagle*, and it is with great satisfaction that we learn that he has reconsidered his intention of resigning. With Mr. McKelway still on the board, the regents' cause will be strengthened.

AWAY WITH THE CORONER:

If any decent citizen, unswayed by personal motives, still questions the desirability of doing away with the expensive, useless, obstructive, and effete office of coroner, we recommend to his attention a little pamphlet recently issued by Dr. H. R. Purdy, entitled *Why the Office of Coroner Should be Abolished*. Dr. Purdy has evidently studied the question exhaustively, and it is in no uncertain strain that he acquaints us with his conclusions. The best answer to those who maintain that the coroner is a necessary official is to point to the experience

of Massachusetts, in which State he was long ago abolished. In that State the work of the medical examiner has proved ample, for the purposes of justice. In saying this, we are not to be understood as committing ourselves to any specific bill now before the legislature of the State of New York; on the contrary, we deprecate hasty legislation, and earnestly hope that mature deliberation will be the path leading to any action that may be taken.

THE REGISTRATION OF NURSES IN THE STATE OF NEW YORK.

In our issue for January 31st we commented adversely upon a bill that had been introduced into the New York legislature concerning the registration of nurses in the State. Since that time other bills have been introduced bearing upon the same subject. One of them, said to represent the ideas of Miss Delano, of Bellevue Hospital, introduced this week by Assemblyman Armstrong, of Rochester, seems commendable, though at the time of writing this article we have not seen the full text of it. It calls for registration by the Board of Regents of the University of the State of New York as a prerequisite to the assumption of any such title as "R. N." or any equivalent designation, and that requirement we regard as amply conservative.

THE WATER SUPPLY OF SOUTH BETHLEHEM.

There seem to be grounds for fearing that Lehigh University is in danger of an outbreak of typhoid fever, for the water supplied to South Bethlehem, Pennsylvania, the town in which the university is situated, is reported to have been declared to be so contaminated with sewage as to be unsafe for drinking purposes save after boiling. Truly a university seems to serve as a "shining mark" for typhoid fever.

THE ITHACA OUTBREAK OF TYPHOID FEVER.

The old story of contaminated drinking water crops out again in Ithaca. It is anything but creditable to the governing board of Cornell University that such an outbreak of typhoid fever should have been allowed to occur among the students. To the credit of our profession be it said that the water supply was not under the control of the medical faculty—at least, if we may trust the press dispatches.

THE NEW YORK STATE HOSPITAL FOR THE CARE OF CRIPPLED AND DEFORMED CHILDREN.

If any doubt was ever entertained of the necessity of the establishment of this young institution, it should be set at rest by the recent announcement that its present capacity is inadequate. It is to be hoped that the defect will speedily be remedied.

News Items

Society Meetings for the Coming Week:

MONDAY, March 2nd.—New York Academy of Sciences (Section in Biology); German Medical Society of the City of New York; Morrisania Medical Society, New York (private); Brooklyn Anatomical and Surgical Society (private); Corning, N. Y., Academy of Medicine; Utica, N. Y., Medical Library Association; Boston Society for Medical Observation; St. Alban's, Vt., Medical Association; Providence, R. I., Medical Association (annual meeting); Hartford, Conn., Medical Society; South Pittsburgh, Pa., Medical Society; Chicago Medical Society.

TUESDAY, March 3rd.—New York Neurological Society; Buffalo Academy of Medicine (Section in Surgery); Elmira, N. Y., Academy of Medicine; Ogdensburg, N. Y., Medical Association; Syracuse, N. Y., Academy of Medicine; Hudson, N. J., County Medical Society (Jersey City); Androscoggin, Me., County Medical Association (Lewiston); Baltimore Academy of Medicine; Medical Society of the University of Maryland (Baltimore).

WEDNESDAY, March 4th.—New York Academy of Medicine (Section in Public Health); Society of Alumni of Bellevue Hospital; Harlem Medical Association of the City of New York; Medical Microscopical Society of Brooklyn; Medical Society of the County of Richmond, N. Y. (New Brighton); Penobscot, Me., County Medical Society (Bangor); Bridgeport, Conn., Medical Association; New York Genitourinary Society.

THURSDAY, March 5th.—New York Academy of Medicine; Brooklyn Surgical Society; Society of Physicians of the Village of Canandaigua, N. Y.; Boston Medicopsychological Association; Obstetrical Society of Philadelphia; United States Naval Medical Society (Washington); Medical Society of City Hospital Alumni, St. Louis; Atlanta Society of Medicine.

FRIDAY, March 6th.—Practitioner's Society of New York (private); Clinical Society of the New York Postgraduate Medical School and Hospital; Manhattan Clinical Society, New York; Baltimore Clinical Society.

SATURDAY, March 7th.—Manhattan Medical and Surgical Society, New York (private); Miller's River, Mass., Medical Society.

Change of Address.—Dr. W. R. Pryor and Dr. J. C. Taylor have moved their offices to 6 West Eighty-fourth Street, Dr. Taylor holding office hours from 1 to 2 p. m., and Dr. Pryor from 2 to 4 p. m.—Dr. John J. Wagner has moved his office from Greenwich, Conn., to 429 Third Street, Brooklyn, N. Y.

The Richmond (Va.) Academy of Medicine and Surgery held its regular monthly meeting on February 24th, the subject discussed being skin cancers. Dr. Greer Baughman presented Some Theories as to the Causation of Cancer; Dr. T. H. Beadles discussed the Diagnosis of Skin Cancer, and Dr. Alfred L. Gray spoke of The Result of X Ray Work.

St. Mary's Free Hospital for Children.—Additional wards have been opened in the St. Mary's Hospital for Children providing model equipment for the care of patients. In the new wards the demands for light, air and cleanliness are met by a combination of tiled floors, marble wainscoting, glass and metal equipments, efficient ventilating and plumbing systems, and large window spaces which have seldom been equaled.

The American Congress of Tuberculosis will hold its next meeting in St. Louis, from July 18th to 23rd, in conjunction with the World's Congress on Tuberculosis. Dr. Charles O. Probst, of Columbus, Ohio, has been appointed a member of the executive council, and Dr. Charles Wood Fassett, of St. Joseph, Mo., has been appointed fifth vice-president. The president, Dr. Daniel Lewis, of New York, has appointed a large and representative advisory committee to assist the council in perfecting the plans for the meeting.

State Supervision of Education in New York.—Quite recently there have arisen several cases in which the existing dual system of state supervision of public education in the State of New York has led to conflict between the Board of Regents and the State superintendent of education, there being some question as to the authority of the two branches of the government. In consequence of this the regents of the University of the State of New York have petitioned the Legislature to give to their board exclusive power and duty of the supervision of education. This appeal is based upon a long record of efficient service free from partisanship.

Impure Cream of Tartar.—Cream of tartar is so extensively used for domestic purposes, that it should be widely known that much of the ostensible cream of tartar on the market is adulterated, some even containing no cream of tartar at all. According to the report of Dr. Deghuae, chemist to the New York health department, an examination of 115 samples purchased in open market, 29 from drug stores and 86 from groceries, resulted as follows: All the samples from drug stores were found to be pure cream of tartar, but of the specimens obtained from groceries, 49 were pure and 37 adulterated. Alum, starch, acid phosphate of calcium were the adulterants, but one specimen contained nothing but sodium bicarbonate.

A New Hospital for Harlem.—Plans have been filed at the Building Department for the new Harlem Hospital, which will be a T-shaped building on the east side of Lenox Avenue, extending from One Hundred and Thirty-sixth to One Hundred and Thirty-seventh Street. The main building is to be five stories high, thirty-seven feet front by one hundred and fifty-seven feet deep. There will be two four-story wings seventy-nine feet front by thirty-four feet deep. The first floor, besides the offices, will contain emergency wards; the second floor the male surgical and medical wards; the third floor the children's and female wards. The fourth floor will be devoted to the female surgical and maternity wards, and several laboratories. The fifth floor, with a glass dome in the roof, will be used as an operating theatre. Each wing will have a roof garden. The front will be of brick, limestone, and ornamental copper. According to the estimate of the architects, Messrs. Horgan & Slattery, the cost will be \$300,000.

Five Thousand Dollars Wanted for the Prevention of Tuberculosis.—The Charity Organization's Committee on the Prevention of Tuberculosis

has one hundred families in its charge in each of which there is one or more victims of the disease. Among these there are not less than twenty for whom care in sanatoria or board in private families in the country is regarded by their physicians as absolutely essential. All of the sanatoria are filled to overflowing and most have waiting lists. The committee is therefore obliged to board these patients in suitable private boarding houses. For the remaining patients who cannot be removed from their homes special diet and other forms of relief are required in an amount which cannot easily be supplied from existing relief agencies. An appeal is made for funds for this purpose by the Charity Organization Society, 105 East Twenty-second Street, to whom all contributions should be sent which will be publicly acknowledged, and will be devoted strictly to the purpose indicated.

The Cincinnati Academy of Medicine held an important meeting on the evening of February 16th when the entire subject of medical reorganization was discussed. The entire evening was devoted to the subject, Dr. Brook F. Beebes, Dr. Charles A. L. Reed, Dr. J. N. McCormack, of Bowling Green, Ky., Dr. Leartus Connor, of Detroit, Dr. P. Maxwell Foshay, of Cleveland, and Dr. Horace Bonner, of Dayton, Ohio, speaking along the lines of medical organization, advanced medical education, and the importance of county medical societies. Dr. P. S. Connor spoke on medical ethics, followed by Dr. N. P. Dandridge on Medical Legislation, Dr. E. W. Mitchell on Social Needs of the Physicians, Dr. Louis Schwab on The Doctor in Politics, Dr. C. R. Holmes on Business Methods of Physicians, Dr. Thad A. Ream on Commercialism in Medicine, and Dr. Magnus A. Tate on Fees, Bills, Collections and Dead Beats. The remarks of Dr. Reed appear on page 369 of this issue.

Sanatoria for Consumptives in Pennsylvania.—A bill is being drawn up by the Pennsylvania Society for the Prevention of Tuberculosis which provides for the erection and maintenance by the State of Pennsylvania of sanatoria for consumptives. The officers of the society hold that the State ought not to wait for private wealth to take the initiative. Massachusetts has appropriated \$200,000 for a sanatorium, Illinois is now moving, New York has given \$100,000 for a sanatorium in the Adirondacks, and little New Jersey has appropriated \$75,000 for one in Hunterdon County. The society holds that the State ought to start the movement. And with the object in view of bringing this matter to the attention of the legislature a bill is now being prepared which will ask for an appropriation of \$500,000 to establish two sanatoria, one on Mount Pocono and another on Mount Alto. It also asks that a commission be appointed to aid in choice of location, equipment, maintenance and administration. There is no land to buy, for the government has its forestry reservations to select sites from, and therefore, the money appropriated, the building could go on at once. So soon as the bill is prepared the committee of this society having the matter in hand will meet and proceed to Harrisburg.

New York Hospitals in Financial Straits.—

According to the president of the Saturday and Sunday Association all the hospitals in this city are facing a financial crisis. In his appeal to the public for assistance the president says: "To-day not one is self-sustaining, and, to avoid serious arrears, all are forced to curtail their free work. Surely this is not a desirable state of things, nor one to be expected in a community so alive to all good works, and, particularly in a period of almost unexampled prosperity. Prompt and generous contributions are, therefore, not only greatly needed, but earnestly solicited; and all gifts will be divided among the forty associated hospitals on a basis of free work."

Bellevue Nurses Exonerated.—

The District Attorney has asked for the dismissal of the charges against the Bellevue Hospital nurses who have been arraigned for trial on the charge of maltreating a patient named O'Gara. The District Attorney in asking for the dismissal of the complaints addressed Magistrate Poole as follows: "I have caused a full and careful investigation to be made in regard to the charges of maltreatment of one James O'Gara while a patient in the alcoholic ward at Bellevue Hospital. Every person having or claiming to have knowledge on the subject of any importance has been examined under oath in the proceedings before you. After careful consideration of the evidence I am satisfied, first, that no crime whatsoever has been committed in connection with this matter; second, that said O'Gara was not in any way maltreated while a patient in the alcoholic ward at Bellevue Hospital. I shall, therefore, not ask that your honor issue warrants upon the testimony taken in this matter but that the summons heretofore issued by your honor be dismissed."

The Typhoid Situation at Cornell.—

President Schurman, of Cornell University, has issued a statement to the effect that there is no reason to suspect the purity of the supply of water of Cornell University, not a single case of typhoid fever having occurred among those who have used that water alone. There are no dormitories at Cornell University, however, and the students live at private houses scattered all over the town of Ithaca, in which the city water supply is used. Over the proprietors of these boarding houses the university has no supervision whatever. A mass meeting of the students was held at which a request was made that the university authorities furnish sterilized water to all the boarding houses. It was found that this was impracticable. However, every building on the university property is now supplied with tanks of artesian well water from which the students may draw freely to drink on the premises or to take away with them. The students have also been authorized to purchase pure water which is for sale and easily procurable throughout the city and the university will pay the bill. About half the student body has left, but a mass meeting of those remaining was held last week at which resolutions were passed expressing complete confidence in President Schurman and the board of trustees. Something like 500 cases of typhoid fever have occurred in Ithaca, and eight or ten students have died of the fever.

Dr. Friedrich Mueller to Return to Chicago.—

It is stated that Professor Lorenz's assistant, Dr. Friedrich Mueller, expects to arrive here about March 10th, by the steamer *Barbarossa*, and will proceed to Chicago to watch the progress of the case of Lolita Armour. It is understood that he will remain in the United States, and will accept the chair of orthopædic surgery in the University of Chicago. When last in New York, Dr. Mueller operated in three cases at the Beth Israel Hospital, and all his patients are doing well. On his return journey he is expected to remain in New York five days, and to operate at the same hospital on a number of patients to be selected by Dr. Isidor Singer, to whom applications may be made by letter addressed to the B'nai B'rith, 106 Forsyth Street.

The Medical Society of the State of New York.

—At the recent annual meeting of the Medical Society of the State of New York, Dr. F. X. Dercum, of Philadelphia, and Dr. R. H. Chittenden, were elected to honorary membership, and Dr. Peter H. Bryce, of Toronto, was nominated as eligible for honorary membership. The officers selected were: President, Dr. A. T. Bristow, Brooklyn; vice-president, Dr. Edward B. Angell, Rochester; secretary, Dr. F. C. Curtis, Albany; treasurer, Dr. O. D. Ball, Albany; committee of arrangements, Dr. Herman Bendell, Dr. Arthur G. Root, Dr. William J. Nellis, Dr. Howard Van Rensselaer, Dr. A. E. Davis, Dr. Francis E. Fronczack; committee on by-laws, Dr. H. D. Wey, Dr. Nathan Jacobson, Dr. F. C. Curtis; committee on hygiene, Dr. J. L. Heffron, Dr. George B. Fowler, Dr. M. A. Veeder, Dr. Joseph D. Craig, Dr. Elias H. Burtley, Dr. J. H. Prior, Dr. D. V. Still; committee on legislation, Dr. Frank Van Fleet, Dr. Arthur G. Root, Dr. Ernest Mende; committee on ethics, Dr. A. T. Bristow, Dr. Edward B. Angell, Dr. Edward S. Willard; committee on prize essays, Dr. A. Jacobi and Dr. J. M. Mosher; committee on publication, Dr. F. C. Curtis, Dr. Daniel Lewis, Dr. William C. Crouse and Dr. O. D. Ball; delegates to the Fourteenth International Congress of Medicine, at Madrid, Spain, Dr. Ramon Guiteras, Dr. Harvey R. Gaylord; delegates to the Ontario Medical Society, Dr. T. H. Halstead, Syracuse, and Dr. W. H. Brown, Rochester; delegate to the Connecticut State Medical Society, Dr. L. Duncan Buckley; delegates to the New Jersey State Medical Society, Dr. W. H. Haskin, New York, and Dr. Edgar Vander Veer; delegate to the Massachusetts Medical Society, Dr. C. H. Richardson, Auburn; delegates to the Canadian Medical Society, Dr. George A. Madill, Dr. A. L. Benedict.

The Abolition of Coroners.—The agitation in favor of the passage of the bill for the abolition of the office of coroner in this city still continues, and though the bill has met with active opposition on the part of the coroners, it now appears probable that it will pass. The bill empowers the Health Department to establish a bureau especially devoted to the verification of deaths from uncertain causes, the chief officer of this bureau being a physician recognized as an authority in pathological investigations. The Health Department is also empowered to appoint a sufficient number of medical

examiners (four or more for the Borough of Manhattan and a proportionate number for the other boroughs) under the Civil Service rules, but having as a special qualification practical familiarity with autopsy work. The practical operation of the bureau under this plan will be as follows: Every death from an unascertained cause reported to the Health Department would be at once referred to this new bureau for verification; the chief officer would immediately dispatch a medical examiner to the place where the body lies, who would take possession of the body and all articles and clothing found upon it; he would have the power to summon to his aid the police or bystanders, or other health officials, or a representative of the District Attorney's office; he would at once begin a systematic study of all the conditions and circumstances attending the death, making ample notes with the aid of a stenographer of every fact ascertained. If, to determine the cause of death, an autopsy be required, he might proceed to make it, and he would have the power to summon to his aid another medical examiner or bystanders or the police. If chemical or biological tests should prove necessary the laboratories of the department would be at his immediate service, the examinations being by experts. Having completed his examination he would submit to the chief of the bureau a full and detailed account of his findings. If this officer should be satisfied that the death was due to natural cause and that there was no suspicion of a crime, the usual certificate of death would be made to the Bureau of Vital Statistics and the case closed, the papers being filed in the bureau. If, however, there were evidence of crime, the chief officer would report all the facts to the District Attorney with the recommendation that an inquest be held. This would close the first or purely medical part of the proceeding.

Official News.

Public Health and Marine-Hospital Service Health Reports:

The following cases of smallpox, yellow fever, cholera, and plague were reported to the surgeon-general during the week ending February 21, 1903:

Smallpox—United States.

Location.	Date.	Cases.	Deaths.
California—Fresno	Jan. 1-31	15	
California—Los Angeles	Jan. 31-Feb. 7	2	
California—Sacramento	Jan. 31-Feb. 7	1	
California—San Francisco	Jan. 24-Feb. 8	13	
Colorado—Colorado Springs	Jan. 31-Feb. 7	1	
Colorado—Denver	Jan. 31-Feb. 7	8	
Illinois—Belleville	Jan. 31-Feb. 7	1	
Illinois—Galesburg	Jan. 31-Feb. 14	7	
Indiana—Elwood	Feb. 8-15	3	
Indiana—Evansville	Jan. 31-Feb. 14	9	1
Indiana—Indianapolis	Jan. 31-Feb. 14	121	24
Indiana—South Bend	Jan. 31-Feb. 7	1	
Iowa—Davenport	Jan. 31-Feb. 14	12	
Iowa—Ottumwa	Jan. 3-10	4	
Kentucky—Lexington	Jan. 31-Feb. 14	4	
Kentucky—Newport	Jan. 31-Feb. 14	2	
Louisiana—New Orleans	Jan. 31-Feb. 12	3	Two cases imported.
Maine—Biddeford	Feb. 7-14	12	
Maine—Eastport	Feb. 7	8	
Maine—Eastport	Feb. 10	5	
Maine—Portland	Jan. 31-Feb. 7	1	
Maryland—Baltimore	Feb. 7-14	1	
Massachusetts—Boston	Feb. 7-14	4	2
Massachusetts—Haverhill	Feb. 7-14	1	
Massachusetts—Lynn	Jan. 31-Feb. 7	1	
Michigan—Detroit	Feb. 7-14	38	1

Michigan—Flint	Jan. 31-Feb. 14	4	
Michigan—Grand Rapids	Feb. 7-14	10	
Michigan—Port Huron	Feb. 7-14	12	
Nebraska—Omaha	Jan. 31-Feb. 7	7	
New Hampshire—Manchester	Jan. 31-Feb. 7	10	
New Jersey—Camden	Feb. 7-14	1	
New Jersey—Jersey City	Feb. 8-15	3	1
New Jersey—Newark	Feb. 7-14	1	
New Jersey—Plainfield	Feb. 7-14	1	Imported.
New York—New York	Feb. 7-14	3	
Ohio—Chillicothe	Jan. 24-31	8	
Ohio—Chillicothe	Feb. 7-14	3	
Ohio—Cincinnati	Feb. 6-13	7	
Ohio—Cleveland	Jan. 31-Feb. 14	16	4
Ohio—Dayton	Feb. 7-14	1	
Ohio—Hamilton	Jan. 31-Feb. 14	2	
Ohio—Toledo	Jan. 31-Feb. 14	15	1
Pennsylvania—Butler	Jan. 17-Feb. 7	2	
Pennsylvania—Erie	Jan. 31-Feb. 7	4	
Pennsylvania—Johnstown	Jan. 31-Feb. 14	5	Three cases imported.
Pennsylvania—Philadelphia	Feb. 7-14	30	2
Pennsylvania—Pittsburg	Jan. 31-Feb. 7	18	3
Pennsylvania—York	Jan. 1-31	1	
South Carolina—Charleston	Jan. 31-Feb. 7	14	1
Utah—Ogden	Jan. 1-31	17	
Utah—Salt Lake City	Jan. 31-Feb. 7	21	
Wisconsin—Milwaukee	Jan. 31-Feb. 14	9	

Smallpox—Foreign.

Austria—Prague	Jan. 17-24	7	
Barbadoes	Jan. 16-30	8	
Belgium—Antwerp	Jan. 17-24	4	2
Belgium—Brussels	Jan. 17-24	1	1
Canada—Amherstburg	Jan. 24-31	1	
Canada—Winnipeg	Jan. 31-Feb. 7	1	
Canary Islands—Las Palmas	Jan. 17-24	33	2
Colombia—Cartagena	Jan. 26-Feb. 1	1	1
Ecuador—Guayaquil	Jan. 24-31	1	1
France—Rheims	Jan. 18-24	1	
Germany—Hamburg	Jan. 24-31	1	
Germany—Leipsic	Jan. 17-24	1	1
Great Britain—Dublin	Jan. 17-31	1	1
Great Britain—Leeds	Jan. 24-31	4	
Great Britain—London	Jan. 24-31	6	
Great Britain—Manchester	Jan. 17-31	27	1
Great Britain—Nottingham	Jan. 17-31	14	
India—Bombay	Jan. 6-20	61	
India—Calcutta	Dec. 13-Jan. 17	2	
India—Madras	Dec. 20-26	2	2
Italy—Palermo	Jan. 10-31	15	5
Mexico—City of Mexico	Jan. 26-Feb. 1	4	4
Russia—Moscow	Jan. 10-24	7	4
Russia—Odessa	Jan. 17-24	2	
Russia—St. Petersburg	Jan. 10-24	71	21
Straits Settlements—Singapore	Dec. 27-Jan. 3	3	
Turkey—Constantinople	Jan. 18-25	1	

Smallpox—Insular.

Philippines—Manila	Dec. 13-27	2	
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Yellow Fever.

Colombia—Panama	Jan. 26-Feb. 9	5	2
Ecuador—Guayaquil	Jan. 17-24	20	
Mexico—Vera Cruz	Jan. 31-Feb. 7	2	2

Cholera—Insular.

Philippines—Manila	Dec. 13-27	16	10
Philippines—Provinces	Dec. 13-27	1,130	813

Cholera—Foreign.

India—Bombay	Jan. 9-20	1	
India—Calcutta	Dec. 13	152	

Plague—Insular.

Hawaii—Honolulu	Feb. 5	1	
Philippines—Manila	Dec. 13-27	1	

Plague—Foreign.

India—Bombay	Jan. 6-20	818	
India—Calcutta	Dec. 13-Jan. 17	85	
India—Karachi	Dec. 28-Jan. 11	53	52
India—Madras	Dec. 20-26	1	
Mexico—Mazatlan	Feb. 4-12	11 new cases, 13 d'ths.	

Infectious Diseases in New York:

We are indebted to the Sanitary Bureau of the Health Department for the following statement of cases and deaths reported for the two weeks ending February 21, 1903:

DISEASES.	Week end'g Feb. 14		Week end'g Feb. 21	
	Cases.	Deaths.	Cases.	Deaths.
Typhoid fever	37	11	48	9
Scarlet fever	247	23	262	19
Cerebro-spinal meningitis	0	3	0	0
Measles	190	17	190	7
Diphtheria and Croup	345	45	386	45
Small-pox	3	0	3	0
Tuberculosis	282	173	318	195
Chicken-pox	135	0	103	0

Public Health and Marine Hospital Service:

Official List of Changes in the Station and Duties of Commissioned and Non-Commissioned Officers of the Public Health and Marine-Hospital Service for the seven days ended February 19, 1903:

- KALLOCH, P. C., Surgeon. To proceed to Augusta, Maine, for special temporary duty.
- BROOKS, S. D., Surgeon. To assume temporary command of the Portland, Maine, quarantine station during the absence of Surgeon P. C. Kalloch.
- FRANCIS, EDWARD, Assistant Surgeon. Relieved from duty in the Hygienic Laboratory, and directed to proceed to Mexico and Durango, Mexico, for special temporary duty.
- WARD, W. K., Assistant Surgeon. Granted leave of absence for four days, from February 13, 1903, under paragraph 191 of the Regulations.
- BULLARD, J. T., Acting Assistant Surgeon. Granted leave of absence for 30 days, from February 13th.
- HOLT, E. M., Pharmacist. To proceed to Louisville, Ky., and report to Passed Assistant Surgeon G. B. Young, chairman of board of examiners to determine his fitness for promotion to the grade of Pharmacist of the second class.
- MORRIS, G. A., Pharmacist. Granted leave of absence for 7 days, from February 11, 1903, under paragraph 210 of the Regulations.

Promotion.

Passed Assistant Surgeon G. M. GUITERAS commissioned as Surgeon, to rank as such from December 13, 1902.

Board Convened.

Board convened to meet at the Marine Hospital, Louisville, Ky., for the purpose of examining Pharmacist E. M. HOLT to determine his fitness for promotion to the grade of Pharmacist of the second class. Detail for the board: Passed Assistant Surgeon G. B. YOUNG, chairman; Assistant Surgeon T. D. BERRY, recorder.

Naval Intelligence:

Official List of Changes in the Medical Corps of the United States Navy for the week ending February 21, 1903:

- BERTOLETTE, D. N., Medical Inspector. Detached from the *New York* and from duty as Fleet Surgeon of the Pacific Station, and ordered home to wait orders.
- BLACKBURN, T. C., Acting Assistant Surgeon. Ordered to the *Culgoa*.
- DABNEY, V., Acting Assistant Surgeon. Ordered to the *Pensacola*.
- DYKES, J. R., Acting Assistant Surgeon. Ordered to the *Franklin*.
- FITTS, H. B., Surgeon. Detached from the Naval Hospital, Sitka, Alaska, and ordered to the *Pensacola*.
- GRIEVE, G. C., Acting Assistant Surgeon. Ordered to the Navy Yard, Boston, Mass.
- HAWKE, J. A., Medical Director (retired). Detached from the Naval Hospital, Mare Island, Cal., and ordered home.
- LEWIS, D. O., Surgeon. Detached from the *Pensacola* and ordered to the *New York* for duty as Fleet Surgeon of the Pacific Station.
- NELSON, H. T., JR., Acting Assistant Surgeon. Ordered to the Marine Barracks, Sitka, Alaska.
- SIMONS, M. H., Medical Inspector. Ordered to Washington, February 24th, for examination for promotion, and thence to Naval Hospital, Mare Island, Cal.

Army Intelligence:

Official List of Changes in the Station and Duties of Officers serving in the Medical Department of the United States Army for the week ending February 21, 1903:

- BROWN, JUSTUS M., Colonel and Assistant Surgeon General. Retired from active service, February 13, 1903.

Births, Marriages, and Deaths.*Married.*

CARLETON—GRIFFITH.—In New York, on Tuesday, February 24th, Dr. B. G. Carleton and Miss Clarice Elizabeth Griffith.

MAGRUDER—CURTISS.—In Brooklyn, N. Y., on Wednesday, February 18th, Dr. R. B. Lowry Magruder and Miss Lotta Anna Curtiss.

ROGERS—HILL.—In Youngstown, Ohio, on Wednesday, February 18th, Dr. Robert E. L. Rogers and Miss Helen Hill.

SATERLEE—WHITNEY.—In Milton, Massachusetts, on Saturday, February 21st, Dr. Henry Suydam Saterlee, of New York, and Miss Ethel Alice Whitney.

Died.

ANDERSON.—In Venetia, Pennsylvania, on Monday, February 16th, Dr. D. M. Anderson, in the sixty-fifth year of his age.

BLAUVELT.—In Newark, New Jersey, on Wednesday, February 18th, Dr. Wilbur A. Blauvelt, in the twenty-seventh year of his age.

BISSEY.—In Philadelphia, Pennsylvania, on Sunday, February 22d, Dr. Herman S. Bissey.

BRUHL.—In Cincinnati, Ohio, on Monday, February 16th, Dr. Gustav Bruhl, in the seventy-seventh year of his age.

BURDICK.—In Passaic, New Jersey, on Thursday, February 19th, Dr. Alice H. Burdick, in the sixtieth year of her age.

DAVIS.—In Birmingham, Alabama, on Tuesday, February 24th, Dr. W. E. B. Davis.

GAGE.—In New York, on Sunday, February 22d, Dr. George C. Gage, in the fifty-third year of his age.

GARDNER.—In Washington, D. C., on Friday, February 13th, Dr. Franklin A. Gardner, in the forty-sixth year of his age.

KAPPES.—In Philadelphia, Pennsylvania, on Friday, February 13th, Dr. David Augustus Kappes, in the forty-third year of his age.

MCCLELLAND.—In Philadelphia, Pennsylvania, on Monday, February 16th, Dr. Cochran McClelland, in the fifty-ninth year of his age.

SCOLLARD.—In Clinton, New York, on Friday, February 20th, Dr. James I. Scollard.

WEBBER.—In Brooklyn, N. Y., on Thursday, February 19th, Dr. Ashley A. Webber, in the thirty-ninth year of his age.

YOUNG.—In Detroit, Michigan, on Sunday, February 15th, Dr. George Young, of Pioneer, Ohio, in the sixty-fourth year of his age.

Obituary.

WILLIAM ELIAS BROWNLEE DAVIS,
OF BIRMINGHAM, ALA.

Many a medical man throughout the country felt a pang on learning of Dr. Davis's sudden death by a shocking railway accident. He was in the prime of his activity, being only in his fortieth year. A native of Alabama, he was a graduate of the Bellevue Hospital Medical College, of New York, of the class of 1884. Except for a few months of practice in Rome, Georgia, his entire professional career lay in Birmingham. He soon achieved more than local distinction as a surgeon, and for several years preceding his death he was among the best known surgeons of the United States. He was a precise and elegant speaker and writer, and had had some experience in editorial work. Dr. Davis was a courtly and lovable man, and his loss will be deeply felt by the profession.

Pith of Current Literature.

PRACTICE OF MEDICINE.

Typhoid Fever in the Boston City Hospital in 1902. By George G. Sears, M. D. (*Boston Medical and Surgical Journal*, February 5th).—The paper is based on a study of 203 cases of typhoid fever admitted to the hospital between June 1 and November 15, 1902. The following points are somewhat unusual, and a note is therefore made of them. In one case the temperature reached 107.5° F., without discoverable cause, and yet the patient recovered. There was hæmorrhage in fourteen cases, with fatal termination in four, and perforation in three cases, in all of which death occurred. In some cases in which a chart was kept of the daily amount of urine, it was noticed that there was a marked increase of the quantity as convalescence set in, and that this occurrence was at times noticed before either the pulse or temperature had begun to fall, thus proving at times, of importance in making a prognosis. The Widal reaction was positive in 168 cases (83.5 per cent.) and negative in 33 cases. This was in part due to not testing the cases over a sufficiently long period of time. The failure of the test as an aid to early diagnosis, was, however, not infrequently exemplified, yet it proved at times of great value in doubtful cases. Leucocyte counts were made in almost all cases and showed that typhoid fever as a possible diagnosis could not be excluded by a moderately high white count (10,000 to 15,000). The mortality was 12.8 per cent. Only four cases came to autopsy; in two of these the typhoid bacillus was found in the heart's blood; in the other two the bacillus did not appear in the cultures from any of the organs.

Paratyphoid Fever and its Complications. By Joseph H. Pratt, M. D. (*Boston Medical and Surgical Journal*, February 5th).—Including the three cases reported in the present paper, there have been so far recorded 84 cases of well authenticated paratyphoid fever. At the end of Dr. Pratt's article there is appended a complete tabulation of these cases and a bibliography. The paratyphoid bacilli belong to a general group of microorganisms that lie between the *Bacillus typhosus* and the *Bacillus coli* and are more closely related to the former than to the latter. The paratyphoid bacilli may be defined as those members of the intermediate group which produce typhoidal symptoms in man. There are two species of paratyphoid bacilli, and Buxton calls them the α and β paratyphoids. So far as the 84 recorded cases, the α was found in 12 cases; the β bacillus in 69 cases; and in the 3 remaining cases the species was not determined. Only four deaths have so far been placed on record as due to this infection. In one case the infection was secondary, however, to typhoid; the remaining three deaths were all due to the β bacillus. The following points are of special interest and we give them under the same headings as in the original paper. (1) *Ætiology*. The infection may be acquired through the water supply; it may occur in epidemics; it affects chiefly young adults, although children and older people are not exempt; it prevails most extensively in the autumn. (2) *Path-*

ology. The disease is a general infection in which localizing lesions may not occur. The fact that intestinal hæmorrhages occurred in five of the recorded cases would seem to show that intestinal lesions do sometimes exist. (3) *Symptomatology*. Paratyphoid fever may present all the clinical features of typhoid fever. It is in general a much milder disease, but it has been known to last for eighty-four days. An afebrile case has been reported. (4) *Complications*. A large number of complications have been reported. These are tabulated in the paper. They are in general of the same kind as occur in typhoid. (5) *Diagnosis*. The surest way of making a diagnosis is by cultivating the bacillus from the blood of the suspected case. A diagnosis of this infection is justified if the patient's blood agglutinates the paratyphoid bacilli in high dilution and fails to agglutinate the typhoid bacilli or agglutinates them only in very low dilutions. It is necessary to test the blood with both species of paratyphoid bacilli. In serum tests the simple assertion that the Widal reaction is positive does not suffice. The dilution, the extent of clumping, the presence or absence of motility, and the time limit should be recorded. (6) *Prognosis*. The death rate is low.

Typhoid Fever at the Massachusetts General Hospital. By Herman F. Vickery, M. D. (*Boston Medical and Surgical Journal*, February 5th).—The paper reports forty-nine cases of typhoid fever admitted to the author's service between July 1 and November 1, 1902. The mortality was 6 per cent. Whether any of the cases were paratyphoid fever or not could not be determined, as the pathological department had not yet possessed itself of cultures of the paratyphoid bacillus. Forty-one cases gave a positive Widal reaction. In seven cases there were repeated unsuccessful attempts to obtain the Widal reaction. A diazo test was invariably made as a matter of routine, and in general it seemed to be of little value in making a diagnosis of typhoid fever. One of the cases was of peculiar interest. It occurred in a young servant girl who was profoundly toxic and who took nourishment very badly. She did not respond to either drugs or brandy. She, however, exhibited striking improvement upon the subcutaneous injection of normal salt solution, of which a pint was administered twice a day for thirteen days. Its effect was to diminish the toxic condition of her blood, so that her mind became clearer, her complexion more normal and her pulse stronger.

The Early Diagnosis of Pulmonary Tuberculosis. By Dr. H. H. Thomson. (*Lancet*, January 24th).—The author calls attention to the great importance of an early diagnosis of cases of pulmonary tuberculosis, as, in the majority of cases, if treatment is commenced during the stage of infiltration, the result will assuredly be a complete and permanent arrest of the morbid condition, and the prolongation of life. The early stage of the disease is characterized by the simple presence of tubercles, the surrounding lung tissue being comparatively healthy; so that the formation of healthy granulation and cicatricial tissue is more readily induced under treatment. The author considers the various physical signs met with in the early

stages of pulmonary tuberculosis; of these deviation from the normal in the quality of the respiratory murmur is, perhaps, the most constant early sign. In all suspicious cases the morning and evening temperature should be regularly recorded for a period of three weeks. A continuous evening rectal temperature reaching above 99° F. would point to the probability of tuberculous disease. In doubtful cases a reaction with Koch's tuberculin should be sought for. The author reports five such cases in which the use of tuberculin was of the greatest assistance in making a positive diagnosis.

Associated Typhoid Fever and Tuberculous Meningitis.—M. Chavigny (*Revue de médecine*, January 10th) concludes that these diseases may appear simultaneously, but they rarely do so. A clinical diagnosis is difficult and the assistance given by serum diagnosis is very little. At autopsy, an attentive search is necessary, for the lesions of the typhoid fever may be poorly marked. The symptoms of the meningitis predominate during the course of the disease.

The Simultaneous Occurrence of Acute Febrile Eruptions (Measles, Rötheln, and Scarlet Fever).

—Dr. S. V. Vittline (*Roussky Vrach*, December 24th) reports two cases in which first appeared rötheln, then measles, and finally scarlatina. The cases were observed during an epidemic of both scarlatina and measles in Ekaterinoslav, at a time when there were also sporadic cases of rötheln. The number of cases of rötheln increased so that a third epidemic developed, and the author was able to observe thirty cases of the disease. In commenting upon the two cases reported in full, the author says that these histories are of interest, not only because the simultaneous occurrence of acute exanthemata is very rare, but also because the appearance of measles a short time after the development of rötheln shows that the two diseases are pathogenically distinct entities, and that rötheln is an independent disease, and not a mild manifestation of measles. Hensch, for example, doubted the independent nature of measles, but afterwards changed his opinion when Genzer, in 1887, reported that in three girls in the same family there developed measles three or four days after rötheln.

In regard to the question as to how much influence one exanthem exercises upon the other when they occur simultaneously, the author points out that in both his cases the course of the scarlatina was mild; that in his first case the measles passed off without any complications; that in the second case the measles was quite severe, on account of a double pneumonia complicating the process; that in the first case the scarlatinal rash was typical and very well marked, while in the second it was faint and localized to the chest and back, but in both cases there was abundant desquamation for a month. Therefore, no conclusions can be drawn from these two cases as regards the influence of measles upon scarlet fever when occurring simultaneously in the same patient. A great diversity of opinion is held on the prognosis of such cases by various authors who have studied the sub-

ject. Thus, for example, Paquet and Cacaud conclude, from a study of the literature of the subject and from three cases of their own, that the best prognosis may be given when scarlet fever follows measles, the latter having already passed away. If both are present simultaneously the result is better if measles precede scarlet fever. The worst results occur in those cases in which measles follows scarlet fever after the latter has ended. Johannessen, however, holds the opposite view, believing that if measles follows scarlet fever the result is not worse than ordinarily. The question is one that requires further clinical data.

Rheumatoid Arthritis as a Cerebrospinal Toxæmia.—Dr. R. Llwyn Jones (*Edinburgh Medical Journal*, January) believes that the term "rheumatoid arthritis" should be cast from medical nomenclature. As to the nature of the disease, the author allots causality to the inevitable microbe and its toxins, and grants to the nervous system the minor rôle of being the medium through which and by which the clinical phenomena are colored. Kent Spender and others attached great importance to the vasomotor phenomena. The author considers them one of the most salient features of the disease. He believes that these conditions of local syncope and asphyxia—most obvious in the extremities—are undoubted Raynaud's disease. He draws attention to the relationship that he believes to exist between the joint changes and the vasomotor phenomena. It seems to the author that in the early stages of rheumatoid arthritis we have a constant recurrence of cycles; and this, in his opinion, in time, as it were, wears out the particular segment affected. This is the important time in the history of the disease—the time of small things. In the muscular sphere, the first stage appears to be a condition of undue irritability. Sir Thomas Barlow says that cramps occur in Raynaud's paroxysms, and also that fine movements are with difficulty performed. The author believes that the increased excitability of the nerves has some relation to the joints affected, inasmuch as he has been able to find it in one limb and not in the other. Passing out of this stage, we find muscular atrophy and contractures supervene, and in some cases paralysis and loss of knee joints.

The author makes an interesting suggestion: In cases of early rheumatoid which have followed quickly on a history of gastric ulcer, dilatation of stomach, or chronic diarrhoea, would it not be just as well if we tried the effect of stomach lavage or intestinal irrigation? If any such treatment is to do good, its adoption at an early stage of the disease is indicated, during that stage when all the phenomena are subject to remissions and exacerbations. Later on, when trophic phenomena color the clinical picture, it is too late to do anything but palliate. It seems to the author that the first stage, with its fluctuating temperature, rapid wasting, and vasomotor phenomena, etc., is the true rheumatoid; the features of the later stage are simply secondary to changes induced in the cerebrospinal axis by the previous vascular disturbances with sequential failure in nutrition of the nerve centres. Under certain circumstances thyroid feeding has some

chances of being successful. Thermal waters, massage, electricity, etc., are adjuncts, but, as such, are valuable.

The Facts in a Case of Hæmaturia. By Charles H. Chetwood, M. D. (*Medical News*, February 7th).—The noteworthy features in this case were: The duration of the hæmaturia for four years without markedly affecting the patient's health; the negative results of the urine analysis; the satisfactory cystoscopic examination, which showed the blood issuing from the right ureteral orifice; the absence of visible pathological lesions of the kidney when exposed at operation; the microscopical evidence of kidney lesion; and the prompt cessation of the hæmaturia after the operation.

The Meaning of Uric Acid and the Urates. By Dr. Woods Hutchinson. (*Lancet*, January 31st).—The author's views as to gout and lithæmia are summarized as follows: (1) There is no connection whatever between the production of urea and uric acid, hence interdiction and marked limitation of animal or of nitrogenous foods, as such, in gout is irrational. (2) The uric acid produced in health comes exclusively from two sources: the larger moiety, the *exogenous* uric acid, from the nucleins and purin bases of the food; the smaller or *endogenous* moiety, from the destructive metabolism of the nucleins of the body tissues. (3) It is the endogenous moiety alone which is increased in gout and lithæmia. (4) Gout and lithæmia are mere symptom names for a miscellaneous group of chronic toxæmic processes of widely varied origin, characterized by the production of uric acid and the urates. (5) By "gouty diathesis" is meant the possession of a sufficient degree of resisting power on the part of the protective cells of the body to oppose the entrance of any poison, whatever its character or source, with consequent destructive metabolism and production of uric acid, but not adequate to neutralize or successfully prevent its absorption. (6) The uric acid of gout, like the phosphoric acid which invariably accompanies it, is merely a result and measure of the destructive metabolism of the nucleins of the body cells, chiefly probably of the leucocytes, in response to the invasions of poisons or toxines, either organic or inorganic (lead, phosphorus, alcohol, acetone). (7) Hence the use of lithia or other "solvent" agents is irrational, and any benefits resulting are to be explained on other grounds. (8) As most of the toxines setting up this destructive metabolism and consequent uric acid production are of intestinal origin or entry, diet in gout should be regulated solely with regard to the diminution of intestinal fermentation and putrefaction. (9) As animal foods are more apt to be indulged in in excess, their limitation may be found to be more frequently necessary than that of vegetable foods, but sugars and starches are also very often at fault. (10) As uric acid and the alloxur group are not toxic, or at best only feebly so, and are not the cause of gout, the prohibition of foods rich in nucleins and purin bases, such as red meats, roe, and sweetbreads, has no rational basis, and diminishes the attractiveness of the dietary. (11) The rôle of the liver in gout is a negative one, being in-

ability to perform its chief normal function as a "poison filter," and to absorb or to transform into harmless excretory substances the excess of toxines brought to it by the portal vein. (12) The drugs found of value in gout owe their efficacy chiefly to their power of checking intestinal putrefaction or of preventing the absorption or promoting the elimination of its products.

Hæmatemesis in Diseases of the Spleen.—Dr. C. Fedeli (*Clinica moderna*, January 7th) says that there is a form of hæmatemesis dependent upon certain diseased conditions of the spleen, although this has not been recognized heretofore, the vomiting of blood being attributed as a rule to other associated conditions, such as diseases of the liver, etc. In support of his theory, the author cites a number of cases, one of which may be briefly mentioned here. In 1893, Fedeli saw a man aged sixty-six years, who had been affected with an enlarged spleen for some time. In addition, he had been suffering from an obstinate dyspepsia, and had attacks of hæmatemesis, during which he vomited pure unaltered blood. Cirrhosis, vicarious hæmorrhages, and the so-called hæmorrhagic diathesis were excluded, and a few months later he was seen again, this time with all the signs of a splenic anæmia. The coincidence of hæmatemesis with diseases of the spleen having been shown, the author tries to establish a causal nexus between the two occurrences. The lesions of the spleen may, in the first place, give rise to enlargement of the gastric veins, producing varicosities and twists in these vessels, just as is observed, too, in diseases of the liver. But the mere mechanical causes do not produce the hæmatemesis, for in cases of malaria with very large spleens, and in cases of heart disease with splenic and hepatic enlargement, there may be no hæmatemesis. The fact that in all the cases cited the hæmatemesis came on during the process of development of the splenic tumor shows that it is connected causally with the origin of the splenomegalia itself. In the author's cases the splenic enlargement was due to infectious causes, in some to malaria, and in others to splenic anæmia, which is recognized as an infectious condition. The author believes, therefore, that the hæmatemesis of splenic diseases is due to an infectious gastritis which precedes or accompanies the development of splenic disease.

SURGERY AND ANATOMY.

The Operation of Cholecystectomy, with a Record of Cases. By B. G. A. Moynihan, F. R. C. S. (*British Medical Journal*, January 24th).—The operation of cholecystectomy, or removal of the gall-bladder, is one that is comparatively rarely performed. It is called for under the following conditions: (1) In injuries of the gall-bladder, rupture, stab, or bullet wounds. (2) In gangrene of the gall-bladder. (3) In phlegmonous cholecystitis. (4) In chronic cholecystitis with dense thickening of the walls of the gall-bladder and cystic duct, and when the gall-bladder is shrivelled and universally adherent. In such cases it is no longer a receptacle for the bile. (5) In distention of the gall-bladder, hydrops, or empyema, due

to blockage of the cystic duct by calculus, stricture, etc.; or in cases of mucous fistula following operations for these conditions. (6) In cases of fistula between the gall-bladder or the cystic duct on the one hand, and the stomach, duodenum, or colon on the other. (7) In multiple ulcerations of the gall-bladder or the cystic duct, when gall stones have eroded their way through the walls into the liver or the duodenum. (8) In primary carcinoma of the gall-bladder. The author describes the operation in detail, and reports six cases in which it was successfully performed.

Two Operations Performed upon the Liver Through the Chest Wall. By G. P. Newbolt. (*British Medical Journal*, January 24th).—The author reports a case of hydatid of the liver and another of abscess of the liver, in which it was only possible to evacuate the cavities by resecting a rib. It is dangerous to put an exploring needle into a tense cavity without being prepared to open up freely or empty the cavity for the time being with the aspirator. The tension in the abscess cavity is apt to force pus through the needle tract into the pleural cavity, producing an empyema.

The Elevation of the Stomach in Gastropotosis by the Surgical Plication of the Gastrohepatic and Gastrophrenic Ligaments; an Original Operation. By Henry D. Beyea, M. D. (*Philadelphia Medical Journal*, February 7th).—The author reviews in a general way the frequency, ætiology, symptomatology, and customary medical and mechanical treatment of gastropotosis, and shows the futility of all the methods so far employed in the attempt to overcome, even partially, the severe cases of this condition. He then describes and critically analyzes the operations of Duret, Davis, Rovsing, Hartmann, Coffey, and Webster, and considers that they are all more or less faulty in principle, since they all tend, more or less, to fix the stomach either to adjoining viscera or to the abdominal wall. Dr. Beyea makes the following claim for his proposed method: "The operation we have devised simply shortens the natural ligamentary supports, and the normal mobility and function of the stomach are completely preserved. The principle of the operation must be considered physiologically and surgically ideal." He has performed the operation four times himself, and from these four cases and three similar operations performed by Bier, of Germany, he draws the following conclusion as to the efficiency of the operation in relieving the symptoms: "The completeness of the relief and, to my mind, the extraordinary restoration to excellent health of these seven patients who had suffered for years, the simplicity of the operation (which restores the stomach to normal position by shortening its natural ligaments without removal of tissue or the formation of abnormal adhesions) and the fact that it is practically free from danger (we would estimate the danger as being no greater than one-fourth of one-per-cent.) must strongly recommend this operation at least in every case of gastropotosis in which the suffering is great." The method of shortening the normal ligaments by means of sutures is as follows: Three rows of sutures are used in such a way that

the gastrohepatic and gastrophrenic ligaments become plicated and thus shortened and the stomach is raised. (a) The first row of stitches begins in the gastrophrenic ligament and extends across the gastrohepatic ligament to almost opposite the pyloric orifice and hepaticoduodenal ligament. It forms a plication in the centre of these ligaments and includes from above downwards, or vertically about four centimetres of tissue. The sutures are practically mattress sutures and about five of them are needed. (b) The second row of sutures is introduced in the same manner, but 2.5 centimetres above and below the first row. (c) The third row stitches are the same as in the other two rows, except that they are introduced just above the gastric vessels and a short distance below the diaphragm and liver. When these sutures are tied the plication will be complete.

Note on the Results of the Treatment of an Unusual Series of Cases of Acute Intussusception. By H. M. Rigby, F. R. C. S. (*Lancet*, February 7th).—During nine successive days during the Christmas holidays of 1902, the author saw seven cases of acute intussusception. Six of these were submitted to operation, of which five recovered. Of the six operated on only one was irreducible and gangrenous; the others were reducible, some with ease, and some with more or less difficulty. It was found that complete reduction was impossible unless the cæcum, colon, and ileocæcal junction were brought up to the wound and manipulated outside the abdominal cavity. From a consideration of these cases the author draws the following conclusions: (1) In these cases immediate laparotomy should be insisted upon without delay. (2) No valuable time should be lost in attempting inflation of air or injection of fluids by rectum. (3) The keynote of operative success is rapidity. (4) In favorable conditions, as in hospitals, and with skilled assistants, the mortality of reducible intussusceptions should be diminished to a very small percentage. (5) The chief points in the after treatment are early feeding and the use of opium when necessary.

The Surgical Treatment of Rheumatic Fever. By Dr. J. O'Connor. (*Lancet*, January 24th).—The author holds that rheumatic fever is an infective disease, similar to gonorrhœal arthritis and pyæmia, the germ gaining entrance through the tonsil or elsewhere, and that the joint invasion is promptly followed by a form of infective arthritis, accompanied with general toxæmia, the infected joints acting as incubators where the toxins are formed and passed out into the circulation. He therefore advocates early surgical intervention; the affected joints should be opened, well irrigated, and a drainage tube put in which is kept in for three or four days. Irrigation with a two-per-cent. carbolic solution should be kept up until healing no longer permits the passage of the fluid. The external wound should be freshly dressed with iodoform gauze every day. In the wrist and ankle joints gauze may be used in place of a drainage tube. He reports twenty cases of rheumatic fever in which opening and draining the infected joints was

followed by prompt recovery. As a rule the patients were entirely well and attending to their usual vocations by the end of two weeks. In one case, however, arthrotomy was delayed five days, during which time a valvular murmur developed. Had he operated when he first saw the patient, the author believes that infection would have ceased and the heart would not have been affected.

Theory and Practice of Spinal Cocainization.

By G. K. Dickinson, M. D. (*Medical Record*, February 7th).—Until at least 100,000 cases have been properly observed and recorded it will be idle to either condemn or laud this method. The author has used the method in over 200 cases and so far the results have been satisfactory. The chief dangers to be apprehended are three: (1) Infection. This should not cause any real anxiety in the careful well-trained surgeon familiar with the methods of antisepsis. The selection and proper sterilization of the cocaine should demand the greatest care. Commercial cocaine is often contaminated with isotropyl cocaine, a cardiac depressant of great power, and undoubtedly the cause of the numerous deaths ascribed to cocaine in the early days of its use. To sterilize the drug the following method is effective: Subject twenty-five minims of a two-per-cent. solution of cocaine, in small glass capsules, to a temperature of 176° F. for four hours for four successive days. This renders the drug surgically safe without impairing its properties. (2) Cardiorespiratory phenomena. While these phenomena are in the main to be apprehended, yet with the dose used by the author ($\frac{1}{2}$ grain) he has so far never noticed any distress to a patient from dyspnoea or palpitation. (3) The present or remote damage to the patient that may possibly follow the use of the drug. This danger, if it really exists, can only be rightly estimated after prolonged use of the method. There is another question that can only be settled by actual experience, and that is the condition known as idiosyncrasy. At present there are not a sufficient number of cases on record on which to base conclusions. The author reviews the physiological action of the drug with reference both to its local and constitutional effect and goes into detail in discussing the way of giving the injections. In conclusion we quote: "The claim is that this procedure is not empirical, but based on clear physiological grounds that the action of the drug is not uncertain if pure, and that, in regulated doses, its action can be predicted with great certainty; but nevertheless many more cases must be carefully observed before it can be rated with ether and chloroform in safety. It is not proven to carry enough risk to prohibit careful clinical experimentation."

Anæsthesia with Schleich's Mixture No. 1.*—

Professor von Winckel (*Münchener medicinische Wochenschrift*, January 6th) has used this mixture in a great number of obstetrical and gynecological cases and has compared it with the use of ether alone, over which, he thinks, it has no advantages. He finds that serious complications—bronchitis,

vomiting, etc.—are more frequent after its use than after ether, although both the time it is employed and the quantity used are less than is the case with ether. Von Winckel finds ether preceded by morphine an admirable anæsthetic.

Operations Without Direct Use of the Fingers.

—Professor König (*Berliner klinische Wochenschrift*, January 5th) describes part of his technics in avoiding touching the wound or any part of it with the fingers, since he realizes, he says, the impossibility of bringing about absolute sterilization of the hands. Instruments take the place of fingers, the technics not being easy, he says. The instruments have longer handles than usual so that the hand shall not approach the wound too closely. The number and the style of hooks and retractors for deep and superficial work must correspond to the idea; bullet-forceps are often used to bring parts into view or to keep them there. Arteries are tied by the aid of long forceps, and forceps or a long-handled, suitably curved, hook, is used to pass a ligature about vessels. Long-handled spoons or bullet forceps with long arms are used to bring organs or tumors out of the depths. If a wound is sutured, this is done with long needleholders held at a distance from the wound. A small part of the wound is left open and drainage with gauze is avoided whenever possible. Osteotomies and joint operations lend themselves most easily to this method, but König says his list of operations in which this technics is employed is constantly growing.

OBSTETRICS AND DISEASES OF WOMEN.

Extirpation of the Puerperal Septic Uterus.—

Dr. R. Grodenwitz (*Münchener medicinische Wochenschrift*, December 23rd and 30th) reports seven such cases with death in two. In four of the cured cases, local septic processes were found, while the other one was in a pyæmic woman. The two patients who died were both suffering from septicæmia with no localized foci of pus, inflammation of the lymph channels, or suppurative phlebitis. The author thinks hysterectomy is justified when the infection is positively localized in the uterus, when purulent processes invade the uterus, its parametria, and the appendages, and when there is purulent inflammation of the lymph passages and the veins in the pelvis.

The Surgical Treatment of Puerperal Infection.

By Matthew D. Mann, A. M., M. D. (*American Medicine*, February 7th).—Dr. Mann reviews in succession all the operations that have so far been suggested for the treatment of puerperal infection. He calls attention to the fact that the treatment must depend and vary with the kind and nature of the infecting organisms. Three general classes of infection are usually recognized: (a) The saprophytic, due to retention within the uterus of dead material; (b) the streptococcic, or similar virulent process, which soon becomes a systemic condition and defies intrauterine treatment; (c) the gonorrhœal, which is usually, though not always, a circumscribed and not very virulent infection. The operations that have so far been proposed are: (1) Curetting; (2)

* Ethyl chloride, two parts; chloroform, four parts; ether, twelve parts.

the removal of ruptured or inflamed tubes; (3) the removal of infected fibroid or ovarian tumors; (4) the opening or removal of ovarian abscesses; (5) the opening of parametric abscesses; (6) the opening of the peritonæum (*a*) for exploration, (*b*) for septic peritonitis, (*c*) for vaginal drainage in early peritoneal infection. (7) Hysterectomy, vaginal or abdominal. (8) Removal of thrombosed and infected veins. Dr. Mann's chief conclusions with regard to the advisability of employing these various methods follow, in the same order in which the operations have been enumerated. (1) The nature of the infection should be at once determined by either Döderlein's or Williams's method. The interior of the uterus should then be explored with the finger and if any offending body is found it should be at once removed. This is best done with curette forceps though most surgeons use a curette. Then, if the case has been shown to be one of simple retention of putrid secundines, the uterus is irrigated and packed with gauze. If the case is one of mixed infection, then, following the curetting, a cul-de-sac operation should be performed, and the curetting should not be repeated. If the case is shown to be one of septic endometritis, with a smooth lining to the uterus and no foreign body present, a curetting will probably do more harm than good. "The rule regarding curetting, then, should be, do it only when clearly indicated; do it thoroughly, but not roughly or too forcibly, and then do not repeat it." (2) If during labor a pus tube should have been ruptured the abdomen should at once be opened, cleaned and the diseased tube removed. (3) This condition will usually call for a hysterectomy. Almost certainly will this be so in the case of infected fibroids. (4) Cases of this kind have been reported by Dr. Henrotin, who has devised a special operation for their relief. Dr. Mann commends Henrotin's paper but has never himself met with the kind of cases that the latter describes. (5) "How best to treat these patients, except in the early stages, as suggested by Henrotin, I have not determined to my entire satisfaction." Care should be taken not to soil the peritonæum; "such an infection is almost certain to be streptococcic in its origin, and to let free acutely infectious streptococcic pus into the abdomen is almost sure death." (6) (*a*) On general principles Dr. Mann is against exploratory laparotomies. He quotes Hirst with approval as follows: "The surgeon should demand some tangible evidence of those forms of sepsis that are amenable to surgical treatment." (*b*) The diagnosis is often difficult. In diffuse peritonitis if the diagnosis has been made in the first twenty-four hours, then the open method of treatment should be resorted to at once as the only method promising much hope. (*c*) Pryor's method is commended, though Dr. Mann is not prepared to go to the length of using it in simple cases of putrid endometritis. (7) "When we consider all the difficulties surrounding these cases, the difficulties of diagnosis, of determining the time when the operation should be done, the weakened condition of the patient, with high temperature and feeble and rapid pulse—we must conclude that 'he who operates often operates too much.'" (8) This operation has not been performed in this country. It deserves more attention than it has so far received.

The Effects of Vaccinating during a Menstrual Period. By E. R. Dawson, L. R. C. P. (*British Medical Journal*, February 7th).—The author reports the case of a woman, aged twenty-nine years, who was vaccinated during one of her menstrual periods. The vaccination took well, but caused no special trouble. The next period was very scanty, just a smear on the napkin for one day. This amenorrhœa continued for five months when the patient had an attack of hæmatemesis, and brought up two full pints of dark blood. A few hours later the menstrual period came on freely and profusely. There was no return of the hæmatemesis and no subsequent anæmia, and the monthly periods were perfectly normal thereafter. The hæmatemesis was not preceded by any abdominal pain or dyspepsia. Everything except the hæmatemesis itself seemed to point to the case being one of vicarious menstruation rather than of gastric ulcer. The lesson to be drawn is that it is not advisable to vaccinate during a menstrual period except in cases of emergency.

The Isolation of the Living Uterus. A Preliminary Communication.—Dr. E. M. Kourdinsky (*Roussky Vrach*, December 21st) has attempted to study the physiological processes of the uterus by isolating this organ and keeping it alive for a sufficient length of time to make the needed observations. The first attempt of this kind was made by Rein, who used defibrinated blood for the process of keeping the uterus alive. The author used the more modern methods of physiology and employed Locke's fluid (*Centralblatt für Physiologie*, 1900, vol. iv) for this purpose. He performed laparotomies on female rabbits under chloroform. A cannula was then introduced into the abdominal aorta and its lower end was injected with Locke's fluid, thus flushing the vessels of the uterus. The fluid returned through the veins, and when the womb had been well washed, it was excised under great precautions, with its appendages, the broad ligaments and the vessels belonging to it, and then the whole preparation was placed in a special apparatus in which the fluid was kept circulating through the uterine arteries and veins. The apparatus consisted of a metallic box lined with cotton and provided double walls, between which warm water circulated. The fluid to be injected into the organ was kept warm by passing through a coiled tube in warm water. The work of the uterus was recorded by means of a catheter supplied with a rubber bulb which transmitted the contractions pneumatically to a recording tambour.

The results of this study are as follows: A varying length of time is required to revive the isolated rabbit's uterus, usually about an hour. The reflex excitability of various uteri differs considerably, but as a rule pregnant uteri are more excitable than non-pregnant ones. Young non-pregnant uteri, however, often work very vigorously. The uterus was also observed in this manner during labor, and it was found that the contractions of the cornua and those of the uterine os did not depend upon each other, and did not occur simultaneously. The waves of contractions recur at more or less regular intervals after each other. After about an hour the uterus begins to get tired, the waves are more distant from each other, become longer and less

regular, and finally the curve becomes a straight line. After a period of rest, the uterus begins to work again with the same regularity, and again there comes a period of rest. In a word, the rhythmical arrangement of the work of the uterus in labor is well regulated. The contractions of the cornua are peristaltic in character, resembling very much those of peristalsis in the intestines, and the movements of the rain-worm. They usually start at the abdominal end of the cornu. The contractions of the os and vagina are more like constrictions, which disappear after having been drawn for a few seconds.

The influence of oxygenation on the work of the uterus was also shown. If the oxygen supply is gradually withdrawn, the contractions soon weaken and stop; if the oxygen supply is suddenly withdrawn at the acme of a series of waves, the uterus continues to work for a time as though nothing had happened, but soon loses its tone and stops contracting. The author also observed the act of birth itself, and believes that he was the first to see the actual process of expulsion from an isolated uterus.

A Case of Sarcoma of the Pelvic Cellular Tissue Occupying the Retroperitoneal Space at the Bottom of Douglas's Pouch.—That the nature of the case reported by L. Orteza (*Revista de Medicina y Cirugía de la Habana*, January 10th) was not determined before an exploratory laparotomy was performed is hardly to be wondered at. The author thus describes it: The patient, a young woman of nineteen years of age, sought relief for severe pelvic pain of two weeks' duration, the onset of which dated from an excessive sexual excitement. During this period, the abdomen increased in size, disturbances of micturition and defecation appeared, and there was a continuous flow of blood from the vagina. Upon examination, the vagina was found to be occupied by a tumor, the vulvar end of which was torn transversely so that it gave the impression of a transversely lacerated cervix; and within the tumor, bleeding fungosities were seen. The insertion of the tumor could not be determined on account of the pain caused by manipulation, and the limited space between it and the vaginal wall, which did not permit the exploring finger's passage. Bimanual palpation revealed a pelvic tumor the size of the foetal head, occupying the median line, continuous with the vaginal tumor, and slightly movable from side to side. The patient had no fever, the pulse was 108, and there were no general symptoms save the anæmia consequent upon continuous loss of blood, and vesical and rectal tenesmus attributable to compression by the tumor. After other measures had failed to relieve, laparotomy was performed, and a tumor was found in Douglas's pouch which extended upward into the pelvic cavity and downward into the vagina as low as the vulva; at which point it was ulcerated, thus giving the impression of a lacerated cervix. The growth was traced back to the retroperitoneal cellular tissue, but its diffuse attachments and the severe hæmorrhage ensuing upon incision, precluded the possibility of its removal. Microscopical examination of small particles of the tumor showed it to be a small-celled sarcoma.

What Advice Should be Given to a Woman Suffering from Fibroid Tumor of the Uterus? By J. Riddle Goffe, M. D. (*Medical News*, February 7th).—Dr. Goffe reviews the general subject of fibroid tumor of the uterus and discusses in detail the advantages and disadvantages of both the operative and non-operative modes of treatment. He believes (1) that, barring the exceptions to be noted, all women having fibroids should have them removed at once, whatever the size of the fibroids may be. The two exceptions to this rule are, first, women of very advanced years, and second, pregnant women. (2) That most women having fibroids will go to term and have a normal delivery. Yet, if trouble is inevitable, the waiting plan should still be adhered to as Cæsarean section at full term is, in the hands of an expert, less dangerous both to the mother and child, than is myomectomy during gestation. "I mean it is better to take the risk of such a procedure (Cæsarean section), the necessity of which is very remote, than to destroy the child by producing miscarriage or taking the risk of myomectomy."

A Retrospect and Prospect in Obstetrics and Gynecology.—Dr. J. Nigel Stark (*Glasgow Medical Journal*, January) in his presidential address to the Glasgow Obstetrical and Gynecological Society, delivered October 22, 1902, characterizes the change between a hundred years ago and now as being a change from speculation to investigation. One hundred years ago a vaginal examination was evidently regarded as a very serious and solemn act or ceremony, as "it is usual for the room to be darkened and the bed curtains drawn close during an examination," and, moreover, "it should never, if possible, be proposed or made whilst an unmarried lady is in the room." What would Burns and his contemporaries say and think could they revisit this world and view the conduct of a midwifery case in a modern hospital? The author epitomizes the history of gynecology and obstetrics, and considers the present day status of the art and science. One of the great triumphs in obstetric art during the last few years has been in the diagnosis and treatment of extrauterine gestation, and although the last word has not yet been said regarding the ætiology, pathology, and early course of this abnormal condition, treatment is, nevertheless, practically summed up by all gynecologists now in early operation. It has been proved that the mortality in cases not operated on is at the rate of about seventy per cent., while at least eighty per cent. recover among those women upon whom operation is performed. The author agrees, with Dr. W. J. Sinclair, that the secret of cancer as it exists in the body generally, will yet be unravelled and explained by the study of cancer of the uterus. The gynecologist's watchword with regard to cancer should be—"clinical observation from the earliest stages of the disease." One very important point must be noted and emphasized. Cancer attacking the cervix is more readily recognized at an early stage than is cancer of the body of the uterus; but in spite of this fact, the cervical cancer is far more dangerous than the corporeal.

While some deaths at the puerperium cannot be avoided, the incontrovertible fact remains, that in

hospitals where the most badly fed, housed, and clothed, the most degenerate and deformed, are treated, the death rate from puerperal infection has almost vanished, while in private practice, in which, in most cases, the physical condition of the patients is much better, and the standard of health higher, the death rate is deplorably large. The whole responsibility for the prevalence of puerperal infection cannot be saddled upon the midwife. The medical profession must bear its share, and it must do so for several reasons, the first of which is the imperfect training in obstetrics which the medical student receives. Far too few labors are attended, and there is need of systematic practical instruction. The student is not obliged to attend regularly the practice of a teacher in a maternity hospital, and in that branch, which is the most important in general practice in either town or country, he is not so well taught in a practical fashion as he is in medicine or surgery.

Endothelioma of the Ovary.—Dr. M. Lange (*Zentralblatt für Gynäkologie*, January 17th) in recording a case of this kind, the forty-first in literature, says that the microscopical examination of all these growths shows a cystic formation in the ovary, some of the cysts being large, others representing an amalgamation of several small cysts. In this sense, they are true "mixed tumors," the endotheliomatous growth following the cystic degeneration. The great malignancy of this form of tumor is noteworthy. In the present case, the growth was so well removed that the pedicle showed no traces of it; yet the other ovary soon became affected and metastases rapidly appeared. The practical deduction is to remove both ovaries in doubtful cases since the artificial menopause is preferable to taking the risk of death by carcinoma.

NERVOUS AND MENTAL DISEASES.

General Nosology of Progressive Muscular Atrophy.—M. F. Raymond (*Presse médicale*, January 28th) divides the muscular atrophies into four classes. (1) *Spinal progressive muscular atrophy*, the type of Aran-Duchenne, which results from a degeneration of the trophomotor cells of the anterior horn. It begins in adult age and may be a family disease. It attacks principally the small muscles of the hand, exceptionally the circumscapular muscles. It advances centripetally and quite rapidly. It is accompanied by fibrillary twitchings, with the electrical signs of the reaction of degeneration, but there is no lipomatosis, or genuine or pseudo-hypertrophy of the muscles. The prognosis as to life is quite grave, as the myelopathy may extend to the bulb causing paralysis of the glosso-labio-laryngeal group. (2) *Progressive muscular dystrophy*; which may run its course with no evident alteration of the nerves or central nervous system. It begins most often in childhood or in late adolescence and has a tendency to affect members of the same family. It advances centrifugally and slowly from the superior portions of the extremities. There are no twitchings or altered electrical reactions in the affected muscles. There are never any bulbar symptoms and the patient may live for years with the disease. (3) *Type of Charcot-Marie, progressive neurotic muscular atrophy or peroneal type*. It

may begin at any age, it can assume a family type, it attacks mainly the muscles of the legs, rarely those of the hands. It advances centripetally and slowly. There are fibrillary twitchings, the reaction of degeneration and muscular cramps. Tabetic signs may accompany the disease, such as abolition of the tendon reflexes, subjective and objective disturbances of sensation, oculopupillary disturbances. Pathologically, there is probably a degeneration of the roots and anterior horns as in the first group, and also of the roots and posterior horns, especially the columns of Clark, as in tabes. (4) *Muscular atrophy of the type of Werdnig-Hoffmann*, which begins in early childhood and has a family character. There is a motor paresis of the lower extremities and the back which may become so marked that the patient is entirely helpless. It may invade the muscles of the arms, the neck and the chest. There is lipomatosis, and a reaction of degeneration, but no fibrillary tremor. The tendon reflexes are lost and exceptionally there is pain. The prognosis is grave, the patient succumbing in from four to five years. Anatomically, there is found a degenerative atrophy of the ganglionic cells of the anterior horns, an analogous atrophy of the fibres of the anterior roots and peripheral nerves—motor and sensory—and a progressive muscular atrophy with correlative adiposity.

PHYSIOLOGY AND PATHOLOGY.

Gangrene Foudroyante, Cadaveric Fat Embolism of the Pulmonary Capillaries.—Dr. M. Westenhoeffer (*Virchow's Archiv*, December 5th) believes that gas can be formed in the tissues only when they are dead. He reports in support, the case of a pregnant woman with cadaveric fat embolism of the pulmonary capillaries. On the endocardium of the right ventricle numerous fine drops of fat were found, and also in the smaller pulmonary arteries and capillaries fatty masses in characteristic sausage-shaped form were seen. Fat could be expressed on pressure from the deep femoral vein whence it was derived from the nutrient veins. Fränkel's gas bacillus was found in the discolored marrow of the thigh, although the tibial marrow was free. The fat embolism in the lungs is thus explained: the entrance of the gas producing bacilli was in the puerperal uterus, whence they were carried, during the time of dying (which lasted one hour and a half) into the bone marrow, and seeking a good medium, they lodged in the red bone marrow. Through the development of gas under high pressure, the fat of the bone marrow was driven into the circulation and remained in the pulmonary capillaries as the pressure was not sufficient to drive the gas through them.

Physiological Iodine Contents of the Cell.—Dr. J. Justus (*Virchow's Archiv*, December 5th) has examined the thyroid gland and other organs of animals, as well as plants, and comes to these conclusions: (1) The nuclei of the endothelial cells of the follicles contain less iodine than those of the colloid mass; (2) not only the nuclei of the endothelial cells, but every nucleus of every cell contains iodine. The author describes his technics minutely and makes some further chemical deductions.

Proceedings of Societies.

MISSISSIPPI VALLEY MEDICAL ASSOCIATION.

Twenty-eighth Annual Meeting, held in Kansas City, Mo., October 15, 16, and 17, 1902.

The President, Dr. S. P. COLLINGS, of Hot Springs, Ark., in the chair.

(Concluded from page 348.)

The Address in Surgery: Operations for Cancer of the Mouth and Neck.—Dr. GEORGE W. CRILE, of Cleveland, delivered the address. The author's summary is as follows: In the past three decades there has been a continuous decrease in the operative mortality, and even a more notable increase in the percentage of cures has been accomplished. Especially in the last decade there has been evidence of more confidence in operations, as indicated by an increased number of cases submitted early. The supreme importance of early diagnosis and early and radical operation is becoming widely recognized. The same may be said of the so called precancer stage, especially of the tongue. Except in cancer of the upper jaw, the disease is now regarded as involving the regional lymphatic system. The disease may be found in the lymphatic vessels and lymphatic glands. It rarely extends to other parts of the body. Physiological and clinical evidences show that severing the thoracic duct causes but little disturbance, owing to its free anastomosis; that the effect of resection of the internal jugular vein is practically nil; that unilateral resection of the vagus does not alter the heart's action, the respiration, or the digestion, but produces a permanent hoarseness only; that division of the superior laryngeal causes anesthesia of a part of the larynx, but pneumonia is improbable; that division of the inferior laryngeal causes paralysis of the corresponding vocal cord, but interference with respiration is not marked; that the division of the spinal accessory has but slight effect, on account of the double nerve supply to the sternomastoid and the synergistic action of other muscles; that the division of the hypoglossal causes temporary interference with speech and swallowing, but compensation occurs; that the submaxillary and salivary glands may be removed without symptoms; and that the removal of the sternomastoid muscle is not followed by torticollis, etc., on account of the synergistic action of other muscles. The complete removal of the lymphatic system of one side does not produce pseudoelephantiasis of the face and head. Permanent closure of the external carotid has an operative mortality of one to two per cent., due to thrombosis and embolism. Permanent closure of the common carotid or internal carotid is attended by an operative mortality of about three per cent., but in the cancer period of life from twenty to thirty per cent. of cerebral complications follow, about fifty per cent. of which prove fatal. Temporary closure of the carotid by means of a special clamp, as shown in the writer's forty-three cases, in which neither death nor cerebral complications occurred, is both efficient and safe. These physio-

logical and clinical data lead to but two objective points in unilateral operations for cancer of the mouth or neck, namely, complete removal of the disease and preservation of the blood supply to the brain. If necessary, sacrifice every other structure between the skin and the place of the deep muscles of the neck. Loss of blood is the greatest operative difficulty and danger. If hæmorrhage is likely to be considerable, the common carotid should be closed during the operation. In the mouth cases an anæsthetic may be administered through rubber tubes passed through the nostrils to the level of the epiglottis, with the tongue well drawn forward. The pharynx may then be packed with gauze, so as to form an air chamber in the lower larynx effectively, and prevent blood from entering the pulmonary tract. The dissection should be made on the same plan and as thoroughly as in the radical operation for cancer of the breast. The greater ease and certainty with which diagnosis may be early made in this region and the rarity of extension of the disease beyond the glands of the neck should enable the surgeon to obtain even better results here than in cancer of the breast. The hope for the patient lies in early diagnosis, early operation, and a logical technique.

Cancer of the Rectum.—Dr. EMERSON M. SUTTON, of Peoria, Ill., read a paper on this subject. He reported cases of cancer of the posterior vaginal wall penetrating to the submucosa of the rectum, with fibrous but non-malignant infiltration around the rectum producing stricture. He operated by the sacral route, resorting to the Von Volkmann-Rose incision. He resected the vagina, rectum, and one half of the cervix, anchoring the healthy end of the sigmoid to the gluteal side of the wound. He mentioned other cases from literature, and then gave reasons for attempting operations for extensive cancerous growths situated in the pelvis.

The Treatment of Extensive Rectal Strictures.—Dr. EMIL RIES, of Chicago, pointed out the difficulties in treating these strictures. He referred to septic conditions, anatomical changes, and the danger of recurrence. He discussed anastomosis after resection, end to end anastomosis, anastomosis without resection, side to side anastomosis after exclusion, and end to side anastomosis. He detailed his first case operated upon by the latter method, saying that the patient was well over five years after the operation.

Ureteral Catheterism; its Value in the Male and Female.—Dr. BRANSFORD LEWIS, of St. Louis, said the purposes of ureteral catheterism in connection with the cystoscope were for diagnosis and for treatment. Cases reported showed that ureteral catheterism, in both male and female, had been reduced to a practical procedure. With the author's cystoscope, the operator was enabled to look directly on the field. Air was used for inflating the bladder. One or both ureters might be catheterized at the same sitting. The operation was performed under local anæsthesia.

Dr. EASTMAN, of Indianapolis, thought a removable roof to facilitate withdrawal of the cystoscope,

leaving the catheter in the ureter, would be an improvement.

The Mechanics of Intubation.—Dr. B. F. GILLMOR, of Creston, Iowa, discussed the mechanical problem of intubation and exhibited drawings and x ray plates. He emphasized the importance of acquiring manual familiarity with instruments and the means by which this might be acquired, and then alluded to the problems of intubation and the difficulties of extubation.

Laminectomy for Fracture-Dislocation of the Fourth and Fifth Cervical Vertebrae.—In the case reported, the author, Dr. JOSEPH RILUS EASTMAN, of Indianapolis, stated that laminectomy was followed by improvement of motor and sensory conditions, but was unsuccessful so far as saving the life of the patient was concerned. Death occurred on the nineteenth day. After going at length into the literature of the subject, the author said that laminectomy for fracture or dislocation should be done early, the earlier the better. The longer pressure had existed, the more extensive the degeneration of the cord. Still hope need not be entirely abandoned in old cases, for laminectomy had relieved many such even after months had elapsed since the injury was received. Laminectomy *per se* was not dangerous. It presented the surest method of diagnosis of fracture-dislocation, and the most rational and efficient means of relief.

Extrinsic Traumatisms of the Spine; their Diagnosis, Pathology, and Treatment.—Dr. THOMAS H. MANLEY, of New York, read a paper with this title. In the present study of all lesions of a traumatic character sustained by the rhachidian structures or the medulla spinalis not followed by clinical manifestations of central complication would be included under the term extrinsic. These were designated contusions, sprains, hæmorrhage, fractures, diastasis, luxation, and structural and visceral complications.

The most frequent injuries, according to the author, were external to the spinal cord. They were rarely of such a character as seriously to impair function, although deformity and impairment of strength occasionally followed. No serious effort had yet been made by an American author to classify the pathology, to elucidate symptoms, or to establish the diagnosis in this important group of traumatisms.

Spinal Concussion.—Dr. CARL E. BLACK, of Jacksonville, Ill., in a paper on this subject, called attention to the loose way in which the term concussion of the spine was used and to the unclassified condition of such cases. The best dictionaries were quoted to show that the word concussion was misused, and should only apply to the manner in which the injury was received. A great deal of misunderstanding had arisen from the attempt of various authors to use the word to describe a distinct disorder. The various authors on surgery were quoted to show that there was a misunderstanding among writers as to the scope of the term concussion. The work of William Thorburn, of Manchester, England, was quoted as being the only rational effort which had been made to classify these disorders.

In conclusion, the author took the position that minute or capillary hæmorrhage was the basis of most, if not all, of these cases, and gave the following classification of injuries produced by concussion of the spine: Primary effects—sprains, contusion of the spinal cord, minute hæmorrhage into or around the cord. Secondary effects or complications—shock or collapse, acute hysteria, neurasthenia, chronic hysteria.

The essayist concluded with the following sentence: "It is certainly the duty of every surgeon to protect himself as well as any corporation he may represent and the best interests of his patient by distinguishing, if possible, between the purely psychical, the secondarily psychical, and the truly pathological condition, and treatment should be directed accordingly."

Spinal Cord Injury—so called Concussion of the Cord.—In this paper Dr. FRANK PARSONS NORBURY, of Jacksonville, Ill., stated that a scientific interpretation of concussion of the cord, so called, had not yet been attained. The term had become established by long usage, and was largely used because of the want of a better term to cover the clinical picture which it aimed to present. The lesion was doubtless a disturbance of the circulation due to injury to the blood vessels and lymphatics. Intramedullary hæmorrhage was thought by the author to be the immediate lesion. This conclusion was supported by the observations of Kocher, Thorburn, and Horsley on the surgical side of the controversy. Neurologists had varied views, some of which were decidedly hypothetical. However, most of them were inclined to the view that structural changes were probable, and that the degenerative and vascular changes following injury to the cord were indicated in the symptomatology of the disease. Facts were accumulating which made this view both tenable and reasonable. While many injuries to the cord showed no external evidences, the symptoms which followed indicated structural changes occurring within the substance of the cord and irritation of the cord roots by meningeal involvement. The symptoms in pronounced cases of hæmorrhage were compared to the more obscure condition called concussion, showing that hæmorrhage was common in traumatism of the cord, that similarity of sensory and vasomotor changes existed.

The author said regarding the psychical element in cord injuries that it was impossible to eliminate it. It was, therefore, important to recognize the definite and demonstrable symptoms—the symptoms which came on gradually, which in their entirety proclaimed the hæmorrhagic origin of the disease.

The neuropathology of to-day was leaning toward the organic origin of many diseases heretofore regarded as functional. Concussion of the cord was, in the judgment of the author, one of the most marked of these diseases, and he believed the research work of the future would establish this belief.

The X Ray in the Treatment of Malignant Growths.—Dr. EDWIN WALKER, of Evansville, Indiana, read a paper on this subject. The x ray

had given favorable results thus far. Its exact status must be determined by clinical observation. He reported a case of alveolar melanotic sarcoma of the face, which was removed. The growth returned in two weeks and had extended to the neck. A secondary operation was performed a month later. There was rapid extension from that time, so that within a few days almost the entire neck was involved. The wound had not healed. There was immediate improvement after the use of the x ray. The wound had cicatrized in two weeks, and all indurations had disappeared at the end of three months. The patient at this time seemed entirely cured. He spoke of the extent of the effects of the x ray on pyogenic germs. A test was made both in test tubes and Petri plates, the exposure to the ray being from ten to thirty minutes. The results were negative. While the x ray was of undoubted value in malignant growths, it should not be adopted to the exclusion of other known methods. Excision should be done, if possible, before the x ray treatment was begun.

The Physiological Action and Therapeutic Uses of the X-Ray.—Dr. C. M. MUTZ, of Douglas, Kansas, followed with a paper on this subject, in which he dissented from the opinions of those who believed that the physiological and therapeutic uses of the x ray might be intelligently studied without reference to its nature or genesis. It was not a "giant in chains" which physicians needed to approach in fear when they would unchain it, but no physician, in his opinion, should be content to use a therapeutic agent without inquiry as to its exact nature and the elements of its entity.

The Relation of the so called X Ray Burn to the Treatment of Malignant Growths.—Dr. J. RUDIS-JICINSKY, of Cedar Rapids, Iowa, contributed a paper on this subject. The action of the x rays on the tissues was of marked electrochemical character. Irritation followed, and a regeneration of tissues was the result. Three factors determined the special effect on the cell. 1. The condition of the body, *i. e.*, the amount of resistance the rays encountered. 2. The amount and intensity of the rays. 3. The character of the rays. When the irritation was moderate, the cells might be stimulated, but if it was prolonged or in excess, the change might be progressive in the tissues, leading to the so called burn, regeneration, absorption, reabsorption, or a total destruction of the cell.

The author emphasized the protection of healthy tissues in radiotherapy and other precautions in each case. He spoke of the selective power of the rays, attacking diseased tissues first. He reported failures and apparent cures. He discussed the technique and selection of vacuum tubes according to their burning time, soft tubes or soft medium tubes for superficial growths, and high vacuum tubes for internal growths.

The X Ray Treatment of Cancer, with Report of Cases Cured.—This was the title of a paper by Dr. EVERETT J. BROWN, of Decatur, Ill. The author discussed the subject under the following heads: 1. Technique, comparison of apparatus used, protection of the patient, protection of the operator, the distance of the tube, the time of ex-

posure, the frequency of exposure, and the selection and management of tubes. 2. Description of x ray dermatitis as compared with ordinary burns. 3. The remarkable influence of the x ray on all low grade tissue was superficial in location. 4. The uncertainty of results in the treatment of deep-seated malignant growths. 5. The advantages of the x ray treatment over surgery in many cases—(a) painless; (b) non-use of anæsthetics; (c) less destruction of tissue; (d) astonishing results in many cases regarded as incurable surgically. 6. Report of cases cured.

Renal Calculi or Hepatic Calculi; Differential Diagnosis.—Dr. CHARLES E. BARNETT, of Fort Wayne, Ind., read a paper in which he said that the x ray in diagnosis was not as valuable here as in other regions. The author contended that it was impossible to make a diagnosis, and suggested cutting down and exposing the kidney, then being governed by the findings.

Cyst of the Mesentery.—Dr. HERMAN E. PEARSE, of Kansas City, Mo., reported a case of cyst of the mesentery in which the patient recovered after operation. He stated that cysts of the mesentery were exceedingly rare.

Through and Through Intestinal Suture.—Dr. F. GREGORY CONNELL, of Leadville, Colorado, in a paper on this subject, said that a through and through suture should be employed in preference to one that perforated but a portion of the entire intestinal wall, because of less danger of yielding, less danger of leakage, smaller diaphragm, diminution of adhesions, less danger of necrosis, no foreign body, and a decrease in time.

The most appropriate place for the knot of perforating stitches was in the lumen, and as many intentional non-perforating stitches were in reality unintentional perforating stitches, owing to the relative sizes of the needle and the submucosa, it might be stated that the ideal location for the knot in practically all intestinal sutures was outside the peritoneal cavity, in the lumen of the gut. The diaphragm, by its valvelike action, prevented leakage. The square or double stitch was superior to the circular stitch with its top knot. It was of practical import to have the last stitch, as well as the others, pass through all the coats and be knotted in the lumen. As the perforating stitch had been substituted for the Lembert by many, it might be said that if twelve Lembert's were bad and ten perforating and two Lembert's were better, then twelve perforating were best.

The author closed his paper with a description of the technique and a report of fifty-four cases.

Gastrojejunostomy with the McGraw Elastic Ligature for the Relief of Gastropnoia.—Dr. H. O. WALKER, of Detroit, read a paper with this title. He said that little had been done surgically for the relief of this condition. He reported three cases of successful operation, and closed by saying that, of all methods that had been suggested for the performance of lateral intestinal anastomosis, none, to his mind, possessed the advantages of the McGraw elastic ligature, because its simplicity was far greater than any other method yet presented, because of the ease and rapidity with which it could

be done, because of the lesser liability to sepsis than by any other method, because there was no danger from a foreign body, and because a larger opening could be made without liability to cicatricial contraction.

Section Following Vaginal Puncture.—Dr. JOHN YOUNG BROWN, of St. Louis, read a paper in which he spoke of the value of vaginal section in selected cases of pus in the pelvis. He called attention to vaginal section in contradistinction to so called vaginal puncture. He alluded to the post-operative complications following vaginal section, as shown by a series of cases in which abdominal section was subsequently done.

Cancer of the Uterus in the Mississippi Valley.—Dr. EMORY LANPHEAR, of St. Louis, read a paper in which he said that Eastern surgeons did not operate on cancer of the uterus, while Western surgeons did. What was the result? The census statistics of 1900 showed cancer of the breast, on which all operated, east and west; cancer of the stomach, on which no one operated, and cancer of the uterus, as follows: East.—Cancer of the breast, 613 cases; cancer of the stomach, 1,785 cases; cancer of the uterus, 1,101 cases. Mississippi Valley.—Cancer of the breast, 874 cases; cancer of the stomach, 3,776 cases; cancer of the uterus, 679 cases. The difference showed larger proportions of carcinoma uteri operated upon in the West, with either a cure or return of the disease in other organs; hence death was not included in the deaths from cancer of the uterus. Reports from 74 operators in the Mississippi Valley showed 274 cases in which the patients had lived more than five years. The diagnosis had been confirmed by the microscope in most cases, a result encouraging for earlier diagnosis and prompt hysterectomy.

A Plea for the Abandonment of the Abdominal Belt After Cœliotomy—Dr. MAURICE KAHN, of Leadville, Colorado, read a paper on this subject. It was the writer's belief that if in consequence of his plea sufficient interest was aroused in the subject, it would be but a short time when the post-operative abdominal belt would be obsolete. Attention was called to the direction of the muscular fibres, which intersected each other at angles varying from about 25 to 90 degrees. By reason of a common nerve supply, the abdominal muscles acted synchronously. The excellent cancellated arrangement of the abdominal muscle fibres made the grid-iron operation the one of choice, for then the contraction of the muscles tended in itself to safeguard against hernia. He believed the straight through technique to be the most effective factor in obtaining an ideal result in most cases, not so much because the muscles were cut transversely, but because of inaccurate suturing. The application of an abdominal belt, which, if tight enough to exert any influence, must relieve the muscles of their usual labor, resulted in the atrophy of non-use, whereas it would be desirable to have the hypertrophy of overuse. If it were possible to apply a belt inside the abdominal wall, it might perhaps be of service in giving the cut edges an opportunity to firmly unite before any strain was imposed upon them. Such arguments could

not be advanced in favor of the external abdominal belt, which would not prevent the exertion of pressure on structures internal to itself. It had been his practice for over three years, after removing the first dressing, which was applied snugly for comfort and removed at the end of a fortnight, to allow patients to go without any support.

Early Diagnosis and Conservative Treatment of Fibromyomatous Tumors of the Uterus.—Dr. L. G. BOWERS, of Richmond, Indiana, called special attention to the importance of the early diagnosis of fibroids, thus leading to conservative methods of treatment. He enumerated some of the symptoms of fibroids that were many times attributed to other trivial causes on a superficial examination, and insisted that the patient be examined under an anæsthetic and curetted at the same time, if necessary. He pointed out that most of the literature dealt exclusively with the operative views, and nothing was said about preventive measures. The early practice of such treatment often obviated the necessity for hysterectomy later on.

The Treatment of Fractures of the Patella.—Dr. DAVID C. PEYTON, of Jeffersonville, Ind., discussed the relative frequency of these fractures, contraction of the quadriceps as an efficient agent in the ætiology, the displacement of the fragments and the associated injuries to the soft parts, and the diagnosis, and then outlined the advantages of treatment by open arthrotomy as compared with non-operative procedures.

Cleft Palate.—Dr. TRUMAN W. BROPHY, of Chicago, gave a lantern demonstration of his method of operating in cases of cleft palate. He also exhibited patients upon whom he had operated, showing excellent results. The patients were able to articulate remarkably well.

A resolution was adopted making the Mississippi Valley Medical Association a district branch of the American Medical Association. The constitution and by laws of the former would be revised to conform to this change.

The following officers were elected: President, Dr. Edwin Walker, of Evansville, Ind.; vice-presidents, Dr. Hugh T. Patrick, of Chicago, and Dr. William Britt Burns, of Memphis; secretary, Dr. Henry E. Tuley, of Louisville; treasurer, Dr. Thomas Hunt Stucky, of Louisville. Memphis, Tenn., was selected as the place for holding the next meeting, in 1903.

Letters to the Editor.

HOW TO STOP THE SPITTING NUISANCE.

1649 AMSTERDAM AVENUE.

To the Editor of the NEW YORK MEDICAL JOURNAL:

Sir: A marked diminution in the habit of spitting upon the floors of public conveyances, waiting rooms, and the like, has been noticeable during the past few years; yet this habit still remains a great source of danger and disgust. One can rarely travel five miles in a public car without seeing one of his fellow citizens expectorating into a pool of sputum at his feet—or perhaps he soothes his con-

science by obliterating each contribution with the sole of his shoe, gazing complacently meanwhile at the sign opposite which assures him that his act is punishable by a fine of \$500, or imprisonment for one year, or both.

Without any discussion of the admitted danger in this habit, or of the desirability of stopping it, I would offer a solution of the problem which, it seems to me, might prove effective and which would cost the city practically nothing. Let there be assigned to the service of the health department a small number—say three, or perhaps one would be sufficient for a test—of plain-clothes detectives whose sole duty should be to arrest and bring to prosecution violators of the antisputting ordinance. Let these men, or this man, spend their time traveling upon various public conveyances, varying their circuit constantly so that their effect may be felt everywhere within the city limits. Let there be full warning published in the cars, waiting rooms, etc., that these men are abroad. This knowledge in itself would have a strong deterring effect; a would-be offender would think at least twice before acting if he had the uncomfortable suspicion that the innocent-looking man across the aisle might have a detective's badge under his coat. Let the arrests be published, so that the offenders shall find themselves unpleasantly notorious. Let the punishment be light at first—the minimum fine for those who are in position to pay it, a reprimand for the poor workman. But for a second offense, and as time goes on, and the public becomes educated, let the penalty be more severe.

The ordinance fails at present because there is no one to bring complaint against the offender. The detective would meet this need. He might be stimulated to activity by a reward for each arrest. The fines collected should be sufficient to repay the city for the detectives' services.

WILLARD P. MILLSPAUGH, M. D.

Book Notices.

Enfermedades de la Nariz, Boca y Garganta. Vol. III. Manual Teórico y Práctico de las Enfermedades de la Laringe. By RAMON DE LA SOTA Y LASTRA. Sevilla: Escuela Tipográfica Salesiana, 1902.

This, the third and last volume of a series upon diseases of the nose and throat, deals exclusively with affections of the larynx. While it may be considered as essentially a book for the specialist, yet the clear and concise treatment of the subject brings it well within the grasp of the general practitioner and student, who will find profitable reading in its pages, especially in the chapters which treat of the laryngeal affections met with in general practice. The division of the work into three volumes of handy size, constitutes a desirable exception to the general run of cumbersome medical literature. Though the illustrations are not numerous, they are well chosen, and have the advantage of distinct numbering of their details with complete notes descriptive of the numbered

parts. The author has brought to the work a wide experience and deep interest in his subject, which ensures its careful and complete presentation.

Atlas and Epitome of Traumatic Fractures and Dislocations. By Professor Dr. H. HELFERICH, Professor of Surgery at the Royal University, Greifswald, Prussia. Authorized Translation from the German. Edited by JOSEPH C. BLOODGOOD, M. D., Associate in Surgery, Johns Hopkins University, Baltimore. Fifth Edition, Revised and Enlarged. With 216 Colored Illustrations on 64 Lithographic Plates, and 190 Figures in the Text. Philadelphia and London: W. B. Saunders & Company, 1902. Pp. 3 to 353. (Price, \$3.) (*Saunders's Medical Hand-Atlases.*)

The feature which distinguishes this edition from its predecessors is the large number of x ray illustrations. To facilitate the interpretation of the pictures, a schematically drawn illustration of a normal Röntgen picture of each articulation is outlined. The author rightly emphasizes the extreme value of such pictures in the diagnosis of fractures. We beg leave to correct the editor in that Whitman was the first to call attention to the fracture of the neck of the femur of children, and not Sprengel. Furthermore, the suspension treatment of Colles's fracture dates back to Malgaigne, revised by Moore in this country, and is not original with Storp.

Dictionary of Philosophy and Psychology, including many of the Principal Conceptions of Ethics, Logic, Æsthetics, Philosophy of Religion, Mental Pathology, Anthropology, Biology, Neurology, Physiology, Economics, Political and Social Philosophy, Philology, Physical Science, and Education, and giving a Terminology in English, French, German, and Italian. Written by Many Hands and Edited by JAMES MARK BALDWIN, Ph. D. (Princeton), Hon. D. Sc. (Oxon.), Hon. LL. D. (Glasgow), Stuart Professor in Princeton University, with the Cooperation and Assistance of an International Board of Consulting Editors. In three Volumes, with Illustrations and Extensive Bibliographies. Vol. II. New York: The Macmillan Company; London, Macmillan & Co., Limited, 1902. Pp. xvi-892.

It is but a short time ago that we noticed the first volume of Professor Baldwin's great work. Though Vol. II does not complete it, it does complete the vocabulary. The third volume will consist largely of bibliographies.

In spite of the wide range of study with which this dictionary deals, the investigator in medicine, especially in neurology, will find in its pages the elucidation of much that it would not be easy for him to get at elsewhere; hence it is a book that ought to meet with an extensive circulation among physicians.

We must congratulate Professor Baldwin on the promptness with which the second volume has followed the first—indeed, on the virtual completion of his great undertaking.

Miscellany.

A Surgeon's Liability for Operating without the Patient's Consent.—According to the *New York Times* for February 20th a decision by Judge Tooley, at Chicago, rendered on February 19th decides that damages may be assessed against a physician for performing, without first obtaining the patient's permission, an operation that results in serious consequences. The opinion was rendered in a case brought by Mrs. Parmelia J. Davis against Dr. Edwin H. Pratt. It was charged that the plaintiff went to Dr. Pratt's hospital in May, 1896, and was operated on without her consent or the consent of her husband. She was afterward adjudged insane.

It was not asserted that the doctor performed the operation in an unskilful manner and no malpractice was charged. "It cannot be reasonably contended that the doctor acted from any malicious motive," the court said in rendering decision. "The absence of malice does not excuse an unauthorized trespass on the body of the plaintiff." The judge fixed the damages at \$3,000.

Tapeworm in the Brain.—The *Indian Medical Record* for December 10th quotes the following extraordinary account from the *British Journal of Nursing*: "A most curious case was recently made public in the course of an inquest on the body of a man who died in Pentonville Prison while undergoing a sentence of two months' hard labor. Dr. Syme, assistant medical officer, said that the deceased man was in good health when admitted, and was put on oakum picking. On his first serious symptom of illness he was removed to the prison infirmary and died suddenly on the following day. The case was a most unusual one. On examination, his brain was found to be studded with larvæ of the tapeworm. There were over fifty of these parasites, and they had worn away the skull. The tapeworm must have been generating for years. The eggs, which the deceased must have swallowed, were of canine extraction and were believed to have come from the dog. Death was caused by the larvæ of the tapeworm, of which specimens were shown to the jury."

[It would be very interesting to know by what channel the ova could have penetrated within the cranial cavity.]

Ne Quid Nimis.—That genial old cynic and humorist, Montaigne, should be read by every physician, if only to have any superfluous conceit taken out of him. We should have thought this remark unnecessary if we had not recently come across no less than three physicians in succession who confessed to never having read Montaigne. Just to whet their curiosity, if there be any more such, we quote the following passage (Cotton's Translation: Chapter lxxiii): "Æsop, a most excellent author, and of whom few men discover all the graces, does pleasantly represent to us the tyrannical authority physicians usurp over poor creatures, weakened and subdued by sickness and fear; for he tells us, that a sick person, being asked by his physician what operation he found of the

potion he had given him, 'I have sweat very much,' says the sick man; 'that's good,' says the physician; another time, having asked him how he felt himself after his physick, 'I have been very cold, and have had a great shivering upon me,' said he: 'that is good,' reply'd the physician; after the third potion, he ask'd him again how he did, 'Why, I find myself swell'd, and puff'd up,' said he, 'as if I had a dropsie.' 'That is very well,' said the physician. One of his servants coming presently after to inquire how he felt himself, 'Truly, friend,' said he, 'with being too well, I am about to die.'"

Some Humors of the Physician's Career.—Mr. George Munro Smith (*Bristol Medico-Chirurgical Journal*, December) in his presidential address on the Medical Life, to the Bristol Medico-Chirurgical Society, gave some humorous incidents in the physician's career, from which the following are selected: In acting for another physician, for instance, one occasionally gets rebuffs. "The patient asks with a sigh when Mr. So and So is coming home, and looks very depressed when you have to answer, 'Not for two weeks.' I once was sent for by a lady doctor to give an anæsthetic in a midwifery case. Almost before I entered the room I was received with a loud and jubilant 'Thank God, he's come!' which immediately died away into a kind of despairing howl and the—to me—painful explanation that she thought I was a great name-sake of mine. Once or twice patients have confided in me the embarrassing news that they are dying to get rid of their own doctor, but don't know how to do it. Probably my patients have frequently said the same of me. This is very trying, but I think the strangest rebuff I ever heard of was given me when I was attending an elderly nervous lady for a Clifton physician. One morning I called and was kept waiting on the door-step whilst someone peeped through the blinds, and a short colloquy was apparently held; the result being that a servant at length opened the door and cheerfully informed me that Miss H. sent her kind regards, but was 'too ill to see me this morning!' This is a very pretty instance of unconscious feminine humor. Patients frequently say very amusing things with the most serious intention. They wish to be kind and say 'that the medicine does not seem to have hurt them,' as if that was something to be thankful for. During the absence of a well-known Clifton practitioner a patient called on his substitute and explained that she deeply regretted Mr. C.'s absence, as she was so anxious for him to see her husband. 'You know,' she said, 'Mr. C. attended my first husband in his last illness.' I may add that Mr. C. has now returned and the lady is, I notice, in deep mourning.

"I suppose it was with no idea of deliberate irony that a busy undertaker wrote to one of our past presidents, asking if he was offended with him in any way, as he had lately put so little business in his hands. I met this undertaker the other day, and he spoke in high terms of this doctor, so I suppose he has now no complaint against him. It is not only patients and undertakers who say funny things without knowing it. I sent a lady to see a specialist once, and he gave her this advice: 'You

should take a brisk saline purgative every day before breakfast, and you should spend your mornings on the Downs.' And you have probably heard of the eminent man who went from curiosity to a great revival meeting, and sat on a bench in the front of the hall. A Salvation Army officer came round and said: 'Oh, are you saved?' to which he answered, rather losing his presence of mind: 'Oh, no; I'm a Clifton doctor!' The Salvationist also lost his head, and said: 'Oh, I beg your pardon!'

The Earliest known Physician, Sokhit-ni-onkh.

—Dr. Sandwith, professor of medicine and senior physician at Kasr-el-Aini Hospital, Cairo, gives, in the *British Medical Journal* for November 1st, a most interesting account of Sokhit-ni-onkh, who lived some 5,500 years ago. The doctor was stimulated thereto by the sketch given in Dr. Wittington's *Medical History from the Earliest Times*. Dr. Sandwith rediscovered the tomb, and writes as follows: "The tomb itself is situated at Sakkarah, the necropolis, now mostly in ruins, of the mighty city of Memphis, which flourished about B. C. 4000 and later, a few miles south of Cairo. It is an oblong mastaba, sixty feet by forty-eight feet, quite plain except for a well dug through the masonry. The sarcophagus chamber is roughly hewn out of the limestone rock which forms the plateau of Sakkarah. Mariette says (*Les Mastabas*, p. 202) that it was built in a very ordinary way, but that near the well there was a magnificent stela of fine white limestone, engraved with all the perfection of that epoch. The mastaba had no chapel inside, and therefore no door, but there was a stela in the form of a false door near the northeast corner. It was probably rifled and the mummy destroyed in very early times. This false door is more accurately described as a ka door, which was provided for the spirit to pass in and out by, and it was in front of this ka door that offerings were sometimes placed, such as food for the ka, or soul of the departed. * * * * * The name Sokhit-ni-onkh signifies 'the man who is possessed of life'; and it must be remembered that the ancient Egyptians thought life and death were individual beings, who could, if necessary, be eaten and swallowed. They also believed that every sick man was possessed by the spirit of a dead man or woman. Who so likely, therefore, as the priest to be able to drive out the usurping spirit, which must be done before it was worth while to make any attempt at healing the sufferer's body, which had been damaged by the occupation of the intruding spirits? In those days there were no physicians outside the priesthood, though bone-setters probably practised from the earliest times. Sokhit-ni-onkh was certainly a physician as well as a priest, because all the other titles after his name are only honorary ones given to every chieftain of high rank about the court. His title as physician is *sennu*, which signifies wisdom or knowledge, and it is represented here and elsewhere in hieroglyphic writing by an arrow with a broken shaft, because the word for arrow was phonetically the nearest to the word for wisdom. Here we might stop for a minute to compare the Arabic *hakeem*, which has an etymology similar to *sennu*, and the English words wise, wit, witch, wizard, which Skeat tells us are all derived from the old English

verb *wit*, to know. Again, *medicus* comes from *medh*, to be wise.

"M. Maspero (*Proceedings of the Society of Biblical Archaeology*, 1888-89, vol. xi, p. 309), has devoted a chapter to the consideration of this inscription, because, unlike most of the monuments of that date, it contains some interesting details, and helps to elucidate the meaning of a few architectural terms. After the ordinary formulæ, experts can read on the door posts of the ka door the two following sentences. On the right, Pharaoh Sahura, of the fifth dynasty, says: 'His Majesty says to the chief physician, Sokhit-ni-onkh, Strength to thy nose, thou whose steps towards the West are truly beloved by the Gods, and honorable old age, as for a trusty and well-beloved servant.' The first words are an ordinary salutation to the living or the dead, and are equivalent to wishing a cool breeze from the north, or air to breathe direct from the Mediterranean, an important necessary for dwellers in dried-up Egypt. The trusty servant refers to one who freely devoted himself during life to the king, and after death to a God.

"The physician then writes: 'I worship the great King, and I pray even God for Sahura, for he knows me and mine. Thus every wish from the mouth of His Majesty is realized for me, for the God (Anubis) has granted him to excel in medical affairs because of the great veneration that he has for him more than for every other God. Oh, you who love Ra, pray to every God for Sahura, who confers these benefits on me, for I am his trusty servant, I never do anyone any harm.' In these last lines the physician requests all those who in the future will read his tombstone to add in their prayers the name of the son of Ra.

"On the left door post the physician tells us what the King has done for him. 'The chief physician, Sokhit-ni-onkh, says of His Majesty, "It is thy double, oh, friend of Ra, who hast divinely decreed to give me a stone door for this tomb in the cemetery." His majesty ordered that two stone stelæ for doors should be brought from Tourah, and that they should be erected in the interior of two niches of the Khaourri Sahura building (Vision of the crown of Sahura). The chief taskmaster of two gangs of artisans (carpenters and sculptors) from the sacred workshops provided skilled laborers to execute the work. His Majesty was every day at the workyard, seeing that religious decoration was carried out, the whole day long. His Majesty made them execute blue sculptured hieroglyphics of lapis lazuli.'

"It is clear from this, that the Pharaoh profited by an expedition sent to the quarries of Tourah, on the other side of the Nile, to procure an extra stela, which he gave to his physician, and allowed this to be erected while he was himself superintending the funeral chapel attached to his own future tomb. * * * * * On the stela the physician stands with a sceptre in one hand and a wand in the other, sometimes alone, sometimes with his wife standing behind him. His name is always written plainly above his head, but the wife's name has in every case been carefully erased, which I am afraid must mean that our reverend predecessor was more fortunate at court than in his home life."

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WHOLE No. 1266.

Lectures and Addresses.

SOME SCIENTIFIC AND PRACTICAL ASPECTS OF VACCINATION.*

By P. H. BRYCE, M. A., M. D.,
TORONTO, CANADA.

SECRETARY OF THE PROVINCIAL BOARD OF HEALTH OF ONTARIO.

Mr. President and Gentlemen of the Medical Society of the State of New York:

I have to express my appreciation of the favor conferred upon me through the invitation to address your society on a subject which, however old and hackneyed, becomes in view of its present importance one of extreme interest.

After a hundred years since Edward Jenner's discovery was accepted in Europe and by some of the more eminent physicians of America, we find a disease, which, in the eighteenth and preceding centuries had its victims indifferently in the hovel and in the palace, so little prevalent, that until within the last three years the majority of living physicians in America and Canada had never seen a case of smallpox; and, as it has happened, the great number of cases which have been seen on this continent recently have been so mild, that we have to go back to the days of Sydenham in the seventeenth, and of Van Swieten in the eighteenth century to find a parallel for this anomalous type of the disease. It therefore has not been unnatural that to those inexperienced in the appearance of the disease, and even to those familiar with the type of the disease as it has appeared when introduced from Europe, much doubt has arisen as to whether the disease which was brought from Cuba in 1898, and spread so widely over the Southern, Western, and Central States and Canada, was true variola.

Our supreme test of vaccination, however, has enabled us to prove conclusively its nature, since the disease has been successfully combated by that wonderful discovery of Dr. Edward Jenner, as the numerous outbreaks were which from time to time previously had appeared since 1800.

What he taught in brief, was that by vaccination we introduce by inoculation a disease which causes a vesicle of a particular character on the teats of a cow, or on the tender skin of the belly of a calf,

* An address delivered before the Medical Society of the State of New York at its ninety-seventh annual meeting.

the virus of which when inoculated into a person produces a vesicle of a similar character.

We now know, what Jenner and other experimenters of his time believed from their experiments in variolation or inoculation with smallpox virus, that a similar vesicle can be produced through inoculating several calves in a series with virus from a smallpox patient, and that this smallpox virus thus modified produces in other calves, in man, in monkeys, and in guinea pigs, a vaccine which protects against smallpox completely, in practically all cases for ten years, in a large percentage for twenty years, and which, though decreasing, continues to protect against the severity of an attack of smallpox to a large degree throughout life. In the absence of any knowledge of the germ theory of disease, it is natural that Dr. Jenner and his associates should not have arrived at any clear idea of how this protection was produced, further than that it was the same as that caused by other eruptive maladies, whether in man or animals.

Not until Pasteur's discovery of the germs of anthrax and chicken cholera and his success in producing immunity by the cultivation of the microorganisms of these diseases, did it become possible to formulate any theory as to how the protection by inoculation with the germs of a disease was brought about.

Without discussing the modern experimental evidence regarding immunity, we have only to realize the organism of any bacterial disease as a simple cell, having its environment within the body, subject to variations just as in nutrient media, and multiplying and completing its life cycle in the body, obtaining its pabulum from the fluid tissues and their contained cells, and producing substances peculiar to itself, acting upon and being reacted upon by the normal tissue cells, in order to understand that its pabulum may be exhausted as in a culture medium, that its products may become autotoxic, and that they may stimulate in the tissue cells of the body the production of compounds inimical to the further development of the microorganism of the specific infection.

We may, therefore, very properly conclude that as the bacillus of diphtheria grown outside the body produces its toxine, which introduced into horses produces the antitoxine, whose quality and strength can be measured, so the variolous or vaccinal germ

produces its toxine, which stimulates the tissue cells to produce their antitoxine.

That such is actually the case has been experimentally proved, especially by Beclère and Chambon, of Paris, who have shown that active vaccine lymph may be neutralized by adding to it in test-tubes the serum from vaccinated heifers, or from men or monkeys recently having had variola. We have every reason, therefore, to conclude that variola is a bacterial disease, and that Copeman's, Klein's, and others' claims that they have isolated the microorganism of smallpox or vaccinia, are founded upon fact.

The progress of vaccinal immunity in calves has further been admirably illustrated by the experiments of Beclère and Chambon, in which subcutaneous injections of active glycerinated lymph were made; and subsequently epidermal inoculations were made on successive days from the third to the seventh. The effect on the vaccine vesicles when the scarifications were made after the fourth day, were:—(a) Vesicles appearing sooner than in normal vaccination; (b) vesicles modified in external appearance, rapidly arrested or aborted in development; (c) lymph having little or no virulence when taken from vesicles after the fourth day. Such in brief is the basis upon which the immunity caused by vaccination rests; and it must be satisfactory to all who have followed the marvellous results of the biological studies of infectious diseases carried on during the past quarter of a century.

It is, however, a remarkable fact that while the practice of protective and curative inoculations in the instance of diphtheria has been generally accepted both by the profession and the public, there has nevertheless, grown up during the very period in which the experiments which form the groundwork of all our theories of immunity have been carried out, an opposition both to the theory and practice of vaccination against smallpox, which even in conservative England which claims the honor of the great discovery of Dr. Jenner, resulted in 1898 in the introduction of the "conscience clause" in the compulsory vaccination act.

Wherein, then, lies the origin of this opposition? Primarily, I believe, it lies in the simple fact that vaccination laws are compulsory. We have, in fact, no other law compelling persons to subject themselves to inoculation with a disease at a time when they are in perfect health, and when as a matter of fact no cases of the disease may exist in their community, or indeed in their country.

In the second place, the fact exists that in an occasional case unfortunate results have followed the operation, giving some reason for the objections which have been raised.

What moral grounds then can we have for insistence upon the necessity for such legislation; and, if such can be shown to have a basis in reason, what are the logical deductions to be drawn as to the moral duty laid upon the State which institutes such legislation?

With regard to the first question we have several answers:

1. That vaccination has during a century, been the means of reducing the mortality from a disease, which previously caused one-tenth of all deaths in European countries, to the lowest of any of the infectious diseases which we have to combat in temperate climates.

2. That the theory of the immunity caused by it is based upon experimental evidence which has completely revolutionized the practice of medicine, and produced results in the instance of such diseases as anthrax, rinderpest, plague, and diphtheria, which are comparable to that of vaccination itself.

3. That inasmuch as the infectiveness of smallpox is incomparably greater than that of any of these diseases, experience in every country has shown that, while sanitation, isolation, and disinfection play important parts in the work of prevention, even the most complete sanitary organization has utterly failed again and again to eradicate the disease from a community without vaccination.

4. That we have the marvellous fact that vaccination is adequate to protect completely against the disease after exposure has taken place, even up to the fourth day, and of reducing the severity of the disease to a non-fatal issue in almost every instance where vaccination is concurrent with the smallpox.

If, then, we have such potent reasons for persisting in our demands for compulsory vaccination, we must be prepared to accept the fullest responsibility for the position taken, which must be that, if we insist on compulsion, we shall not through indifference or neglect allow anything to exist or take place by which any element of danger can enter into the results of the operation.

I am quite prepared, gentlemen, to admit, that while any serious results which have ever been shown to follow the operation are in practice infinitesimal compared with the total number of operations, yet the secondary effects of the operation at times, from the ethical standpoint, have been such as to clearly inculcate the producer, the operator, the patient, or two, or indeed all three together.

As regards the producer we must realize that while bovine vaccine has been produced and used largely during the past twenty years in America, the methods adopted, being in the hands only of private producers, would not be likely to be improved beyond the scientific knowledge of the bio-

logical theories explaining the mode of its production. Not until bacteriology had made known to us the part played by staphylococci and streptococci in pyæmia and septicæmia, could we understand why the secondary infections were unnecessary and avoidable complications of vaccination, recognized however as to their existence even by Jenner, who said, "That the most material indisposition, or at least that which is felt most sensibly, *does not come primarily from the first action of the virus on the constitution*, but that it often comes on *if the pustules be left to chance*, as a secondary disease." Hence it was not uncommon up to quite recent years for lymph to be taken from vesicles on a second or even a third day, and for clamps to be used for extracting the largest amount of lymph possible from the vacciner. Within the last ten years, however, with the experimental work of Blaxall, Cope-man, and others, all this has changed; and to-day we have producers everywhere supplying, or endeavoring to supply, a vaccine free from extraneous organisms. As usual, the very virtue of the method has become in some instances a defect, and it is found that at times the activity of the virus itself has disappeared. New producers have entered the field, widespread outbreaks have created unexpected demands for vaccine; and between inexperience and commercial necessities, the practice of vaccination has been injured by lymph at times of excessive virulence, and oftener by that having no protective value. It is, therefore, apparent that until all vaccine sent to the operator has been tested, and indeed standardized, as is diphtheria antitoxine, by experiments on persons and animals, we must feel that the ethical demands of the situation have not altogether been met.

That it would make lymph more costly can be no valid reason for its not being done; and no State with a compulsory law can evade the responsibility for neglecting to demand of producers that all vaccine supplied be tested or, failing to secure this, must supply adequate facilities for its production by qualified State officers. When we turn to the operator or public or private vaccinator, we find that, while the State licenses medical practitioners, there seems to have been everywhere on this continent a growing neglect on the part of Medical Colleges either to teach the theory or to illustrate the practice of vaccination. We find lymph which has been stored for weeks in a drug store, used by the practitioner, as if it were an inert mineral drug, incapable of change; and while, in a surgical operation of another kind, the practitioner may carry out aseptic precautions to an almost absurd extent, he will invade the uncleansed epidermis with perchance an unclean scalpel, and after scarification leave the un-

protected wound to its fate, with an unthinking disregard as to whether its course may be normal, or a dangerous secondary infection supervene. In all this the personal elements as regards scientific knowledge and personal responsibility from the ethical standpoint, are points which perhaps it would be too much to make the State responsible for; but if the credit of vaccination is to be lessened or a single person injured by the operation, then it is clearly the duty of the State to allow such compulsory work to be performed only by responsible trained public vaccinators, and to establish heavy penalties, as is done in Germany, for any unqualified person performing the operation, or for proved carelessness on the part of a public vaccinator.

It is apparent that to institute such a system, legislation of a kind similar to that of England and Germany, would be essential. In England, and especially in Germany, such compulsory vaccination is accompanied by provisions for the production of vaccine by State establishments, where the responsibility for the production of tested lymph properly rests, and whence lymph is supplied to qualified public vaccinators appointed by the municipalities. The system further provides for the regular and systematic vaccination of infants and of revaccinations on entrance to the schools and to the army and navy. Such desiderata are making themselves felt more and more on this continent, where increasing urban populations and the facilities for the transmission of infection through the extending travel of railways are annually becoming greater.

With regard to the individual responsibility for unfortunate results of the operation, little need be said. If the vaccinator does not warn the patient of the precautions to be taken, we may expect that the latter will too frequently, through ignorance, be lacking in a knowledge of the care necessary to protect himself. He ought to be taught to know that he is inoculated with a disease, and that for the short time required he must consider himself a patient. In the 1900 report of the medical officer in charge of the vaccinations at the National Vaccine Establishment, London, we are informed that out of 1,892 primary vaccinations, eleven on subsequent inspection showed some abnormal course, most of which consisted of "sore arm" caused by *domestic maltreatment*.

In view of the distribution by producers of lymph, through the journals of this country and through advertising circulars within the past three years, of statements regarding vaccination, which at times have been at variance with the authoritative teaching on the subject, it may not be ill-timed to refer briefly to the question of what constitutes a

normal lymph and a normal vaccination.

It must be remembered that for years we have looked upon a good vaccine as one, which, by its more rapid evolution, will within eight days have developed so complete a vesicle that it will serve to protect a person inoculated, up to the fourth day after an exposure to smallpox, the incubation period of which is from twelve to fourteen days. We learn from report after report of the National Vaccine establishments in England, Germany, and France, that the vesicle on the calf is mature within 96 to 120 hours after inoculation. So fixed for many years was the period of maturation of the vesicles in man, that the compulsory laws of England required all children to be brought on the eighth day for examination of the pock. According to Copeman, of the London National Establishment, glycerinated as well as crude lymph, if normal, will have produced by the seventh day a vesicle 5 or 6 m. m. in breadth with a glistening, translucent margin of a nacreous or pearly appearance, with the pale-red areola, the rest of the surface presenting a more opalescent bluish-white appearance; while the patient suffers from malaise, with some inflammatory fever, and involvement of the axillary glands. From this pearly margin our old teachers took the lymph on the eighth day for arm to arm vaccination. With this picture so constant for a hundred years, it is astonishing that we should recently have had new teachers informing us that glycerinated lymph produced normal vaccination, when a vesicle had matured on the twelfth day, without, as many of us know, presenting the pearly border and characteristic vesicle which we had been taught to look for. It is apparent that if we are to accept this new teaching, the protective inoculation after an exposure to smallpox would become impossible. Fortunately this new doctrine was short-lived; and, personally, I have been able to demonstrate even to the satisfaction of producers that a normal lymph, even though it may have had to overcome some slight immunity, was able to produce (on the eighth day) in a patient vaccinated thus a vesicle of a quite typical character. Such lymphs, therefore, we have unfortunately had good reason to know, have not only not protected against another vaccine, but have not protected against the mild type of smallpox which has so generally prevailed.

It has hence become essential to the maintenance of the credit of vaccination, that public officials as well as the profession, should not only have perfectly clear ideas as to what a normal vaccination is, but that they further be placed in such a position in their several States and cities as to insist upon the use of only such vaccines as will produce normal results and effective immunity.

One of the results of these new theories has been to cast discredit on the very great advances which have been made through the introduction of aseptic glycerinated lymph. Articles everywhere have been appearing in the medical press condemning unsparingly glycerinated lymph; and from the standpoint of the results above indicated, with some reason. But it is apparent that when we can obtain statistical results collected from hundreds of public vaccinators under an organized system, where, as in England, in the year ending March 31, 1902, lymph for 974,595 vaccinations had been sent out from the National Vaccine Establishment; and where for the quarter ending December 31, 1901, 264,044 vaccinations showed a success of 97.9 per cent., and an insertion success of 93 per cent., we have a basis of fact which should wholly disabuse our minds of the idea that glycerinated lymph is a failure.

The actual figures published are:

	Cases.	Cases, per cent.	Insertion success, per cent.
Primary vaccinations	126,209	98.6	94.0
Re-vaccinations	134,835	97.2	92.0

Another theory which has likewise had its rise in these modern days of "sweetness and light," is that one scarification is sufficient for protective purposes. Contrary, perhaps, to what the theory of immunization might lead us to conclude, *viz.*: *that so long as the system becomes inoculated, it does not make any difference how the lymph is introduced, whether by one or five scarifications*, we have the statistics of more than half a century, proving absolutely that it does make a difference whether much or little lymph be introduced. We have long been accustomed to say that a well pitted person will never take smallpox again; and in practice this is true. We say that a child, which has suffered from a severe type of measles or scarlet fever, is absolutely immune against another attack; and in practice this is true. We surely then are justified in saying that, just as the very slight protection produced by a twelfth day vaccine has not established an immunity even for a month against an active vaccine, so a single scarification does not allow the same absorption at one time as several would of a virus whose activity is to overcome the vital resistance of the tissue cells; and will not therefore call up in the same degree the vital energy of those cells to produce those anti-bodies, whatever their nature, upon which we now depend to explain the immunity.

The Table of Marson, surgeon to the London Smallpox Hospital, from 1836-67, of 13,755 cases of smallpox, seems conclusive on this point.

	Percentage of Deaths.	
	1835-1851 3,094 cases.	1852-1867 10,061 cases.
13,755 cases of small-pox, classified according to the vaccination made on each.		
Stated to have been vaccinated, but no cicatrix	21.7	39.4
Having one vaccination, but no cicatrix.....	7.6	13.8
Having two vaccinations, but no cicatrix.	4.3	7.7
Having three vaccinations, but no cicatrix.	1.8	3.0
Having four vaccinations, but no cicatrix.	0.7	0.9
Unvaccinated cases.....	35.5	34.9

Such facts would seem to be conclusive, and fortunately they do coincide with most of the knowledge we have concerning this wonderful fact of immunity against eruptive diseases, either through contagion or experimental inoculation.

It is apparent, gentlemen, that the few practical questions I have touched upon only serve to illustrate to what length the subject would lead us, if we attempted to do it justice.

It is, however, the practical side to which public officers of health have constantly to direct their attention; and it is apparent that we on this continent with our democratic methods, have hitherto been greatly limited in our powers to either control the quality of vaccines, which have been supplied, or produced in State establishments, products which would fulfil the requirements.

Within the last year, however, official opinion has been crystallized, and its conclusions briefly stated would seem to be:

1st. Either that official supervision of the products of vaccine establishments by either State or Federal officers is imperatively demanded.

2nd. Or that the production in State or Federal Vaccine Establishments of adequate supplies of vaccine of established quality to be sent out free or at cost to municipalities, has become a necessity.

It is not necessary here to enter into a discussion of which scheme is preferable; since, while Government production in Germany, England, etc., has proved a success, it cannot be forgotten that in some respects our democratic methods do not always conduce to that permanency of the civil service and freedom from political complications, which are necessary to efficient performance of scientific work.

On the other hand the unlimited capital and keen competition of the large commercial houses supply in many ways facilities for the production of standard articles; and for their maintenance at a high standard of excellence, which perhaps few individual States could attain to.

Personally, I am convinced, however, that no matter which scheme is adopted, there is demanded before anything else, adequate legislation whereby from year to year, qualified public vaccinators must be appointed in every municipality, who shall be empowered to vaccinate systematically and register all children, born in any year; and that through the responsibility laid upon them and the routine methods established, such men will become experts in the art, and will gradually obtain such a store of information as will prevent the use of any except standard vaccine, and by the care exercised, be able to anticipate and prevent those accidents, which we have already referred to as seriously injuring the credit of this greatest triumph of modern medicine.

Original Communications.

THE PRESENT METHOD OF MEDICAL SCHOOL INSPECTION IN NEW YORK.

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The method of medical school inspection in New York city has recently been radically changed. As it is now more complete and satisfactory than that employed in other cities, it may interest many physicians to know in just what this present method consists.

The isolation of such children as might be sources of contagion was formerly left entirely to the judgment of the teacher. Some of these were not very observant; others, depending solely on their own diagnostic skill, neglected to send cases which were really contagious to the medical school inspector. This was the weak point in the system. In order to obviate this defect, the inspector now visits the class room himself once a week, and examines each pupil. This examination is not a thorough one, but, as almost all of the acute exanthemata and the contagious affections of the eyes and the skin have typical manifestations on the head, face, or hands, or in the mouth and throat, the examination is sufficient to detect any such disease. The visit to the class room also gives the inspector an opportunity to instruct the teacher and demonstrate to her those symptoms which are to be especially noted, in order that she may be able to select the cases which are to be sent to the physician for examination. The teachers are aware that it is possible for them to contract a contagious disease from their pupils, and that the more thorough the inspector's examination, the less this danger is. For these various reasons the teachers observe their

pupils more carefully and more intelligently.

There are at present 80 medical school inspectors in the borough of Manhattan, each having three or four schools, with a total of 4,000 to 5,000 children to inspect. The schools are situated in one neighborhood, so that as little time as possible is lost in going from one school to another. The inspector visits his schools before 10 a. m. every morning, and examines, in a room set aside for that purpose, all pupils who have been isolated by the teachers as being possible sources of contagion. Children presenting any symptoms of measles, scarlet fever, diphtheria, mumps, whooping cough, or chickenpox are sent home immediately; those affected with contagious diseases of the skin or eyes leave at the next recess. Each of these children is given a card on which are stated the reason for exclusion and the date on which the child should return for reexamination, with the advice to the parents that the patient be promptly treated.

When cases of measles or scarlet fever are found, the department of health is notified by telephone; and the pupils are visited by an expert of the department, for the purpose of confirming the diagnosis. In all cases excluded on account of throat affections, a culture is taken and sent to the bacteriological laboratory of the department for examination. The next day the school inspector receives the result of this examination. The patient is visited by the district medical inspector, who decides when the child may return to school. No pupils excluded on account of measles, scarlet fever, diphtheria, chickenpox, or smallpox are readmitted until they have received a certificate from the department stating that the premises are free from contagion.

After the day's work is finished, a report is sent to the department stating, on a separate blank for each school, the number of pupils examined, and the name, age, and address, with the reason, in each case excluded.

Once a week the inspector visits the class rooms and examines each pupil. As he is seated at the window, the children pass in line before him. Special attention is paid to the examination of the head, face, eyes, mouth, and throat. For the inspection of the mucous membrane of the lower lids (trachoma) the children draw them down themselves. For the examination of the mouth and throat, the mouth is opened as wide as possible and the tongue protruded. In this way, in almost all cases, the tonsils, uvula, and pharynx may be seen, sometimes even the upper portion of the epiglottis. When the tongue obstructs the view of the tonsils and pharynx, if the child phonates "ah!" the soft palate rises and these parts may be seen. In those cases

in which these methods do not give a satisfactory view, the wooden tongue depressors are used; a separate one for each child. Those pupils who require a more careful examination than is possible in the class room are sent to the inspector's room. The children, even the youngest, soon learn what they are expected to do, so that the examination of a large number requires but a comparatively short time. Those who examine systematically the throats of all sick children know that this is sometimes difficult on account of the fear and struggling of the patient. In the class room they see a number of others do the same thing before them, and offer no resistance. As almost all children between the ages of five and fifteen attend public school, in the future physicians ought to have very little trouble in examining the throats of children over five years old.

While in the class room, the inspector may ask if any cases of contagious disease have been reported from that class. If there are any, or if he himself has found such, special attention is paid in the examination to the possibility of other cases of the same disease. Each inspector is provided with a note book. By keeping a record of each class on a separate page the work is very much facilitated. Inquiry if any pupil has a sick brother or sister at home will sometimes reveal the existence of a case of contagious disease not reported.

At the end of each week, a list of those pupils who have been absent for three or more days on account of sickness is obtained from the school. These are visited, and the character of the disease is determined. If cases of contagious disease are found, the name, address, disease, and its duration are sent to the department. The inspectors report every Saturday morning at the central office to receive instructions.

In order to prevent, as far as possible, the spread of diphtheria, each pupil is provided with an envelope in which his pencils and penholders are placed. When a case of diphtheria occurs in a class room, cultures are taken, not only from the suspected throats, but also from the children sitting around the patient. The importance of this is at once apparent when we remember that it has been repeatedly demonstrated that the presence of the Klebs-Loeffler bacilli in the throats of seemingly healthy individuals may be a source of danger to others.

In the lower part of the city, where the number of cases requiring treatment is much greater, nurses have been appointed by the department. They visit each school at a stated time every day, and treat in the school cases which have been sent by the inspector, with the diagnosis and an outline of the treatment to be followed. In this way, many that

would otherwise be sent home (impetigo contagiosa, ringworm of the face, acute conjunctivitis, etc.) may remain in school. The nurses also visit the homes of the pupils excluded on account of parasitic diseases of the skin and scalp, and treat these cases, also giving instructions to the mother, the object being that the child shall lose the least possible amount of time from school.

The number of cases of trachoma in this same neighborhood being very great (due to a large Russian and Polish population), the department has opened special wards in the old Gouverneur Hospital building for the local and operative treatment of these cases. The patients are given a card on which the date of each visit is stamped, so that the school inspector knows whether the patient continues under treatment. From December 17, 1902, on which date the wards were opened, until February 2, 1903, the total number of visits has been 11,968. Of these, 7,726 were in old cases, 4,242 were in new cases, and 608 were in operative cases.

The department has power only in cases of contagious disease. However, in other affections, such as enlarged tonsils, adenoids, otitis, errors of refraction, etc., the inspector may call attention to the existence of such trouble and advise that it be treated. In no case, however, does he treat or prescribe drugs.

I wish to thank Dr. Walter Bensel, chief of the Division of Medical School Inspection, Department of Health, for permission to publish this brief report.

UTERINE INERTIA: ITS CAUSES AND TREATMENT.*

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I have selected the subject, Uterine Inertia, its Causes and Treatment, because it is one not sufficiently well understood by the general practitioner.

His failure to observe the various causes and symptoms and what these symptoms mean; may result in the death of either the mother or child. Hence, the necessity of being able to diagnosticate uterine inertia and to distinguish between the various symptoms, so that he can adopt the proper treatment in time.

I will here enumerate a few of the most common causes of uterine inertia, but as the time for my paper is limited, I shall consider only three or four of these causes and their treatment.

I. Distended bladder and rectum.

II. Paralysis of the uterus due to overdistention by the liquor amnii.

III. Rigidity of the cervix (and vagina).

IV. A relaxed and pendulous abdomen.

V. The bearing of many children in rapid succession.

VI. Premature rupture of the membranes and escape of the water, causing "dry labor."

VII. Prolonged pressure on the anterior lip of the cervix between the child's head and the pubic bone; this condition causes continued contraction of the os and the physician may mistake it for a rigid os.

VIII. The uterus may be weakened by wasting diseases and fevers or by profuse hæmorrhage, as in placenta prævia.

IX. Deformed pelvis or where the child's head is out of proportion to the birth canal.

X. Cancer of the cervix, uterine tumors, and ovarian cysts.

The physician should make a careful examination, in order to ascertain the cause of the protracted labor and use the necessary measures to overcome it.

Dangers to the Mother in Protracted Labor.—She becomes exhausted, nervous, irritable, and feverish, with a weak and rapid pulse and great thirst, and if any part of the maternal tissues is pressed upon by the head of the child long enough to cut off the circulation for several hours the consequence will be the sloughing of the part and septic infection, with perhaps a vesicovaginal or a rectovaginal fistula. I saw such a case in consultation some months ago. The patient had lost all control of the bladder, due to the amount of sloughing. There is also great danger of post partum hæmorrhage in these cases.

Dangers to the Child.—Long continued pressure on the child's body may cause intracranial hæmorrhage and paralysis. Pressure on the body and cord endangers the child's life by cutting off the blood supply and the oxygen necessary to the life of the child; another indication of approaching danger is the increasing frequency and weakening of the child's pulse (occasionally intermittent), and in this condition experience has taught me that the child's life will be sacrificed unless delivery is soon effected.

Another important sign I have observed is the flow of meconium coming with the liquor amnii; this shows that the sphincter muscle is completely relaxed and that the child is almost asphyxiated. Of

* Read at the meeting of the American Medico-pharmaceutical League, November 28, 1902.

course this sign is good only in head presentation.

Treatment of the First Condition (Bladder and Rectum).—The bladder should be emptied several times during the first and second stages of labor. If the patient is unable to pass her water a sterilized catheter should be used to draw it off.

The rectum should be emptied by one or more enemata of soap and water to which one drachm of spirit of turpentine may be added.

Overdistention of the Uterus.—When inertia is due to an overdistended uterus, the membrane should be punctured and the excess of water allowed to escape.

When the inertia is caused by having several children in rapid succession hypodermics of strychnine, in doses of 1-40th of a grain, repeated every two hours till several doses have been given, acts very well. Some authors advise giving ergot in this condition in ten drop doses and repeating it every half hour. If the os is not fully dilated, I consider ergot a rather dangerous and uncertain drug, because it may act on the circular fibres of the cervix more than on the body of the uterus, and the expulsive power exerted by the fundus would not be sufficient to overcome the contraction of the os. In my practice I prefer to use the forceps rather than to take any risk with ergot.

If a woman has a relaxed and pendulous abdomen an abdominal binder should be put on, so as to lift up the abdomen and keep it and the uterus in the proper position. The binder may have to be re-adjusted several times before the completion of labor.

Rigidity of the Cervix is the most common and serious cause of uterine inertia. Inertia may be primary or secondary, and it is of vital importance that the physician should distinguish between the primary and secondary variety, because the two conditions demand entirely different treatment. And here I wish to emphasize the fact that the lives of the mother and child depend on the judgment and skill of the physician.

In primary inertia (or weak labor pains) the pains are weak from the beginning, and cause little suffering and no uterine exhaustion.

In secondary uterine inertia, labor begins with normal pains and with the usual force and frequency, continuing several hours until finally the uterus becomes completely exhausted, and the pains weaker and weaker till they finally cease. When the patient is in this condition it is dangerous to deliver.

Primary Uterine Inertia: Treatment.—In primary uterine inertia (or weak labor pains) if the os is rigid I give 15 grains of chloral by the rectum every twenty minutes, until three or four doses have been taken. I also give hypodermics of morphine in doses

of from $\frac{1}{6}$ th to $\frac{1}{4}$ th of a grain, and repeat in an hour or two if necessary. I find that the chloral and morphine act well by relaxing the os, and they exert a soothing effect on the mother, relieving her of all fear and nervousness, so that when she has a pain she is willing to bear down all she is able. I have never seen any bad effects from chloral and morphine when given in doses here specified.

In a few of my cases I have made an application to the cervix of a ten per cent. solution of cocaine; the results on these occasions were quite satisfactory.

When the os is well dilated I give strychnine sulphate hypodermically in doses of from $\frac{1}{40}$ th to $\frac{1}{30}$ th of a grain, and repeat in two hours if necessary, and in the intervals a wine glass of sherry or a little whiskey is given, or, best of all, a little champagne, when the patient can afford it. It is well to encourage the patient by assuring her that everything is progressing favorably and that her child will soon be born. This spiritual (wine) and moral encouragement cheers her up wonderfully so that she uses all her powers in bearing down with each pain.

If at this stage she is not making good progress and the os is only partially dilated, I assist the dilatation with my fingers and hand, and after full dilatation apply the forceps, but make traction only during the pain. If the breech or a foot presents, make traction with the fingers on the part, and deliver before the uterine muscle becomes exhausted, thus saving the mother several hours of suffering, and possibly avoiding a postpartum hæmorrhage.

Secondary Uterine Inertia: Treatment.—When the uterus is completely exhausted by frequent and severe pains lasting several hours, even though the os is dilated, delivery by forceps or version would be bad practice and dangerous to the life of the mother. To empty the uterus while it is in an exhausted condition might cause severe, if not fatal, post partum hæmorrhage; and recourse to ergot, electricity, massage, ice internally and externally, and even hot water at 120° F., will sometimes fail to control these hæmorrhages. Hence the great importance of being able to distinguish between primary and secondary uterine inertia.

A relaxed condition of the uterus is of no great importance so long as the child remains *in utero* in good condition, and the placenta is not detached.

Now the question arises, What is the physician to do when confronted by secondary uterine inertia? The first thing is to give the patient time to recuperate by securing a few hours' good sleep. To produce this much required rest given from $\frac{1}{4}$ th to $\frac{1}{12}$ th of a grain of morphine with thirty grains of potassium bromide and fifteen grains of chloral, preceded by an egg nog or milk punch.

After a good sleep the pains will usually return with sufficient frequency and force to complete labor within a reasonable time, otherwise it will be advisable to apply the forceps or do a version.

In all the manipulations I am very careful to keep my hands and instruments as nearly aseptic as possible, and the same attention and care are given to the patient. Without this care the physician fails in his duty to the patient and she is in great danger of becoming infected with puerperal fever, which frequently either ends in death or leaves the patient an invalid for months or years.

152 WEST FIFTY-SEVENTH STREET.

INCOMPLETE TRANSVERSE CONGENITAL OCCLUSION OF THE VAGINA, AND A THEORY AS TO ITS ORIGIN.*

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Incomplete transverse congenital occlusion of the vagina is a comparative rarity. In my service of upwards of 20,000 women, I have seen but three examples of it; and shortly afterward, another case came under my observation which illustrated the obstetric significance of the condition. In his exhaustive monograph,¹ Neugebauer described but fifty-seven cases of this kind out of 1,000 congenital and acquired atresias and stenoses of the vagina, and in this country very few cases have been recorded.

In the consideration of cases of congenital origin, we naturally exclude all those stenoses or narrowings of the vagina which have their basis in disease or injury. Stenosis of the vagina, for instance, may follow any of the acute infectious diseases, notably scarlatina, sepsis, cholera, smallpox and diphtheria, and is not infrequently seen as a sequel to injuries of the vagina, such as caustic douches. Cases have even been reported² where inflammation following coitus has resulted in a vaginal stenosis offering an obstacle to birth. But these instances, while of equal interest, are not relevant to our present purposes.

The four cases which form the basis of this paper were all examples of a transverse, incomplete occlusion of the vaginal lumen, and all of them were instances in which the occluding sæptum was present at birth; that is, in each case, the vagina was found

occluded above the hymen by a transverse sæptum springing from the lateral walls, pierced by a minute perforation in its centre, except in the second case, in which the sæptum did not encircle the entire vagina.

CASE I.—*Occlusio Vaginæ Transversalis. Congenitalis Incompleta. Adhæsiones ad Cervicem.*—Bessie K., seen at the Good Samaritan Dispensary, June 28, 1902 (Protocol No. 143). Aged twenty-five years; married nine months. Never pregnant. Measles at fourteen. Her mother had five children; one other daughter, now seventeen, menstruates regularly. Patient has slight pain in back and abdomen.

Menstruation.—Regular every month since sixteenth year. Has never had any discharge before or since marriage. Last menses three weeks ago. Coitus not painful. Has never had any injury.

Chief Complaint.—Lack of sexual feeling. No pain on first coitus. Patient is not aware that she bled from rupture of hymen.

Examination.—Examining finger enters a blind cul-de-sac at the upper end of the vagina. No fornices or cervix are to be felt. In the centre of the cul-de-sac a transverse strand, like a scar, can be felt. This band is about one c. m. thick. With the speculum two granulation points can be seen in the transverse ridge and with great difficulty a silver probe can be forced through one of them. Through the opening thus made the point of a pair

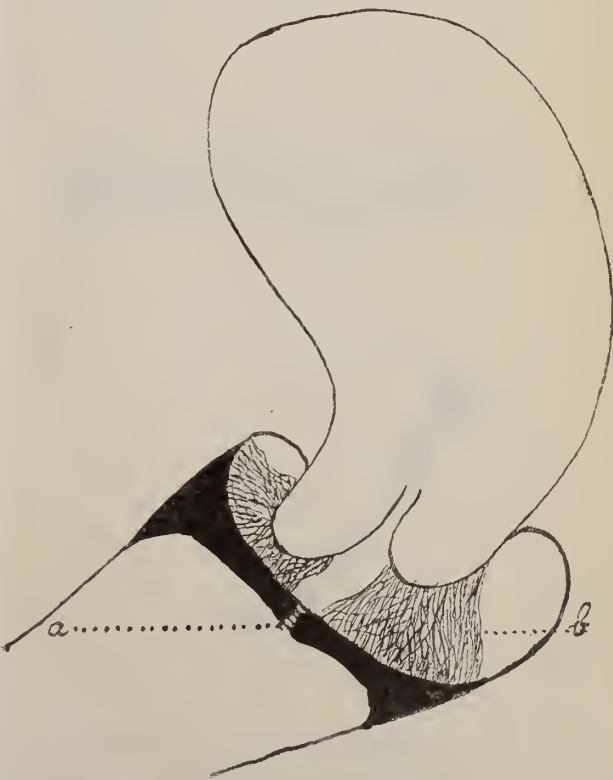


FIG. 1.—Case I. Incomplete congenital transverse occlusion of the vagina, becoming complete by a junction of the margins of the sæptum by granulation tissue. *a*, Granulation tissue joining edges of sæptum. *b*, Adhesions between sæptum and cervix.

of scissors was introduced and the band was cut through. A very small cervix was then seen behind the band, and blood and inspissated mucus es-

* Read at the Ninety-seventh Annual Meeting of the Medical Society of the State of New York, January 27, 1903.

¹ *Zur Lehre von den angeborenen und erworbenen Verwachsungen und Verengerungen der Scheide, sowie des angeborenen Scheidenmangels.* F. L. Neugebauer, Berlin, 1895.

² Davis, *The Principles and Practice of Obstetrics*, vol. i, p. 113, London, 1834.

caped. No bacteria were found in this fluid. The cul-de-sac was composed entirely of normal vaginal mucosa which on its posterior surface, was adherent to the vaginal portion of the cervix.

Hymeneal remains are indistinctly seen at the vulva which is otherwise entirely normal. The vagina is short and rugæ are distinctly visible. The uterus is two inches deep; the right ovary was felt, the left was not palpable.

The subsequent course of the case was one of improvement, the gauze which had been introduced at the first visit was repeatedly removed and the opening constantly enlarged. The adhesions between the cervix and the posterior wall of the sæptum were broken up by the fingers. The patient passed from observation when an operation was suggested.

CASE II.—Occlusio Vaginæ Transversalis Congenitalis Incompleta.—Bessie C.,³ twenty-two years of age, born in Roumania, married eight months. Seen at the Mt. Sinai Hospital Dispensary, September 1, 1902 (Protocol No. 4,856b). First menses at thirteen years; menstruates about every six weeks for about five days. Has considerable pain after her period, lasting for five or six days. Her mother has had three children, all of whom are well. The patient is constipated.

Chief Complaint.—Abdominal discomfort.

Examination.—The myrtiliform caruncles are dis-



FIG. 2.—Case II. Incomplete congenital transverse occlusion of the vagina. This is the simplest form.

tinct and are somewhat thicker than usual. The rugæ are present in the vagina and are well marked. At the junction of the upper and middle thirds of the vagina a tough, fibrous wall is met by the ex-

amining finger, encircling the entire vagina and being about a sixteenth of an inch thick. This sæptum is a little thicker on its left side than on its right. On the anterior vaginal wall, it approaches the cervix more nearly than elsewhere. The cervix can be distinctly and easily felt through a central opening in the sæptum, about half an inch in diameter. The sæptum is not sensitive and lies free in the vagina. The cervix is small, conical, and easily admits the uterine sound. The uterus is anteverted and is two and a half inches deep. The ovaries were not felt.

This patient also unfortunately passed from observation.

CASE III.—Occlusio Vaginæ Transversalis Congenitalis Incompleta. Adhæsiones ad Cervicem.—Dora W. (Protocol No. 5,140b, Mt. Sinai Hospital Dispensary, January 23, 1903). Roumania. Married three years. Never pregnant. First menses at sixteen years, then at intervals of eight months, six months, four months, and two months until it appeared regularly every month. Menses always painful on first day, but the patient has never been obliged to go to bed. The pain is in the back and abdomen. She has never had any acute infectious disease (scarlet fever, diphtheria, measles, smallpox, or cholera). Her mother has four daughters, all of whom are well and menstruate regularly.

The patient experienced pain on first intercourse and for six weeks subsequent to her marriage. Since then it has been painless, and there is no complaint on that score from herself or her husband. Semen does not escape spontaneously from the vag-



FIG. 3.—Case III. Incomplete congenital transverse occlusion of the vagina, showing sæptum and central perforation.

ina. The patient's chief complaint is pain in the back. She is also very constipated.

On examination, the vulva is found to be normal. The hymeneal remains are distinct, and are somewhat thick, showing that this organ was present and was of moderate thickness. The openings

³ This patient was shown at the Metropolitan Medical Society, September 27, 1902.

of the Bartholinian glands and of Skene's ducts are unusually well marked. A caruncle is seen in the urethra. On vaginal examination, the cervix cannot at once be felt, but it can be palpated behind a rather thick sæptum springing from the vaginal walls and completely surrounding the vagina. The cervix is very small, the uterus anteverted. Ovaries



FIG. 4.—Case III. With edges of perforation separated, showing cervix lying immediately behind it.

and tubes could not be palpated. Examination by the speculum shows in front of the cervix a transverse sæptum with an opening directly in front of the external os, a quarter of an inch in diameter. Posteriorly, the sæptum is adherent so that the finger cannot enter the perforation. The sæptum is an eighth of an inch thick and is composed, apparently, of normal vaginal mucosa. A striking fact is that the vagina contains no rugæ.

CASE IV.—*Occlusio Vaginae Transversalis Congenitalis Incompleta; Dystocia*.—On September 27, 1902, I was called by a physician of this city to see with him a parturient primipara, Mrs. E. F. The woman, I was told, had been in labor for eighteen hours, had strong, frequent pains, and at the time I was sent for, there was a bulging of the perinæum, yet the head could not be felt. Indistinctly, a hard body could be palpated through a membrane of some kind. The attending physician was much puzzled, having taken the membrane for unruptured amnion and having frequently, but in vain, attempted to perforate it. He requested my immediate attendance.

Upon my arrival, a careful examination disclosed the nature of the case. A transverse sæptum of the vagina covered the descending head of the child, and, being elastic, it bulged down into the vagina with each succeeding pain. There was a minute opening to be felt in the centre of the sæptum. I

decided to incise the sæptum rather than to dilate with the Champetier-de-Ribes's bags. This was done with a blunt-pointed scissors after making certain that the blades included only the sæptum. Four radiating incisions were made, extending not quite to the vaginal attachments of the sæptum. I took this precaution so that, if the descending head should tear the membrane, the lacerating force would be exerted upon it rather than upon the vaginal walls. There was a little insignificant bleeding. The head lay immediately behind the sæptum, and in fifteen minutes the birth of a male child was successfully and easily accomplished, without injury to the perinæum. I was told, for I did not see the patient again, that the convalescence was uneventful.

After labor was completed, the vagina was tamponed to prevent the edges of the sæptum from cicatrizing with the vaginal walls and this was continued throughout the puerperium.

The patient's history before marriage was without special note. She began to menstruate at fifteen, and was always regular, never having any pain. She was married in November, 1901, and menstruated for the last time, December 15, 1901. Twice during the early months of her pregnancy she had consulted her physician because of a lack

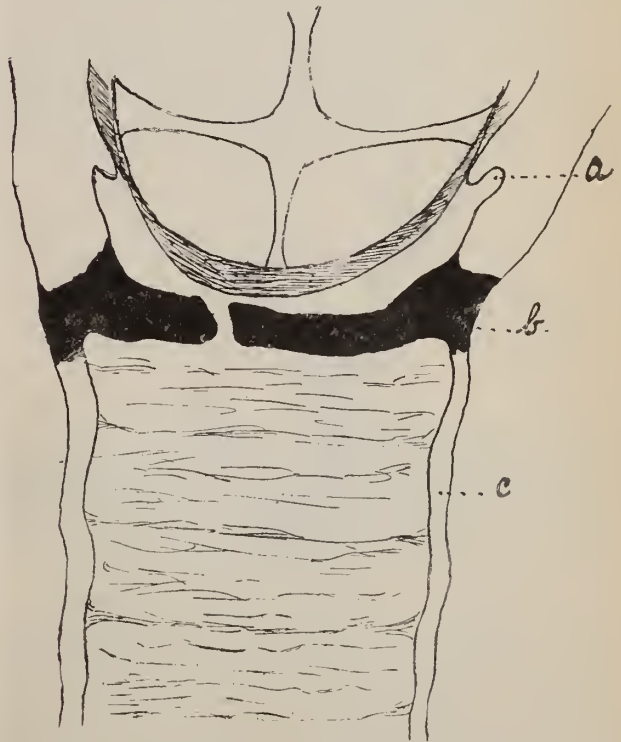


FIG. 5.—Case IV. Incomplete congenital transverse occlusion of the vagina. Patient in second stage of labor. Transverse sæptum prevents descent of membranes and head. a, Internal os. b, Transverse sæptum. c, Vaginal wall.

of sexual feeling, and she also told him of the complaint of her husband of his inability to secure complete *immissio penis*. No local examination was ever made, however, until the patient was in labor. Her pregnancy, I was told, was without any untoward event.

At my examination, the hymeneal vestigia were well marked and appeared like normal carunculæ myrtiliformes. I mention this to exclude the con-

sideration of the sæptum as a hymen situated high in the vagina.⁴

The Origin of Congenital Transverse Occlusions.—The formation of longitudinal sæpta of the vagina, as in cases of double vagina, is not difficult to understand when we remember the fusion of the Müllerian canals to form the genital tube, and their subsequent absorption at the points of contact. This absorption takes place along the entire

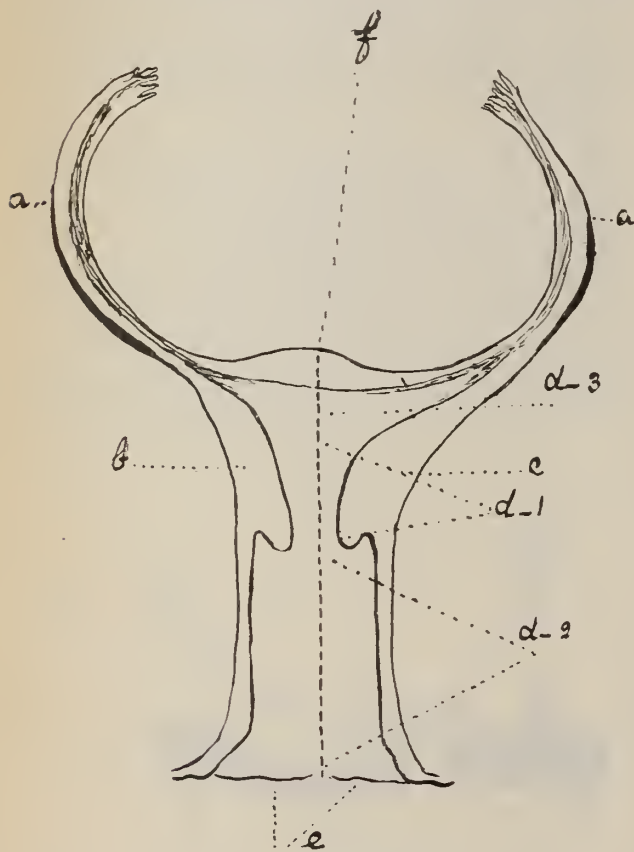


FIG. 6.—Diagram showing fusion of Müllerian ducts to form the uterus and vagina, and their mode of disappearance to leave these organs hollow. *aa*, Fallopian tubes. *b*, From right Müllerian duct. *c*, From left Müllerian duct. *d-1*, First part of sæptum to disappear. *d-2*, Second part of sæptum to disappear. *d-3*, Third part of sæptum to disappear. *e*, Hymen formed at the end of the vagina by its junction with the urogenital sinus. [Modified from *Human Embryology and Morphology*, Arthur Keith, 1902.]

length of the canal from the fundus of the uterus to the hymen. If that part of the amalgamated ducts which goes to form the vagina, fails of absorption, a longitudinal band will remain in the centre of the vagina, dividing it into two halves. It is necessary to remember in this connection that the primitive vagina is a solid body, and that by the absorption of Müller's ducts a hollowing out process takes place which leaves the uterus and vagina tubular. The hymen, too, normally becomes perforated, although the only connection it has with the ducts of Müller is its fusion with the vagina at the urogenital sinus, and since the hymen arises

at the urogenital sinus and fuses with the Müllerian canals at this site, it is impossible—as has been assumed especially by French writers—for a transverse vaginal sæptum to represent a supplementary hymen.

From these very brief data, it is plain that any kind of abnormality in the lumen of the vagina, from an imperforate hymen to a complete atresia of the vagina, can be traced back to a failure in the normal conduct of Müller's ducts. But the facts given do not account for transverse sæpta. Several authors have given attention to the subject, and their theories shall be considered before stating my own views.

Delaunay⁵ explained the presence of these sæpta by assuming that the vagina developed in three sections, as though one were superimposed upon the other. If the middle portion did not undergo absorption, a transverse sæptum remained at the junction of the upper and middle thirds of the vagina. If the lower third failed to follow the normal course, a transverse sæptum would mark this fact at the junction of the lower and middle thirds. While this theory accounts for the simple sæpta, it leaves unexplained the presence of multiple sæpta. Schröder⁶ and Breisky⁷ believed that transverse sæpta represented inflammatory processes during foetal life. Of this there is not only no confirmatory evidence, but it is difficult to understand how an inflammation can attack a solid epithelial mass without leaving more gross lesions than are shown by a simple, non-adherent, free lying band in the vagina.

Verchère⁸ asserts that the transverse sæpta are persistent remnants of the amalgamation of the Müllerian ducts. He takes the well known embryological fact that the vagina constantly increases in length during embryonic life as the basis of the formation of a transverse sæptum. The two lateral openings which he describes are supposed to represent the lumina of the original *Anlage* of the Müllerian canals. This theory is ingenious, but it fails also to account for the presence of two or more sæpta, and most frequently, besides, the opening in the sæptum is central, and is single.

Magendi-Husté⁹ has elaborated a theory which is more in consonance with embryological and clinical facts. If the primary solid epithelial mass which forms the vagina fails to be hollowed out from top to bottom, as is usually the case, and if

⁵ Delaunay, *Cloisonnement transversal du vagin complet et incomplet*, Paris Thesis, 1877.

⁶ Schröder, *Handbuch der Krankheiten der weiblichen Sexualorgane*, 1886.

⁷ Breisky, *Die Krankheiten der Vagina*, Stuttgart, 1886.

⁸ Verchère, *Cloisonnement transversal du vagin*, Société biologique, May, 1895.

⁹ Magendi-Husté, *Cloisonnement transversal du vagin, au point de vue obstétrical*, Paris Thesis, 1894.

⁴ A similar case has been communicated to me by letter by Dr. E. K. Browd, of New York, in which, during labor, he was obliged to incise the sæptum.

at the point of this failure of canalization there is an additional defect of absorption, a transverse sæptum must result. This will be perforated or imperforate, depending upon the extent and nature of the hollowing out process.

These theories are many of them ingenious, and some of them account for some of the clinical and embryological facts; but they fail to take into account the complications and abnormalities of this anatomical peculiarity.

Embryonal Defects.—My own conclusions from a study of the cases may be considered twofold: first, that transverse vaginal sæpta are due to an embryonic fault, and secondly, that these embryonal defects are due to a reversion to type, that is, a "return to an ancestral type." Dr. George S. Huntington, professor of anatomy in the College of Physicians and Surgeons, of New York, with whom I have discussed this topic, is inclined to the former view, and his opinion is certainly of weight; yet, while I lay the greater stress upon the theory of faulty development in the embryo, it has seemed to me that the belief in reversion cannot wholly be disregarded.

Let us now consider the evidence under the head of embryonal defects, without, however, entering more deeply into embryology than is essential for the thorough comprehension of the subject. The Wolffian bodies, later to develop into the most important of the excretory organs of the body, arise from the epiblast, or ectoderm, according to Kollmann, whose view is now universally accepted. In their immediate neighborhood, and springing from an invagination of the mesothelium of the cœlome, or body cavity, the Müllerian ducts soon appear. With these two elements we are mostly concerned. The ducts of Müller extend downward from their point of origin just beneath the diaphragm to join the urogenital sinus. This is preceded, however, by the development upon the Wolffian ridge, the differentiated portion of the Wolffian body, by a change in the character of the mesothelium upon its upper surface by which it becomes columnar in form, the same type of epithelium which is found lining the uterus and upper part of the cervix. From this time on, the Müllerian ducts of the two sides grow downward and inward by a proliferation of their cells until they finally fuse together in the centre (the third month) and also with the Wolffian ducts as these two reach the pelvis where they conjointly form the genital cord. From the Müllerian portions are developed Fallopian tubes, uterus, and vagina, while the Wolffian ducts supply to the lower third of the vagina, at least, its lining epithelium. In briefest outline, this is the story of the origin of the female genitals.

Let us now assume that during the formation of the genital cord, fusion between one portion of the ducts of Müller and one portion of the Wolffian duct becomes more intimate than elsewhere, that an invagination (*Einstülpung*) of a portion of the

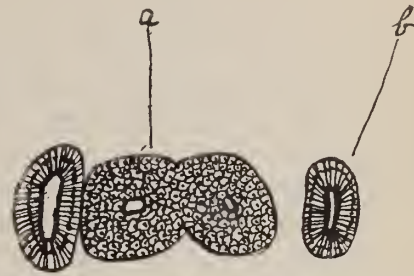


FIG. 7.—Cross section of genital cord. *a*, Müller's ducts. *b*, Wolffian duct. [From Hertwig, after Tournoux and Légay.]

Wolffian duct into the fused ducts of Müller takes place. Inclusions of this character are not unknown, especially in the genital region, and a glance at Figs. 7 and 8 will show how, under favorable circumstances, this inclusion or invagination may occur. But a single proliferating cell from one of the Wolffian ducts will be necessary to account for the peculiarity of subsequent development. Granted that this is the case, the subsequent course of Müller's duct will be modified in the following manner: It remains tubular in all places except

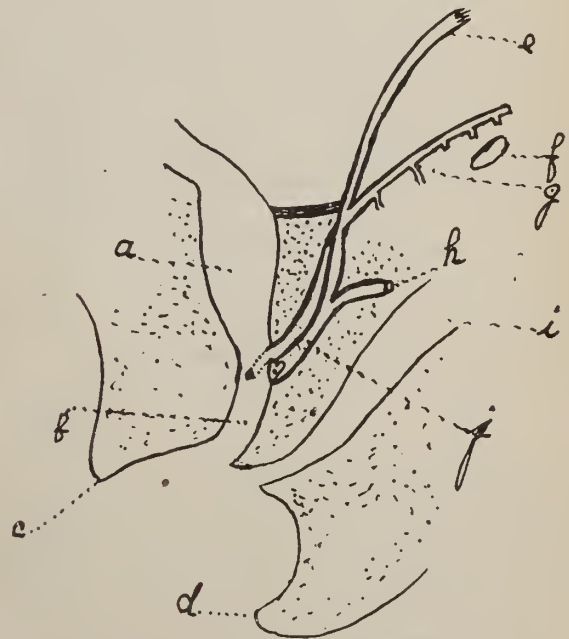


FIG. 8.—Diagram of genital ducts at third month of fetal life. Lateral view. *a*, Bladder. *b*, Urogenital sinus. *c*, Genital tubercle. *d*, Cauda. *e*, Right Müllerian duct. *f*, Genital gland. *g*, Wolffian duct. *h*, Left Müllerian duct. *i*, Rectum. *j*, Genital cord. [Modified from Keith.]

where the inclusion has occurred, and this can only be in the vagina, because the fusion of the two sets of ducts into the genital cord takes place below the level of the uterus. The invaginated epithelium from the Wolffian duct continues in its course, while

the fused Müllerian ducts later become solid epithelial masses, only to become finally tubular by absorption of the epithelial masses and their own joined surfaces. But the sæptum formed by the invagination from the Wolffian, or epiblastic, epithelium, is not susceptible to the same influences as the mesoblastic epithelium, which becomes absorbed to furnish tubes, uterus, and vagina, and remains as a permanent structure, resulting, in the completely developed vagina, in a stenosis of the kind we are considering. This theory, while logical and consonant with embryological facts and with other forms of inclusion, accounts as well for multiple sæpta as for single ones, since it would require but a multiple inclusion instead of a single one. And it allows of the comprehension of lateral openings on the theory of Verchère that these represent the original lumina of the primitive *Anlage* of the canals of Müller.

The fact, however, that by far the greater number of reported cases of transverse sæpta possess a single central perforation—of varying calibre—is proof of the normality of the conduct of Müller's ducts in all other respects, that is, that they met and fused in normal manner, and that the longitudinal band representing their fusion and extending from the fundus of the uterus to the hymen, was properly and normally absorbed, hollowing out the vagina and perforating the hymen as well as the abnormal sæptum which lay in the vagina. Nor does the fact that in a few cases the hymen appeared to be missing, and what was assumed to be the hymen was found somewhat higher in the vagina, as a transverse sæptum, vitiate the theory I have advanced; for when in a complex organ one abnormality of development appears, a second one is by no means a rare accompaniment.

The proof of my contention would be complete were the sæpta to be found histologically of epiblastic origin. While I am inclined from embryological study to accept Berry Hart's conclusions that the epithelium of the lower third of the vagina is derived from Wolffian (epiblastic) sources, my histological researches on the transverse sæpta are not yet completed. It appears to be so derived; but until such time as I have thoroughly convinced myself of their origin from the ectoderm, I prefer to hold this part of the proof in abeyance.

From the study which I have given the cases, however, I am inclined strongly to the belief that transverse sæpta in the vagina are of epiblastic origin and are due to an inclusion by the canals of Müller of cells from the Wolffian duct after the formation of the genital cord. This theory is consistent with embryological facts, with pathological findings, and with clinical observation.

Reversion.—Turning now to lower forms of vertebrate life which possess transverse sæpta in the vagina normally, we first select the chimpanzee, which is a close progenitor of the primate man. The sheep, among the *ovida*, the whale, the manatee, and the dugong, among the *cetacea*, may next



FIG. 9.—Vagina and cervix of *Ovis aries* [sheep], showing deep folds in the vagina and cervix. *a*, Cervix. *b*, Searcher in urethra. *c*, Vagina. Original specimen prepared in the anatomical laboratory of the College of Physicians and Surgeons.

be mentioned. All these animals present deep transverse folds and reduplications in the vagina. It is quite impossible to believe that embryological remnants or defects can secure permanent residence without giving evidence of function in the represented type. In the species cited in which transverse

sæpta are normally present, the exact function of these bands is not known, although it probably has to do with the facilitation of the access of the sperma fluid to the uterus, or with a prevention of the flow of the fluid from the vagina. Darwin¹⁰ says: "It is hardly credible that a complex part, arrested at an early phase of embryonic development, should go on growing so as ultimately to perform its proper function, unless it had acquired such power during some earlier state of existence, when the present exceptional or arrested structure was normal." We find in the first two cases reported here, that the function of the normal vagina was present. It is further conceivable and probable that if the sperma fluid were able to be injected beyond the opening in the sæptum, the sæptum would act as a barrier to prevent its escape. That this actually occurs is demonstrated in the many cases of pregnancy taking place in women possessing this abnormal structure. Function—if we can speak of it in this connection—then being normal in an abnormal structure, and the structure itself being the analogon of a normal adult form in lower species, it is plain, I think, that the variation represented by a transverse sæptum of the vagina in the human species is a reversion to a former type.

Diagnosis.—The diagnosis of this malformation should offer no difficulty. It must be distinguished, however, from a *vaginismus of the superior part of the vagina* and from a *cicatricial or congenital vaginal atresia*. Cicatricial closures of the vagina may almost always be excluded by the history, as by the absence of previous caustic douches, injuries, and the acute infectious diseases, especially diphtheria, scarlatina, smallpox, and cholera; and, in primiparous or multiparous women, from the scarring and formation of bands so frequently seen after childbirth with inefficient or unskilful assistance. A total atresia will barely come under consideration, since the history of a regular menstruation will at once exclude it. Again, the site of the sæptum and the presence of myrtiform caruncles exclude the possibility of confounding a transverse sæptum with a *persistent hymen*, an error which has been made repeatedly.

During labor one must be mindful of the possibility of mistaking the sæptum for the unruptured membranes, or for a saclike dilatation of the inferior segment of the uterus, or for an incomplete dilatation of the cervix. A careful vaginal examination, by speculum, if necessary, and catheterism of the orifice to establish the presence of the vaginal cavity above the sæptum, will settle the diagnosis in a certain manner.

The positive signs which lead to a diagnosis are

the presence of the transverse sæptum discovered by the examining finger, the impossibility of feeling the cervix when the lumen is too small to admit the finger, the presence of the ringlike band which is easily felt when the finger can pass the opening, and the visual demonstration by means of the speculum.

Influence upon Menstruation and Labor.—Transverse sæpta, whether congenital or acquired, may offer obstacles to the menstrual flow and to sexual intercourse, and may thus become sources of sterility. If impregnation occurs, however, they have no effect upon the normal course of pregnancy. When labor comes on, however, they may seriously interfere with its successful completion. The factors then to be considered are the size and site of the sæptum and its degree of resistance to the labor pains, and the intensity of the uterine contractions. If it is very tough and resistant, it may cause the death of the foetus by the prolonged labor; and for the same reason uterine rupture may occur. Maternal exhaustion may be observed from the double work of dilating the birth passage and the obstructing diaphragm. The most frequently described accident is that of rupture of the sæptum with extensive tears into the vagina, resulting in some cases in fatal hæmorrhage. Neugebauer has collected fifty-six cases of Cæsarean section performed on account of this malformation, twenty-two of them being Porro operations. He has reported also 237 cases in which birth ended spontaneously or by the aid of forceps with the most varied result to mother and child. In most instances the child was born dead, and frequently the mother was left with vesicovaginal or rectovaginal fistulæ or with terrific lacerations of the vagina, or she died from sepsis or from hæmorrhage. Birth through the rectum in the presence of a transverse sæptum, is also recorded, the most recent one being that of Alain.¹¹ The prognosis, then, for mother and child, in the absence of timely treatment, is doubtful and even serious.

TREATMENT.—I. *In the non-pregnant state.* In the case of an unmarried woman who menstruates regularly through the sæptum, nothing is to be done. In the multiparous married woman the diaphragm should be so dilated that sterility will not result; that is, if uterus and ovaries are present—for other malformations and lack of development may simultaneously appear. Coition must be rendered painless and possible to both parties. Further than this, no treatment need be instituted. If, however, the opening in the sæptum is very small and dilatation cannot be practised, the sæptum may be excised and

¹⁰ Charles Darwin, *Descent of Man*, 2d ed., p. 36.

¹¹ Alain, Cloisonnement Transversal du vagin, *Rev. mens. de gyn., obstét. et péd. de Bordeaux*, September, 1901. Cited by Audebert and Payrau, *Gazette hebdomadaire de médecine et de chirurgie*, July 27, 1902.

the cut vaginal surfaces carefully sutured, as done by Neugebauer¹² in 1893, and by Vineberg¹³ in 1894. Dilatation with rubber bougies or with the fingers may be practised, subsequent contraction being prevented by packing with gauze.

2. *During pregnancy.*—If the condition is recognized early, excision should be done; if it is seen only late in pregnancy, dilatation should be performed, as an operation then would be too bloody as well as a possible provocative of premature labor pains. These measures have the additional advantage of permitting a thorough exploration of the vagina above the sæptum, and of allowing it to be thoroughly disinfected, for the space above the membrane has been found to be a perfect nidus of microbic residence.

If dilatation is chosen, it should be slow and gradual, and can perhaps be best achieved by Hegar's elastic bougies followed by manual dilatation.

3. *During labor.*—The plan during labor depends upon the stage of labor and its duration when the patient is seen. If labor is just beginning and dilatation can still be accomplished, it is perhaps the safest method, as infection may thus be avoided. Here the Champetier-de-Ribes's bags, or Voorhees's modification, will prove very serviceable after the opening has been sufficiently expanded by the fingers or by bougies to permit of their introduction. But if the sæptum is very tough and fibrous and does not yield to stretching, its section is the only possible measure left. Either a buttoned knife or bistoury or a pair of blunt-pointed scissors may be used for this purpose. Bilateral incisions may be sufficient to permit the birth of the child, or it may be necessary to make crucial incisions as I was compelled to do. The after-treatment consists in preventing the sæptum from forming cicatrices with the vaginal wall or with its own cut edges. Dilatation may even have to be practised after the puerperium is ended, as a prophylactic measure against a repeated stenosis.

Conclusions.

1. Transverse sæpta of the vagina are rare, occurring in about one in 5,000 cases, about .002 per cent.

2. They are derived from an inclusion by Müller's ducts of cells from the Wolffian duct or ducts after the formation of the genital cord, and are therefore epiblastic in origin.

3. Their perforation is proof of the normal conduct of Müller's ducts in all other respects.

4. Transverse sæpta of the vagina being normal in adult sheep, whales, dugongs, the manatee, and the

chimpanzee, they represent in the human being a reversion, "a return to an ancestral type." Their function is purely speculative, but may have to do with the facilitation of conception; and when they appear in the human female may have a similar purpose in harmony with other minor defects of development.

5. The treatment of this condition is excision of the sæptum with suturing of the cut edges. In unmarried women no treatment is necessary. If the sæptum is first seen early in pregnancy, it may be excised; if during labor, a crucial incision will be sufficient with subsequent removal of the sæptum. The prognosis for the child is usually bad unless the sæptum is incised early or unless it is not too strong to be burst by the advancing head; for the mother, it may result in serious lacerations or fatal hemorrhage.

136 WEST EIGHTY-FIFTH STREET.

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¹² Loc. cit., p. 212.

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EXPRESSION OF THE LID MARGIN AS A THERAPEUTIC MEASURE IN BLEPHARITIS AND ITS COMPLICATIONS.

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That the hair follicles, crypts, and glands of the lid margin may, even in apparently healthy lids, retain sebaceous matter and fatty detritus, together with a varied flora of bacteria, is generally recognized. Most of these microorganisms are, it is true, innocuous, but not infrequently germs of a more virulent, and especially of a pyogenic nature, are also present. The investigations of Straub, Stroschein, and others of the Würzburg school have established these facts and called attention to the importance of painstaking asepsis of the conjunctival sac and of mechanical cleansing of the lid margin as a preliminary to major operations on the eye, while digital expression of the marginal glands is used by some surgeons to insure still further sterilization of the field before performing iridectomies or cataract extractions.

It is the more surprising that this method of removing septic matter has not been applied to treatment as well as to prophylaxis; to the cure of obviously diseased and infected lid margins as well as to the cleansing of evidently normal ones. The inference seems not to have suggested itself that if secretion rich in bacteria, or at any rate in effete matter favorable to their growth and multiplication, may present a source of infection of a corneal section, the same material, altered by disease, mixed with septic matter from the conjunctiva or from pustules of the lid edge, inoculated by rubbing with dirty fingers or soiled towels, may well be a potent factor in the ætiology of recurrent, chronic, and essentially infective conditions, not only of the lids themselves, but of other tissues on the surface of the globe, notably of the cornea, when through injury or disease the latter had been exposed to microbial ingress from the lid margin, or to actual inoculation by the mechanical effect of frequent winking or of rubbing the eyes.

Mackenzie,¹ discussing inflammation of the eyelids or "ophthalmia tarsi," says that the Meibomian secretion, naturally bland and small in quantity, serving merely to smear the edges of the eyelids so as to prevent them from adhering, and to conduct the mucus of the conjunctiva and the tears toward the puncta lacrymalia, becomes in this disease augmented in quantity and changed into a puriform matter. This matter of itself, as well as the inflammation in which it originates, causes constant irrita-

tion and frequent itchiness of the eye and eyelids, and adhering to the eyelashes, prevents the little ulcers from healing which arise at their roots.

One or more of the Meibomian follicles are often greatly distended with purulent matter, which oozes out from their apertures on pressure. The local symptoms vary considerably in severity, obstinacy, appearance of matter discharged, and even in the seat of the principal morbid changes, for in some the Meibomian follicles, in others the ciliary glands or bulbs of the eyelashes, are the parts chiefly affected.

Michel² lays stress on the importance of considering the various forms of blepharitis clinically, from a dermatological standpoint, particularly as to their ætiology, histopathology, and nomenclature. Indeed, all the ills which skin—if not flesh—is heir to, may appear on the lids. To mention only some of those of an infective or microbial origin, we have the eruptions of the acute exanthemata, of vaccinia and syphilis, as well as the initial lesion of the latter disease, acne, eczema pustulosum, sycosis, favus, and scabies. While these are comparatively rare we often see forms of chronic blepharitis with retention and puriform change, producing an infective secretion quite capable of inoculating an abraded cornea, or, as I have cause to believe, one whose epithelium is to all appearances intact. That phlyctenulæ of the conjunctiva and cornea may be caused, or their development at least favored, by the pyogenic germs of an old blepharitis, is asserted by various authors, and the observation is an old one that affections of the lid margins and more particularly of the glandular structures are seen with disproportionate frequency among drinkers, constipated dyspeptics, and those who have acne or comedones of the face.

This dermatological aspect seems to have been lost sight of when the question of treatment comes up. The recognition of eye strain, due to refraction errors or to imbalance of the extrinsic ocular muscles, as an important ætiological factor in blepharitis, has marked a distinct advance in our therapeutic measures, and careful correction of ametropia and heterophoria is, as has been recently stated, a commonplace among ophthalmologists. Other factors, constitutional and local, are, however, frequently neglected, treatment is but too often schematic or perfunctory, and the underlying cause is overlooked. We do not sufficiently differentiate in blepharitis the various forms of eczema and of seborrhœa, and generally prescribe "yellow salve" for every case of red lids.

As to the form of local treatment with which this paper deals, I find no mention of expression of the lid margin as a therapeutic measure in the text-books on diseases of the eye, and only one or two notices,

¹ *A Practical Treatise on the Diseases of the Eye*, London, 1840.

² *Graefe-Saemisch H'dbuch d. ges. Augenheilk.* Leipzig, 1876.

scattered in ophthalmic literature, of its having been used at all. Fuchs mentions that epilation probably acts in part by removing colonies of bacteria, preventing retention and the formation of scabs, which offer a nidus for microorganisms. He refers to massage of the lid in the thickening due to chronic blepharitis as acting partly by exciting resorption, partly because it helps to remove mechanically the contents of the palpebral glands and thus prevents their occlusion.

My attention was accidentally drawn to this subject a year or two ago by an unusually stubborn case of recurrent blepharoadenitis. The patient, whose case is detailed below, had been under treatment for many months, his refraction error had been corrected by a surgeon whose accuracy in this line is well known; recurrent chalazia and Meibomian concretions had been curetted again and again; he had taken the waters at Carlsbad for a tendency to obesity and constipation, all without relief. The condition of the lid margin was so evidently one of pus retention that expression and massage were performed as a cleansing procedure preliminary to making local applications. The improvement was so prompt and marked that mechanical treatment of the lid margin was made a routine measure in the case with the most gratifying results.

Since then I have made it a point to pay special attention to the condition of the marginal glands and to the detail of retention and septic inoculation in all cases of chronic blepharitis, as well as in those cases of superficial keratitis and corneal infiltrate in which the presence of an infective lid element could be recognized. In fact, I have made it a part of routine treatment to express, massage, and disinfect the lid margin in all cases of superficial inflammation where there was the slightest evidence of retention, and to apply the same measures for diagnostic purposes in many instances to determine the necessity for further treatment of this sort.

CASE I.—Mr. G. T., a broker, aged forty-three years, consulted me in August, 1901, for the relief of his lids, which had been red and swollen, on and off, for months. His general condition was fair, except for a tendency to obesity and constipation, and a general flabbiness of muscles and integument. The skin of the face was particularly fat and greasy. Examination showed three dioptres of myopic astigmatism, fully corrected, with normal vision. There were no fundus changes, and muscular equilibrium was perfect. The lids on eversion were found congested, irregularly thickened, and nodular, showing numerous cicatrices resulting from previous incisions into recurrent chalazia. The glands of the lid margin were engorged. There were a number of small pustules at the roots of the cilia. The ocular conjunctiva was inflamed and there was marked tearing, with some secretion of a mucopurulent nature. Expression of the lid margin brought out quite

a large amount of tallowy matter mixed with pus. After thorough massage and washing with hot soap-suds, a solution of bichloride of mercury 1 : 500 was rubbed into the edge of the lids with a cotton pad.

The patient was directed to continue the cleansing of the lids with Castile soap and hot water every night, and to rub into the edges a salve containing ammoniated mercury (2 per cent.) and zinc oxide (2 per cent.). The local treatment by expression and massage was repeated twice, with marked improvement; the condition of the lids being better, according to the statement of Mr. T., than it had been in more than a year. Two months later a recurrence was treated in the same way and promptly subsided. Since then the patient has remained free from lid trouble until October, 1902, when he came to me with a mild blepharitis of the familiar type. The reaction was slight this time, but retention was marked, and expression was used as before, with excellent results.

CASE II.—Miss E. S., aged twenty-eight years, consulted me in June, 1902, at the suggestion of her family physician. For more than three years she has had "attacks of red lids." After a day or two, the ball of the eye becomes red and painful and a "spot appears on the sight." The refraction was tested, under atropine, and correcting glasses prescribed two years since. The glasses have been changed from time to time, and various salves have been used, without preventing the appearance of the spot and the inflammation of the globe. On examination a pustulous blepharitis was found and with it a number of nummular infiltrations in the cornea, corresponding in position to the pus points on the lids. After thoroughly expressing and disinfecting the lid margin, a drop of atropine solution was dropped into the eye and the infiltration cauterized under local anesthesia (cocaine 4 per cent.), with pure carbolic acid applied on a fine probe. Relief was almost immediate. The patient was instructed to use hot soap-suds for the lids, and to apply a bichloride salve 1 : 2000 at night. Since then there have been one or two mild attacks in which the lids have become itching and red. These have been cut short, at once, by expression of the lid margin, carried out by a member of the patient's family, whom she has trained in this procedure. There has been no reappearance of the spots. The eye has not been involved in any way.

It would carry me too far, were I to enumerate the various cases in dispensary practice in which expression has been used with strikingly good effect. The two histories detailed above are typical, and so may stand for numbers of similar observations.

My case-books show a number of similar instances in which retention of secretion was evidently a factor in producing stubborn or recurrent blepharitis, but as expression was not the only treatment used, correction of a refraction error being necessary, I have preferred not to cite them in this connection. It is by no means my intention to claim for mechanical expression a specific action in these cases, or to urge its use to the exclusion or neglect of any

of the usual and generally necessary methods. I do believe, however, that it is a valuable aid in therapeutics and one which, if it is known, is much neglected.

THE DETECTION OF RENAL AND VESICAL CALCULI BY MEANS OF THE X RAYS.*

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On November 8, 1895, Professor Wilhelm Conrad Röntgen, working in the Institute of Physics in the University of Würzburg, in Bavaria, first saw a fluorescent chemical glow under the influence of the x rays. Six months later, July 11, 1896, there appeared a report in the *Lancet*, by Dr. McIntyre, of Glasgow, of a renal calculus found by radiograph in a patient, the diagnosis being later confirmed by operation. This is the first reported case of a renal calculus detected by this means, and soon reports of similar cases began to multiply rapidly.

The methods of examination by x rays are two:

1. *Fluoroscopic Examination.* This is absolutely unsatisfactory for renal and vesical calculi, because (a) the portion of the body under consideration is the most difficult we have to examine. It does not allow to pass through it a quantity of the fluorescent rays sufficient to light up the fluoroscope, so as to give a differentiation fine enough to be of value when observed by the retina.

(b) The object to be found is frequently too small to be seen under the most favorable circumstances, and cannot be brought near enough to the screen to cast a distinct shadow.

(c) The necessity of remaining at least ten minutes in an absolutely dark room before making any *satisfactory* fluoroscopic examination is mentioned, to show what careful preparation of the observer's eye is required, even under favorable conditions, and how unreasonable it is to expect to see such a small object as are many calculi under such adverse circumstances.

2. *Radiographic Examination.* This is the only positive means of detecting the presence of renal or vesical calculi by the x rays. Good radiographs are necessary. Negatives are satisfactory only when the negative shows

(a) Good differentiation between the various tissues.

(b) The outlines of the vertebral bodies, the intervertebral spaces, the transverse and spinous processes.

(c) The last ribs.

(d) The psoas, iliacus, and quadratus lumborum muscles. If these conditions are fulfilled a calculus, if not too minute, will usually cast a perceptible shadow. The plate should include the lower ribs, both kidneys, and the length of the ureters. An 11 x 14 plate is usually sufficiently large.

The target of the tube is placed over the umbilicus from eighteen to twenty-four inches from the plate on which the patient lies flat on his back.

Two radiographs should be made and compared before any opinion can be formulated. The interpretation of the radiograph requires some experience, great care, and much patience. The negatives are examined best by a diffuse light transmitted through ground glass, or they may be held against a clear white northern sky. Too much care cannot be exercised in the matter, and the negatives are often best seen by tilting them so that the light passes through the film obliquely, for they are frequently what are known by photographers as *thin* negatives with faint outlines.

It is very necessary to consider also in drawing conclusions the clinical history of the case.

Preparation of the patient.—The patient should have the gastrointestinal tract prepared nearly as carefully as for a *coeliotomy*. An active cathartic should be followed by enemata, and the meals of the day of exposure should be very light. This prevents errors due to shadows of pits or fruit stones, and increases the permeability of the abdomen to the rays. During the exposure the patient should keep absolutely still except for very quiet respiration.

Fat patients are very difficult subjects, even under the most favorable conditions of apparatus and tubes.

Possible Sources of Error in interpreting the negatives are

1. Defects in the plates.
2. Air bubbles on the plates. These are not important, for they are easily recognizable, but
3. Air in the gut often causes shadows, which may be mistaken for calculi by inexperienced observers.

Varieties of Calculi.—Dr. C. L. Leonard, of Philadelphia, is, so far as I have been able to learn, the only observer who has reported the obtaining of shadows of pure uric acid calculi in the living human subject. Calculi of oxalates, phosphates, and the combinations of the different urinary salts usually give good shadows.

Vesical Calculi.—The radiographic examination of this variety of calculi is much simpler than that of those in the kidney or ureter. They are usually made up of oxalates or phosphates, even though the nucleus is of uric acid, and are frequently of large

* Read before the Medical Society of the County of New York, December 21, 1902.

size. The patient is better placed on the belly, the plate being under him, so as to bring the bladder as near the plate as possible. The distended bladder may cast a deceptive shadow, so that the organ should be empty.

In conclusion, it is my privilege to give you the opinions of the following gentlemen on this method of diagnosis of renal calculi. To all of them I am deeply indebted for many valuable suggestions and much kind criticism, and I was to thank them for the interest they have extended to me in this fascinating line of work.

Dr. Andrew J. McCosh writes:

I consider that radiographs are of great value in the diagnosis of renal calculus, both as to its presence as well as to its absence in the other kidney. While it is true that errors have been made because of shadows in the photograph supposed to represent stones, yet such mistakes could probably have been avoided had the surgeon not trusted to a single photograph. As corroborative evidence, a radiograph showing a renal calculus is perhaps of more importance than any one symptom. If an expert observer sees in three different plates a kidney stone, I should regard the evidence as conclusive, provided other symptoms were present. Without other symptoms I should regard it as only probable that a stone was present in the kidney. I think, however, if reliance is placed in one radiograph mistakes are bound to occur.

Dr. F. Tilden Brown, regarding the usefulness of this method, says:

1. For *positive diagnosis*.—No, when the radiographic returns are negative; Yes, when affirmative. In other words, where two or more plates differentiating the normal tissues clearly, show identical abnormal shadows in the region known to be occupied by the kidney or kidneys.

2. For *probable diagnosis*.—Yes. It is hardly necessary for me to add that while satisfied that x ray diagnosis of renal calculus is well in advance of any other means, even this resource has its limitations.

The value of ureter catheterization as an adjunct to x ray diagnosis is deserving of recognition, in that it reveals the relative competency of the two organs. If the other kidney is found to be organically and functionally perfect the surgeon is in a relatively safe position at time of operation to do a nephrectomy instead of nephrotomy, should he find that the calculus kidney is markedly pyonephrotic, and the stone so beset with branches into the calices as to render its removal difficult, destructive, and bloody.

Dr. Francis H. Williams writes:

The absence of indications of a calculus on the negative does not, in my opinion, exclude the presence of a renal calculus. On the other hand, when all suitable precautions have been taken, indications of calculi on satisfactory negatives afford good evidence of their presence when taken in connection with the clinical history.

A CASE OF ABNORMAL TEMPERATURE.

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Recently, I attended a case of remittent malarial infection, the diagnosis being verified by a blood examination.

The patient was Dehlia J., colored, Emporia, aged twelve years. Was never sick before with any protracted illness, and while normally very thin, was as strong and as vigorous as any other of her playmates.

Three days before I was called she had had a chill, "malaria," which was of the ague variety, and lasted two and a half hours, after which fever came on, and lasted for six or eight hours; and from what was learned, delirium was experienced during the fever. Quinine was given in the form of one of the various chill tonics which comprise to each drachm the following: Amorphous quinine, two grains; iron by hydrogen, one grain; lemon syrup, q. s.. A teaspoonful of this mixture was given every two hours until twelve doses had been ingested. The third day the child did not have a return of the chill, but appeared dull and inactive, a thing very unusual for her, as ordinarily she was always active. This condition had lasted three or four days when I was summoned; but being absent on professional business I did not see the patient till thirty-six hours afterwards. A few hours before my arrival, a very high fever set in, and upon testing the condition my thermometer registered 105.5° F. I shook the mercury down and replaced the thermometer, which within a half minute was raised to 105.5° F. This was orally taken. The axillary space registered the same. I left instructions to give cold baths and use an ice bag upon the forehead. Upon returning, three hours later, the fever registered 105.5° F., notwithstanding three cold water sponge baths had been given and the ice cold bag kept continually in position. I then gave ice cold enemata of a quart each, and a sponge bath at 40° F. One enema after another was injected, five being administered in all during one hour, at the expiration of which and during which I kept a thermometer in the mouth and upon examination this showed the fever had gone to 106° F. I then had the child encased in sheets wrung out of ice cold water, but this did not lower the temperature one degree. Ordinarily, if this had been among a class of intelligent people, I should have tried the ice tub bath, but already my treatment had been somewhat criticized and the various members of the family had begun to think I came upon a mission of murder, rather than one of mercy, so I fore-

went the pleasure of placing the patient beneath the water. I now returned to the initial plan of fever reduction plus antipyretics in increasing dosage, *i. e.*, from two to five grains of phenacetin every two hours, alternated with forty drops of spiritus ætheris nitrosi, well diluted in weakened brandy. This plan of attack was reinforced by *high* rectal enemata of ice cold water, using a quart at each sitting. The latter was given and ordered every two hours and a half until reduction in the temperature was noted by the *thermometer*, the same being placed in the hands of a competent colored nurse. During my stay of about eighty-five minutes, three registrations of the fever were made by me personally without noting any reduction in temperature. Upon leaving I gave specific instructions to continue the treatment without any modifications whatever until my return, unless a sudden fall in temperature was noted. Being absent nearly three hours, I was greatly chagrined to ascertain on my return that no impression had been made upon the child's condition. The only evidence of improvement noted was spasmodic vomiting attacks, during which the patient displayed a degree of consciousness unusual for her abnormal fever elevation. I at once applied an elongated ice bag which reached from the nape of the neck to the second lumbar vertebra, and hastily shaving the scalp, I encased the child's head in an ice cap, which was put in operation instantly. During this procedure she lay peaceful and unconscious, her loud breathing and rapid pulse being watched with no little anxiety by myself and those around the bedside. At this juncture, there came on suddenly a paralysis of the sphincter ani, a condition I had not contemplated, and one which, under the trying circumstances, I deeply deplored. However, I used the lower tube as best I could in its crippled condition with some good effect. The spinal bag was turned every few minutes, that the colder side might be fully appreciated by the underlying parts. After having fully tested this mode of battling with a temperature which had now gone above 106° F., I concluded that phlebotomy might assist in alleviating a most stubborn condition, and remove from the general circulation a poison, rank and venomous in its violence. The classical operation advised was hurriedly performed and the system was relieved of about one pint and a half of blood, rather darker in color than ordinarily seen, but I attributed this to the coal tar derivatives in the circulation. I carefully noted the impression made upon the opposite pulse, and within fifteen minutes after the depletion, I was rewarded by great reduction in both pulse and temperature, the former dropping gradually from a hundred and forty-nine to one hundred and eight a minute, (full

count), and the latter by three and two fifth degrees Fahrenheit. Strange to relate, no perceptible shock followed this rather heroic treatment. From this time until the crisis was reached, the fever never rose above 103° F., and when it did, either the head coil or cold water sponging immediately gave the desired results.

The child was given the unusual treatment for malarial fever, which ran its course in about twenty-seven days, and she made a complete recovery without any final complications.

Normally, we may expect a higher fever in children and young adults, but this case puzzled me very much, but the prompt assistance that the bleeding gave, I believe saved the patient's life. It is true that for the past twenty years phlebotomy has fallen into disuse, especially by the younger generation of physicians, and being myself in my thirtieth year, I have had only a few cases that I thought needed such rapid depletion as bleeding usually gives, as applied to diseases like fevers; but our grandfathers were eminently successful practitioners, and the members of the older schools were taught that bleeding was the sheet anchor in almost all cases where a continued fever existed.

Truly the pendulum has swung dangerously far in hundreds of instances, but a just consideration of all things creates for a man the name of being level headed, and this will apply in the profession to which I have the honor to belong as much as in any other.

The Value of Art Study to the Scientific Writer.—Mr. George Munro Smith, in a recent address to the Bristol Medico-Chirurgical Society (*Bristol Medico-Chirurgical Journal*, December), says: "Many of us practically renounce Art, because in its essence it is often outside the pale of scientific analysis and investigation. 'For obscure all great Art is—not with the perplexity of subtle speculation, but with the mystery of vital movement' (*Studies in Literature, 1789-1877*, by Edward Dowden). We find, whether this be the reason or not, a great want of appreciation of artistic productions, whether in painting, poetry, or literature generally, amongst medical men—at least, so it seems to me—and literature especially is looked upon by many of us as an occasional relaxation rather than as a great force which moulds the character and lives of mankind. This, I believe, is a great mistake, because we must be incomplete without the influences which come from artistic literature, and our style of writing becomes stilted and uninteresting—too much of the catalogue type. 'What does it matter,' it may be urged, 'how you express yourself, so long as you put down your thoughts clearly?' Well, it makes this difference, amongst others, that one style can be read with pleasure, the other can hardly be read at all. We pay very little attention to style, yet we are all, in our reading, more or less influenced by it."

Correspondence.

LETTER FROM TORONTO.

A Proposed Institute of Hygiene.—The New Medical Building for Toronto University.—The Royal National Mission to Deep Sea Fishermen.—Infectious Diseases in Ontario.

TORONTO, February 21, 1903.

Dr. Robert Ferguson and Dr. H. A. McCallum, London, Ont., formed part of a deputation to Toronto recently, to lay before the Ontario government the claims of the Western University, more particularly, probably, the medical department thereof, and to prefer the request that an Institute of Hygiene be established in London in connection with the Western University. The object of the university is to have the government build and maintain an institute equipped with laboratories for the purpose of providing scientific facilities for the prevention and treatment of infectious and epidemic diseases. The advocates for an Institute of Hygiene for London feel that the establishment of it is due to the western portion of the province, on account of the generosity displayed by the government in other sections. Although the government has replied that it cannot at present accede to their application, the petitioners intend further to prosecute it.

The new medical building for the medical faculty of Toronto University is nearing completion. This fine structure, which has cost \$125,000, is also to be splendidly equipped. Recently a deputation from the medical faculty waited on the Ontario government in order to secure an additional loan of \$50,000 from the funds of the university, the proceeds to be applied to equipment and furnishings. It is planned entirely on the "unit system," and is the first university structure to be constructed on this plan since that principle was laid down. Toronto University now has the largest number of medical students of any Canadian university, not excepting McGill College, which for so many years took first place. At the present time there are 420 medical students enrolled.

Dr. Wilfrid T. Grenfell, medical superintendent of the Royal National Mission to Deep Sea Fishermen, a short time ago lectured in Toronto on his medical work amongst the fisherfolk of Labrador and the shores of Newfoundland. This work covers a field of 1,000 miles of coast, and ministers to 30,000 people. Dr. Grenfell has built up two hospitals and is now having a third constructed on the North French shore. The object of this medical mission to these fisherfolk is to reach those isolated cases of sickness which otherwise would receive no medical or surgical treatment. Dr.

Grenfell is assisted in this work by two physicians and two trained nurses. Two hospital ships ply along the coast-line, and follow the fishing fleets out to sea. During the first year of the mission, in 1892, they treated 900 patients. Last year the number treated amounted to 2,774. The three hospitals contain twenty-four endowed cots.

The regular quarterly meeting of the Ontario Board of Health was held in Toronto, last week, in the office of the secretary of the board, Dr. P. H. Bryce. According to the quarterly report submitted by the secretary, the health of Ontario had remained fairly good as regarded contagious diseases, with the exceptions of smallpox and scarlet fever. The latter had, however, become so virulent in its character that prompt and effective measures of isolation and disinfection similar to those employed for smallpox had to be adopted. In January of the present year, smallpox had existed in forty-two centres. There were 196 cases and ten deaths, as compared with 650 cases and one death in January, 1902. Galt, Ont., had experienced the most serious outbreak. During January there had been sixty-five cases in that town and five deaths. Vaccination had been pretty general, over five thousand of the eight thousand of population having been vaccinated. Dr. Bryce had examined personally thirty of these cases. Of these thirty cases seventeen had never been vaccinated; and none of them had been vaccinated or revaccinated within the past seven years. It was significant that not one of the five who died had ever been vaccinated. The present laxity as regards vaccination in the province called for an amendment to the Vaccination Act which was placed on the statute books over forty years ago; and at the coming session of the Ontario Legislature, the board of health will have a bill passed making the law in this respect more effective. During the past few months scarlet fever has been quite prevalent throughout the province and had been more virulent than for many years. In Toronto alone, during the last six months of 1902, there had been 701 cases with 88 deaths. While the death rate had been nine per cent. in the cities generally, it had been 12.5 per cent. in Toronto from scarlet fever. In Toronto, in January of this year, there were 106 cases and 21 deaths, an exceedingly large percentage.

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The Dermatological Society of Great Britain and Ireland.—At the annual dinner of this society which will be held in the near future in London, Dr. W. T. Corlett, of Cleveland, Ohio, author of a work on Exanthemata will deliver an address. At the last annual dinner of the society, Dr. Unna delivered the address.

Therapeutical Notes.

For Pleurisy.—M. Marian (*Revue française de médecine et de chirurgie*, January 19th) prescribes in pleurisy with serous effusion the following mixture:

- ℞ Distilled water.....200 grammes (6 ounces);
Syrup of orange flowers...80 grammes (2½ ounces);
Cherry laurel water.....20 grammes (5 drachms);
Tincture of aconite root.....20 drops;
Sodium salicylate.....5 grammes (75 grains);
Potassium nitrate.....2 grammes (30 grains).
M. Four tablespoonfuls daily for an adult; four dessert-spoonfuls for a child ten years of age.

The Medical Treatment of Hæmorrhoids.—According to the *Journal des praticiens* for January 24th, it is "possible to live on very good terms with hæmorrhoids," provided that they do not become infected (hæmorrhoidal crises), and that they do not bleed too often. But the rules of hygiene must be most scrupulously observed.

Frequent sitz baths must be taken. To diminish local congestion, a life of moderately active exercise must be led; sobriety must be practised, the abuse of meat avoided as also of spiced foods, and vegetables and fruits must be taken freely. The stools must be regulated, a movement as often as possible being obtained before bedtime, as the hæmorrhoids swell greatly after defecation and become reduced during the rest at night. Drastic purgatives must never be taken; instead, a teaspoonful of the following at bedtime:

- ℞ Calcined magnesia..... }
Cream of tartar..... } equal parts.
Sugar of milk..... }
M.

A teaspoonful of castor oil, taken fasting, may also be recommended.

As to enemata, they are of great service. Some recommend them cold, others prefer them hot. The writer prefers them hot when there is no pain, as the decongestive action of heat is more prolonged than that which follows cold. As an astringent, a teaspoonful of alum may be added to the enema, or astringent decoctions may be used. An enema or decoction of rhatany root of a strength of two per cent., is recommended by the writer. Care must be taken to use a clean rectum tube of suitable size and properly oiled, to avoid infection.

For those patients who demand drugs hamamelis and capsicum may be recommended, although the writer has not a great opinion of their efficacy:

- ℞ Fluid extract of hamamelis.....0.05 gramme (¾ of a grain);
Watery extract of capsicum.....0.10 gramme (1½ grain).
M. For one pill. Three or four to be taken daily.

Local Treatment.—Although anatomically, the distinction between internal and external hæmorrhoids is bad, clinically it is of service.

External Hæmorrhoids.—The commonest complication of these hæmorrhoids is acute inflamma-

tion of a very painful character (hæmorrhoidal crisis). The first indication is to relieve the pain. A pledget of absorbent cotton soaked with a one-per-cent. solution of cocaine is very good, but the relief it affords is only transitory. To obtain permanent relief it is necessary to allay the inflammation. Applications of very hot or very cold water, of liquor plumbi subacetatis, or repeated sprayings with hot boric solution, often produce the desired result in a very simple manner.

During the active stages the patient must use only absorbent cotton soaked in borated lotion, for wiping the anus. The use of ordinary paper is bad because it tends to increase the irritation by the small erosions it sets up, and because, lacking suppleness, it is generally painful to use.

Inunctions with ointment of tar or poplar ointment should be practised three or four times a day. The following formula is ascribed to Coutaret:

- ℞ Poplar ointment...|.....30 grammes (1 ounce);
Extract of rhatany.....2 grammes (30 grains);
Thebaic extract.....0.50 gramme (7½ grains);
Cocaine hydrochloride.....0.75 gramme (11 grains).
M. ft. unguent.

Internal Hæmorrhoids.—When the hæmorrhoids which come down during defecation are difficult to return, the patient should lie on his side, the lowermost thigh extended, the upper one flexed, and with a compress soaked in freshly boiled water or in olive oil containing ten per cent. of gomenol gentle taxis should be applied. Should this manœuvre fail, it may be repeated after taking a prolonged bath.

For pain the following suppositories will be found very useful:

- ℞ Extract of rhatany.....0.50 gramme (7½ grains);
Cocaine hydrochloride...0.02 gramme (⅓ of a grain);
Cacao butter.....4.00 grammes (60 grains).
M. For one suppository.

The following is ascribed to Unna:

- ℞ Chrysarobin.....0.40 gramme (5 grains);
Iodoform.....0.10 gramme (1½ grain);
Extract of belladonna...0.05 gramme (¾ of a grain);
Cacao butter.....20.00 grammes (300 grains).
M. For five suppositories.

In case of hæmorrhage, cold applications should first be tried, with pure plain water, water containing five per cent. of alum, or with a hot solution, at 48° C. (118° F.), of 4 grammes (60 grains) of calcium chloride to the quart (Mathieu); if unsuccessful, recourse may be had to the following suppository:

- ℞ Antipyrine..... } of each 0.30 gramme (4¼ grains);
Salol..... }
Extract of belladonna...0.01 gramme (1⁄100 of a grain);
Cacao butter and wax.....q. s.
M. For one suppository.

The patient should also take the following mixture, a tablespoonful every hour:

- ℞ Calcium chloride.....4.00 grammes (60 grains);
Tilia water.....120 grammes (4 ounces);
Syrup.....30 grammes (1 ounce).
M. ft. mist.

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THE "REFRACTING OPTICIAN."

Physicians speak scornfully about the credulity of educated men and women who regard as equally worthy of consideration with their own the assertions of magnetic healers, Indian doctors, Eddyites, Dowieites, faith curists, etc., but how about the credulity they themselves exhibit in regard to the professions of the "refracting optician"? Is it true that physicians are as credulous as laymen in regard to medical quackery, provided always that the particular quack confines his operations to some branch of medicine to which the particular physician pays little or no attention? If not, it remains to be explained how several firms of opticians find it profitable to distribute circulars among physicians, offering to furnish the physician with a diagnosis if he will send to them patients suffering from headaches and other presumptive symptoms of ocular trouble, and also to prescribe for the patients glasses without subjecting them to the trouble and expense of a visit to a specialist. The need of medical knowledge is thus acknowledged in one of these advertisements: "Frequently it happens that many good mechanics, who are connected with the optician's calling, are correspondingly deficient in their knowledge of how to correctly ascertain the optical condition of the eyes" (in less stilted language, of how to fit glasses), "therefore a combination between the physiologist and the mechanic is essential to the success of both." And yet the advertiser brings forward no evidence, and makes no pretense, except by implication, that he is a physiologist, though if he is not he is unqualified to "correctly ascertain the optical condition of the eyes."

This request for the family physician's support of the advertiser's attempt to practise a certain

branch of medicine is made with full recognition of the fact that there are very many physicians in any large city who devote themselves to the study of the needs of eyes and ears. Such a specialist may not be as acute in the recognition of the interdependence of ocular troubles and general disease as he theoretically should be and practically might be if one brain could retain a complete knowledge of all branches of medicine; yet he can not infrequently give important information to the family physician which he has obtained during a routine examination of a patient's eyes to fit them with glasses, information which cannot be expected reasonably from one uneducated in medicine. In the advertisement already referred to this statement is made: "The refracting optician is also taught to recognize the value of the general health of the patient in relation to the necessity for glasses, he therefore does his work in connection with that of the family physician and thus effects a great saving in the patient's time and purse." How thoughtful! Although unskilled in medicine, this optician volunteers to act as a consultant with the family physician in regard to the interdependence of eye strain and other physical ailments. Now may we not expect the friendly offices of the apothecary to be offered in consultation with regard to the treatment of the other ailments? Specialists have insisted on the danger to life and sight from the delayed recognition of organic disease due to such consultation, and have quoted many cases as evidence, until it sometimes seems as if other physicians were weary of the subject and apt to stay away from society meetings when they thought it might be brought forward.

It is proper and laudable for the family physician to save his patient's time and money; when called upon for his advice, he would be blameworthy if he failed to take these expenditures into account, but he should consider also what the patient will receive in return. By the "great saving in the patient's time" the advertiser probably refers to the tedious delay in the waiting room of the very prominent specialists, which he obviates by the employment of a number of clerks, presumably of even less competence than himself, to wait on the patient immediately, while the specialist is unable to employ a corresponding number of competent as-

sistants to help him. But, of the many eye specialists in a great city, there are only a few who as a rule are obliged to keep patients very long in their waiting rooms. Is it not better to save the patient's time by recommending a competent though less widely known specialist? A list containing the names of a number of these can be obtained at any special hospital, or can be found in the *Medical Directory* as attending surgeons and assistant surgeons at those hospitals, and in these lists a physician can usually find some name which he knows at least by reputation. Among these specialists there are very few who do not have patients whom they treat for nothing, or for amounts ranging upward to their usual fee, and who are not glad to welcome such patients when they come with a word from their family physician as to their pecuniary condition. The "refracting optician" professes that he examines the eyes for nothing and then sells the glasses for their lowest market value. This may be so, but many patients, after trying both, have stated that they could buy the same value of goods for less money at a dispensing optician's.

What is a "refracting optician"? This advertisement says: "His education embraces both the professional and mechanical sides of his calling in a manner not unlike a dentist's." Is this true? The advertisement for a well known optical institute which has graduated many "refracting opticians" says: "Classes are formed on the first Tuesday of each month and continue for two weeks." Nothing is said of any need of or requirement for a previous knowledge of the physiology of the eye, or of even a rudimentary acquaintance with the laws of light, and no such knowledge can be imparted in two weeks. Can the most credulous believe that this training is comparable with the rigid course of training exacted of a dentist before he can receive a degree?

The true optician, or, as called above, the dispensing optician, professes to be competent to perform the mechanical details of filling any prescription for glasses and to adjust the frames to any face, but admits his ignorance of the anatomy, physiology, and pathology of the eye. The relation of the optician to the ophthalmologist and that of the apothecary to the general practitioner are identical, and the "refracting optician" deserves the support of

the family physician no more than the counter prescribing druggist merits the countenance of the ophthalmologist. Above all, no physician should encourage the practice of any branch of medicine by persons not legally qualified, even though in possession of diplomas conferring meaningless degrees.

THE MCKINLEY MEMORIAL HOSPITAL.

In spite of the fact that diseases of the digestive tract prevail with great frequency in this country, so that "American dyspepsia" has become a byword among nations—though perhaps without much justice—the United States has contributed comparatively little to our recently acquired knowledge of digestive maladies. As yet the field of diseases of the stomach is one that attracts comparatively few specialists in this country. On the other hand, Germany and some other European countries have contributed to the present development of our knowledge of the physiology and pathology of digestion in such a measure as not only to bring about a fuller understanding of digestive diseases, but to revolutionize in many respects the older conceptions regarding the nature and treatment of these conditions.

One cause of the apparent backwardness of this country in this respect seems to be the lack of hospitals for patients with incipient gastric diseases or disorders, in which these patients could be properly treated and kept under observation for a sufficient length of time to effect a cure. At present the great majority of the poor who are affected with digestive diseases are of necessity ambulant patients, treated in a more or less unsatisfactory way at the dispensaries, where their ailments cannot be properly cared for with all the resources of diet and medication that such cases demand.

It is gratifying to note, therefore, that the need of a special hospital for digestive diseases has been recognized by a group of philanthropists who have signified their readiness to subscribe the money needed for the establishment of such an institution in New York. It is distinctly stated that the projected McKinley Memorial Hospital for the Treatment of Digestive Diseases is to be for the poor and the poor only, and, in view of the lack of facilities in the overcrowded general hospitals for

the proper care of the incipient, the ambulant, cases of digestive disorders and diseases, the new hospital has a *raison d'être* and will supply a want.

It is said that sufficient funds will be available shortly for the erection and maintenance of this hospital, and that there will be enough money to insure the continuance of the undertaking without resorting to chronic begging. A laboratory for research in digestive diseases and for routine laboratory work is to be one of the principal features of the hospital, and it will be equipped with all the necessities for the most advanced work in physiological chemistry, bacteriology, etc. No plans have been made as yet for clinical teaching in connection with the hospital, but this is a matter that will receive attention, we are told, when the institution is in working order.

So long as the hospital supplies a want on the part of the suffering poor, it should be welcomed by the profession, even by those who are opposing, not without good grounds, the tendency to specialization and to the extension of medical charities which characterizes the present state of medicine. If the McKinley Memorial Hospital will do the work that it promises to do, it will be an important addition to the clinical resources of New York, and will make the city a centre for the study of digestive diseases second to none in this country.

MEDICAL EXAMINERS FOR NEW YORK.

Mr. Elsberg's bill for the abolition of the office of coroner provides for the establishment of a bureau of medical examiners of the department of health, the chief medical examiner to be the officer at the head of said bureau, to be appointed by the board of health, which shall also appoint not more than six examiners for the borough of Manhattan, not more than four for the borough of Brooklyn, and not more than two each for the boroughs of Queens, Richmond, and the Bronx. "Such medical examiners shall in the first instance be appointed from the coroner's physicians in office when the office of coroner is abolished as provided in this act, and thereafter shall be appointed from among those standing highest upon an eligible list prepared by the civil service commission after a competitive examination held therefor." It will be seen that the bill works no hardship to any present medical officer, and that it tends to insure the appointment of none but competent examiners. In this respect, as in every other, the bill commends it-

self to our support, and we understand that it has met with the approval of the Medical Society of the State of New York, the New York State Medical Association, the Society of Medical Jurisprudence, and the New York Medicolegal Society. If it becomes a law, as we earnestly hope it will, the people of the State will owe a debt of gratitude to the medical men who, with the aid of gentlemen high in the legal profession, prepared its provisions. The physicians of the State have no selfish interest in the bill, but their interest in the public welfare will, we feel sure, impel them to use their influence with legislators from their several districts.

THE BIRTH RATE OF CHICAGO.

The Health Department's *Bulletin* for the week ending February 21st gives gratifying evidence that there is no mistake in the board's statement that the birth rate of Chicago has recently increased—five times as much, indeed, during the period from 1890 to 1900 as in the whole United States, that is, more than 5.3 per cent. This is an excellent showing, and we hope that it may be maintained.

"APPENDICITIS INSURANCE."

A new form of special life insurance having been brought before the public—insurance against appendicular disease in which the company undertakes to pay, up to a certain amount, the expense incident to an attack for which an operation is performed, and to pay a certain sum in case of death after the operation—the *New York Times* thinks that any such policy of insurance should be made a matter of confidence between the insured and the company, for it professes to fear that the apparent necessity of an operation would become much more frequent if the surgeons knew that such and such persons were thus insured. We take it that this is only a little pleasantry on the *Times's* part, for that paper we always expect to see appreciative of the real spirit of the medical profession.

FORMALDEHYDE AND FORMALIN; ERRORS IN DR. BARROWS'S ARTICLE.

In our issue for January 31st, we published an article by Dr. Charles C. Barrows on Acute Septicæmia Treated by the Intravenous Infusion of a Solution of Formaldehyde. In the course of this article Dr. Barrows made it quite clear that what he had used was a solution containing 1 per cent. of formalin, which is equivalent to 0.008 per cent.

of formaldehyde gas. It seems from correspondence that has come under our notice that some misunderstanding has arisen in certain quarters on this subject, and we therefore wish to direct careful attention to the difference between the terms formaldehyde and formalin. Formaldehyde is a gas, formalin is a 40 per cent. solution of this gas, consequently a 1 per cent. solution of formalin means a solution containing 0.008 per cent. of formaldehyde gas. In this connection we would also call attention to the fact that two errors crept into the charts illustrating Dr. Barrows's article. In the second chart the word "infusion" should have accompanied the record of highest temperature. In the third chart the note "foetus expelled" should have been omitted, as reference to the text will show. Newspaper reports from various sections of the United States show that Dr. Barrows's use of formaldehyde solution has attracted widespread attention among the medical profession and that it is being tried by many physicians, and, according to the newspapers, with somewhat varied results. It may be of interest to our readers to know that Dr. Barrows is making an effort to collect complete data as to all cases in which the remedy has been tried, and is himself following out further experiments in its use. The collated results of this experience will form the subject of a paper by Dr. Barrows which we expect to lay before our readers as soon as the data are complete.

DIAPHRAGMATIC EVENTRATION.

The distinction between this condition and that of diaphragmatic hernia seems to rest upon the absence of actual perforation of the diaphragm in the former, but the presence instead of such an atrophied state as to admit of encroachment of the abdominal organs on the thoracic space. In a case reported by H. Doering (*Deutsches Archiv für klinische Medizin*, lxxii; *Zentralblatt für innere Medizin*, January 17th) the condition was apparently congenital, and the case well illustrates the capacity of the respiratory apparatus to tolerate crippling, if only it is gradual in its development. The patient was a laboring man, sixty years of age, who had had good health until within a short time of his death from cardiac insufficiency. During his brief stay in the hospital it was observed that the heart was pushed over to the right side, and over nearly the whole left side of the chest, as far up as the third rib, the percussion note was tympanitic, and intestinal sounds were to be heard. There was no deformity of the thorax. The anomaly was inferred to have been congenital.

News Items

Society Meetings for the Coming Week:

MONDAY, March 9th.—New York Academy of Medicine (Section in General Surgery); New York Academy of Sciences (Section in Chemistry and Technology); New York Medico-historical Society (private) anniversary; New York Ophthalmological Society (private); Gynecological Society of Boston; Burlington, Vt., Medical and Surgical Club; Norwalk, Conn., Medical Society (private); Medical Association of the Greater City of New York; Society of Medical Jurisprudence.

TUESDAY, March 10th.—New York Academy of Medicine (Section in Genitourinary Surgery); New York Medical Union (private); New York Obstetrical Society (private); Buffalo Academy of Medicine (Section in Medicine); King's County, N. Y., Medical Association; Rome, N. Y., Medical Society; Medical Society of the County of Rensselaer, N. Y.; Newark, N. J., Medical Association (private); Trenton, N. J., Medical Association; Clinical Society of the Elizabeth, N. J., General Hospital and Dispensary; Northwestern Medical Society of Philadelphia; Practitioner's Club, Richmond, Ky.; Richmond, Va., Academy of Medicine and Surgery.

WEDNESDAY, March 11th.—New York Pathological Society; New York Surgical Society; American Microscopical Society of the City of New York; Society of the Alumni of the City (Charity) Hospital; Society for Medical Progress, New York; Pittsfield, Mass., Medical Association (private); Philadelphia County Medical Society; Lenox Medical and Surgical Society (private).

THURSDAY, March 12th.—Society of Medical Jurisprudence and State Medicine, New York; Brooklyn Pathological Society; Medical Society of the County of Cayuga, N. Y.; South Boston, Mass., Medical Club (Private); Pathological Society of Philadelphia; Church Hill Medical Society of Richmond, Va.; New York Academy of Medicine (Section in Pædiatrics); New York Academy of Medicine (Section in Otolaryngology).

FRIDAY, March 13th.—Yorkville Medical Association, New York (private); Brooklyn Dermatological and Genitourinary Society (private); German Medical Society of Brooklyn; Medical Society of the town of Saugerties, N. Y.

SATURDAY, March 14th.—Obstetrical Society of Boston (private).

The Detroit Board of Health.—Dr. C. G. Jennings has been selected to succeed Dr. John L. Irving as a member of the board of health for the city of Detroit, Mich.

The Surgeon General of the Colorado National Guard.—Dr. Peter O. Hanford, of Denver, has been appointed surgeon general of the National Guard of the State of Colorado.

Dr. Doty Confirmed as Health Officer.—On February 25th, the appointment of Dr. Alva H. Doty, the Health Officer of the Port of New York, was confirmed by the Senate of the New York Legislature. Dr. Doty is his own successor.

The College of Physicians and Surgeons of the City of New York.—Dr. George L. Peabody has resigned the chair of materia medica and therapeutics, the resignation to take effect at the close of the academic year.

The Columbus Hospital has purchased three dwelling houses adjoining its present hospital building at 220 to 230 East Twentieth Street, in this city, and will utilize the new building as a means of enlarging its present capacity.

The Woman's Medical College of Baltimore celebrated the twenty-first anniversary of its foundation on February 21st. Dr. Henry M. Hurd, superintendent of Johns Hopkins Hospital, delivered an address on the Study of Medicine.

Physical Training in the Public Schools.—Dr. Luther H. Gulick has been appointed superintendent of physical training in the public schools of New York City, and a dinner was given in his honor at the Hotel Majestic, on February 28th, by the directors and special instructors of physical training in the city school service.

Internes of St. John's Hospital Organized.—At a dinner given at the Montauk Club in Brooklyn, on February 28th, a permanent organization was formed by former internes of St. John's Hospital in that borough. Dr. R. S. Royce was elected president, Dr. W. L. Duffield, vice-president, and Dr. A. H. Longstreet, secretary and treasurer of the association.

The Medical and Surgical Club of Baltimore held its annual meeting and banquet on the evening of February 25th, at the Carrollton Hotel, in that city. Prof. W. C. Goodenow, of Philadelphia, delivered an address upon Optimism and Pessimism in Therapeutics. Dr. Charles L. Rumsey was elected president, and Dr. William M. Pennington, secretary and treasurer for the ensuing year.

A Psychopathic Hospital for New York.—A bill has been introduced in the New York State Legislature appropriating the sum of \$300,000 for the establishment of a psychopathic hospital in New York City to accommodate 150 to 200 patients. It is contemplated that the city will furnish the site on which this hospital is to be built which will serve practically as a reception hospital for the main asylum for the insane on Ward's Island, thus doing a portion of the work now done by Bellevue Hospital.

The New York Eye and Ear Infirmary, at Thirteenth Street and Second Avenue, was the scene of a strike on February 28th, on the part of nine graduate nurses. It is stated that the recalcitrant nurses objected to certain changes introduced by a newly appointed assistant to the chief nurse, and after presenting their individual resignations, which the authorities declined to accept, they left in a body. The five resident physicians undertook to perform the duties of the nurses until substitutes could be secured.

Analysis of Saliva as a Means of Diagnosis.—According to newspaper reports, Dr. E. P. Kirk, of Philadelphia, in an address delivered in Chicago recently, announced that he was enabled through the examination of saliva to make a definite and accurate diagnosis in some diseases in which ordinary methods of diagnosis proved unsatisfactory. Maladies due to faulty nutrition, such as rheumatism, neuralgic affections, and even cancer have been correctly diagnosticated. When highly magnified, saliva is seen to be pervaded by minute crystals of varied size and shape. On polarizing the

light these crystals assume widely diverse, highly characteristic and often beautiful forms, which investigators now recognize as distinctive types, indicating an excess or deficiency of certain constituents as compared with a normal standard.

The Hospital of the University of Pennsylvania.—The second reunion and banquet of the Association of Ex-resident Physicians of the Hospital of the University of Pennsylvania, was held on February 28th, at the University Club, Philadelphia. Among the speakers were Dr. Barton Cooke Hirst, Dr. William E. Hughes, Dr. Charles H. Frazier, Dr. Edward Martin, and Dr. John P. Carpenter. Dr. George E. De Schweinitz was elected president, Dr. Edward Martin, Dr. William E. Hughes, and Dr. John H. Johnson, vice-presidents, and Dr. Albert P. Francine, secretary and treasurer.

Licensing Nurses.—A bill has been passed in the Illinois Legislature providing for the examining and licensing of trained nurses by the State Board of Health. A movement is on foot among the nurses of Massachusetts to secure the enactment of a similar measure, while, as has already been recorded, two bills providing for the registration of nurses have been introduced in the Legislature of the State of New York. Of the bills which have been introduced in the New York Legislature that known as the Armstrong bill seems to be the one which has the support of the organized nurses, who state that under this measure only those nurses can be registered who have really had adequate training, which is not the case under the Nye bill, which would permit promiscuous registration.

The New York State Board of Medical Examiners.—The secretary of the State Board of Medical Examiners representing the Medical Society of the State of New York, reports as follows regarding the January, 1903, State medical licensing examinations: Total number of candidates, 103; successful, 75, or $72\frac{8}{10}$ per cent.; unsuccessful, 28, or $27\frac{1}{10}$ per cent. Of this number eight had previously passed in the medical primary branches. There was but one "honor" licentiate. Fifty-one candidates appeared for certificate of proficiency in the medical primary branches (anatomy, physiology and hygiene, chemistry). Forty-seven, or $92\frac{1}{10}$ per cent., of these were successful.

Plans for a New Bellevue.—Dr. John W. Brannon, president of the board of trustees of Bellevue Hospital, has applied to the Board of Estimate of the City of New York for an appropriation of \$3,000,000 for the erection of a new hospital at Bellevue to replace the present inadequate and antiquated structures. Dr. Brannon proposes that the hospital be erected in four sections, one section to be built at a time. The plans contemplate the erection of a main hospital building in the centre of the plot now occupied by the hospital at the foot of East Twenty-sixth Street. Separate wards for the insane, for consumptives, for alcoholic patients, and for those suffering from contagious diseases are to be connected to the main building by covered passage ways. All the structures are to be as near

fireproof as possible and the capacity of the institution is to be 1,200, the capacity of the present buildings being 920. It seems probable that the appropriation will be granted.

The State Charities Aid Association.—The thirteenth annual report of the New York State Charities Aid Association, which has recently been made public, reviews the history of various public charities during the past year, and criticizes the tendency towards extreme centralization in the government of charitable institutions of the present executive in the following words: "It is not believed that this extreme centralization of power will be of benefit. It would seem that the governor of the State should appoint as members of the State Board of Charities and the State Commission in Lunacy, men who could be trusted to attend to the affairs of their departments with intelligence and integrity. To require that all questions of importance be submitted to the governor is to discourage able men from accepting positions in which little real responsibility or authority is allowed them."

The Boston Emergency Hospital.—There has been considerable friction of late between the authorities of the Boston Emergency Hospital, or as it is also known, the Gelvin Emergency Hospital, and the police. The hospital authorities state that the police discriminated against that particular institution, sending patients long distances in order to prevent them being carried to the Emergency Hospital. As a result of this attitude on the part of the police the Emergency Hospital withdrew its ambulances from service for some days and a public meeting was held at which the matter was discussed with considerable animation, and the police commissioner was charged with discriminating against the Emergency Hospital. As a result of this agitation an order has been issued by the police commissioners instructing the police to consult the wishes of patients as to which hospital they shall be carried to.

Summer Instruction at the College of Physicians and Surgeons.—Some reference has already been made in these columns to the proposed establishment of summer courses at the College of Physicians and Surgeons of Columbia University. This step, which has long been under advisement, has been positively decided on, the first series of lectures being given during the coming summer. Instruction will be given in general medicine by Dr. Sumner and Dr. Draper; in neurology, by Dr. Pearce Bailey and Dr. Cunningham; in gynecology, by Dr. W. S. Stone and Dr. Bradley; in obstetrics, by Dr. Lobensine; in ophthalmology, by Dr. Clairborne, Dr. Holden, and Dr. Tyson; in laryngology, by Dr. Simpson and Dr. Frothingham; in dermatology, by Dr. Hodgson and Dr. Dade; in diseases of children, by Dr. La Fetra and Dr. Huber; in genitourinary diseases, by the senior assistants in the department; in diseases of the stomach and intestines, by Dr. Fischer; in clinical pathology, by Dr. Jessup; and in physical diagnosis, by Dr. Dow. Each course continues for a period of from three to five weeks, and the work will be adapted to the needs

of undergraduates of the third and fourth years, and of practitioners of medicine who desire to pursue further special studies. The splendid equipment of the college, the Vanderbilt Clinic, and the Sloane Maternity Hospital, will thus not be allowed to remain unused for purposes of instruction during the long vacation. A circular giving full information regarding these courses may be obtained from the secretary of the university.

Professor Lorenz's Views on America.—Press cables from Vienna state that Professor Adolf Lorenz in relating his experiences before a distinguished gathering in Vienna, on March 3rd, referred in a jesting manner to the "tyranny of the American toastmaster," and stated that he had been almost banqueted to death. He said that the American woman was preeminent in intellect, in education and in art, "but she cannot cook and, President Roosevelt says, will not marry." The American man he described as "by no means the purely dollar-seeker he has so often been described to be, but tender-hearted, often sentimental, charitable, public-spirited, chivalrous to women and unapproachable in hospitality." Professor Lorenz summed up his impressions by saying that America was "a magnificent country, inhabited by a noble people."

Dr. Lorenz's views on Chicago seem to have been misrepresented by the daily press, as he has recently written a personal letter to Dr. F. Preissel, of Chicago, in which he denies the utterance of the disparaging remarks concerning Chicago attributed to him in interviews published in New York papers. This denial will be readily accepted by any one who had the pleasure of coming into personal contact with Professor Lorenz during his stay here, as the remarks attributed to him were not at all in consonance with his character or his usual methods of expressing himself.

Official News.

Infectious Diseases in New York:

We are indebted to the Sanitary Bureau of the Health Department for the following statement of cases and deaths reported for the two weeks ending February 28, 1903:

DISEASES.	Week end'g Feb. 21		Week end'g Feb. 28	
	Cases.	Deaths.	Cases.	Deaths.
Typhoid fever.....	48	9	34	12
Scarlet fever.....	262	19	288	14
Cerebro-spinal meningitis.....	0	0	0	0
Measles.....	190	7	226	10
Diphtheria and Croup.....	386	45	341	42
Small-pox.....	3	0	4	0
Tuberculosis.....	318	195	298	187
Chicken-pox.....	103	0	137	0

Public Health and Marine Hospital Service:

Official List of Changes in the Station and Duties of Commissioned and Non-Commissioned Officers of the Public Health and Marine-Hospital Service for the seven days ended February 26, 1903:

KERR, J. W., Assistant Surgeon. To report at bureau for special temporary duty.

- WARREN, B. S., Assistant Surgeon. Granted extension of leave of absence, on account of sickness, for thirty days, from March 1st.
- ROSS, M. H., Acting Assistant Surgeon. Relieved from duty at Cairo, Ill., and directed to proceed to Los Angeles, Cal., and report to medical officer in command for duty.
- SAMS, F. F., Acting Assistant Surgeon. Granted extension of leave of absence, on account of sickness, for thirty days, from February 17th.
- RICHARDSON, S. W., Pharmacist. Granted leave of absence for seven days, from February 21, 1903, under provisions of paragraph 210 of the regulations.
- THURSTON, E. J., Pharmacist. To report to chairman of board for physical examination to determine fitness for promotion to the grade of Pharmacist of the first class.
- MORRIS, G. A., Pharmacist. Granted extension of leave of absence for seven days, from February 18th to February 24, 1903.

Board Convened.

Board convened to meet at the Bureau, Washington, D. C., February 25, 1903, for the physical examination of Pharmacist E. J. THURSTON, of the second class, to determine his fitness for promotion to the grade of Pharmacist of the first class. Detail for the board: Assistant Surgeon General W. J. PETTUS, chairman; Assistant Surgeon General H. D. GEDDINGS, recorder.

Reinstatement.

E. J. THURSTON reinstated and appointed Pharmacist of the second class.

Casualty.

Acting Assistant Surgeon C. F. ULRICH died February 17, 1903.

Army Intelligence:

Official List of Changes in the Station and Duties of Officers serving in the Medical Department of the United States Army for the week ending February 28, 1903:

- MCANDREWS, PATRICK H., First Lieutenant and Assistant Surgeon. Having reported his arrival at San Francisco, Cal., in compliance with orders heretofore issued, will proceed to Jefferson Barracks, Mo., and report in person to the Commanding Officer of that post for duty.
- RICHARDS, ROBERT L., First Lieutenant and Assistant Surgeon. Appointed Assistant Surgeon with rank of first lieutenant from January 22, 1903.

Naval Intelligence:

Official List of Changes in the Medical Corps of the United States Navy for the week ending February 28, 1903:

- DE VRIES, J. C., Acting Assistant Surgeon. Appointed Acting Assistant Surgeon from February 16, 1903.
- FIELD, J. G., Surgeon. Detached from duty with recruiting party, and ordered to the *Bennington*.
- HART, G. G., Acting Assistant Surgeon. Ordered to duty with recruiting party.
- MARSTELLER, E. H., Surgeon. Ordered to the *Panther* via the *Raleigh*.
- PRICE, A. F., Medical Director. Detached from the Naval Hospital, Washington, D. C., and ordered to the Navy Yard, New York.
- ROSS, J. W., Surgeon. Appointed Medical Director from February 5, 1903.
- SCHWERIN, L. H., Acting Assistant Surgeon. Ordered to duty with recruiting party No. 4.
- STOKES, C. F., Surgeon. Detached from the *Oregon* and ordered home to wait orders.
- WILSON, G. B., Surgeon. Detached from the *Panther* and ordered to the Naval Hospital, Chelsea, Mass.
- WRIGHT, B. L., Assistant Surgeon. Detached from treatment at the Army General Hospital, Fort Bayard, N. M., and ordered to the Naval Hospital, Pensacola, Fla., for treatment.

Births, Marriages, and Deaths.

Married.

- DESNOES—DAVIS.—In Brooklyn, N. Y., on Monday, February 23d, Dr. Alfred M. Desnoes and Miss Ethlyn M. Davis.
- HARRIS—JELENKO.—In San Francisco, Cal., on Sunday, February 22d, Dr. Henry Harris and Miss Adelia Dorothy Jelenko, of Baltimore, Md.
- MELOY—LOGAN.—In Brooklyn, N. Y., on Wednesday, February 25th, Dr. William Wandell Meloy, of Chicago, and Miss Charlotte Amelia Logan.
- PETERS—WHITE.—In Montreal, Canada, on Tuesday, February 24th, Dr. C. A. Peters and Miss Norah White.
- PFEIFFER—FIELD.—In New York City, on Thursday, February 26th, Dr. Henry S. Pfeiffer, of Stamford, Conn., and Miss Mary Stone Field.
- SPARKS—CURTIN.—In Washington, D. C., on Monday, February 23d, Dr. William C. Sparks and Miss Hortense Curtin.
- TUNIS—ROSSELL.—In Philadelphia, Pa., on Tuesday, February 24th, Dr. Joseph Price Wister and Miss Annis Wister Rossell.

Died.

- BROWN.—In Binghamton, N. Y., on Thursday, February 26th, Dr. John F. Brown, of Albany, N. Y.
- BURKE.—In Quincy, Mass., on Thursday, February 19th, Dr. Ernest G. Burke, in the thirty-first year of his age.
- BURNHAM.—In Haverhill, Mass., on Sunday, February 22d, Dr. Charles A. Burnham, of Boston, in the sixty-sixth year of his age.
- DONNAN.—In Aiken, South Carolina, on Saturday, February 14th, Dr. Ingham William Donnan, of Pittsburg, Pa., in the fifty-eighth year of his age.
- GALBRAITH.—In Detroit, Michigan, on Saturday, February 21st, Dr. Franklin B. Galbraith, in the sixty-third year of his age.
- GOODE.—In Jersey City, N. J., on Tuesday, February 24th, Dr. Lemuel G. Goode, in the thirty-second year of his age.
- HANCOCK.—In New York City, on Saturday, February 28th, Dr. Alexander Stanley Hancock, in the sixty-fifth year of his age.
- HANFORD.—In Hempstead, L. I., on Wednesday, February 25th, Dr. Samuel C. Hanford, in the eighty-first year of his age.
- HOOD.—In Litchfield, Illinois, on Friday, February 20th, Dr. H. H. Hood, in the seventy-ninth year of his age.
- JOHNSON.—In Boulder, Colorado, on Wednesday, February 18th, Dr. William Johnson.
- MCIPHERSON.—In San Francisco, California, on Friday, February 20th, Dr. George Edward McPherson, in the seventy-fourth year of his age.
- PETERS.—In Newark, N. J., on Sunday, March 1st, Dr. Alexander C. Peters, in the sixty-third year of his age.
- PTOLEMY.—In Brighton, Michigan, on Monday, February 16th, Dr. Henry M. Ptolemy, in the forty-seventh year of his age.
- RIDDLEMOSER.—In Smithsburg, Maryland, on Wednesday, February 18th, Dr. William T. Riddlemoser, in the forty-third year of his age.
- ROURK.—In Detroit, Michigan, on Sunday, February 22d, Dr. Francis Rourk, in the sixty-first year of his age.
- THOMAS.—In Thomasville, Georgia, on Saturday, February 28th, Dr. Theodore Gaillard Thomas, in the seventy-first year of his age.
- VANDEWATER.—In New York City, on Monday, March 2d, Dr. Albertus Lyman Vandewater, in the fifty-third year of his age.
- WATERHOUSE.—In Bevis, Ohio, on Friday, February 20th, Dr. Waterhouse, in the seventy-eighth year of his age.

Obituary.

THEODORE GAILLARD THOMAS, M. D., LL. D.,
OF NEW YORK.

The profession was not prepared for Dr. Thomas's death; he had until so recently made himself felt in medical matters, and so ardent was his temperament and still so keen his interest in professional affairs, that he was looked to for much further active participation in the doings of the day. He was only seventy-one years old and still apparently vigorous. His death occurred in Thomasville, Georgia, on February 28th.

A South Carolinian by birth and rearing, Dr. Thomas naturally took his medical course in the Charleston Medical College, receiving his degree in 1852. He came to New York almost at once, and spent all the rest of his life here. At first he had a hard struggle, and he is said to have been on the verge of giving it up when he formed a connection with the late Dr. John T. Metcalfe, with whom he was associated in general practice for several years. He first attracted professional attention by his efficiency as a teacher of auscultation and percussion in the Medical Department of the University of the City of New York. In a prodigiously short time after that he was teaching obstetrics, and so brilliantly that the various medical colleges of the town were soon contending as to which of them should have the privilege of making him a professor of that branch. It was not long before he was a member of the faculty of the College of Physicians and Surgeons, in which he taught obstetrics and subsequently gynecology up to the time of his retirement from active work.

Dr. Thomas was a man of tremendous personal "magnetism," and from all the other medical schools the students flocked to hear him lecture. But it was not in the lecture room alone that this gift was manifested; it was felt in society meetings, in the sick room, in after dinner speeches, and in private conversation. In short, he quickly became a power in the town, and not in the town alone, for his fame became national and then universal. He soon (in 1868) produced a *Practical Treatise on Diseases of Women*—a book written in his own charming style—and it at once found a place in the library of almost every physician. The book was translated into various languages. Of the Spanish translation—

prepared for circulation in South America and the West Indies—it is notable that it met with a large sale in Spain itself.

Originality of conception, whether in ætiology, pathology, or treatment, was characteristic of Dr. Thomas. Not all his ideas were adopted, but most of them were. Perhaps the most striking of his conceptions—quite as original with himself as if it had not many years before (unknown to Thomas) been done by others—was that of laparoelytrotomy. He performed the operation successfully several times, and his example was followed by others. It would undoubtedly have remained the procedure of election in cases of extreme pelvic contraction, had not Porro's operation and Säger's improvements of the classical Cæsarean section been devised.

Dr. Thomas was a man of broad culture beyond the confines of professional thought; in general literature, in civic affairs, and even in finance his grasp was far-reaching. It was he who first discerned the advantages of Southampton as a summer resort for New Yorkers, and his house, built almost on the dunes, was the first "outward and visible sign" of a metropolitan outreach into that stronghold of rustic repugnance to progress.

For all these reasons, and because of his delightful personality, Theodore Gaillard Thomas's memory will long be cherished by his professional brethren; and not by the community alone, but by all who ever heard him speak or ever read his writings. His popularity in the profession was amply shown by the dinner given last year in honor

of the completion of his half century of medical practice.



The Late PROFESSOR T. GAILLARD THOMAS.

The Plague Situation in Mazatlan Improving.—Recent press dispatches from Mazatlan, Mexico, indicate a cessation in the spread of the disease and the outlook on February 25th was on the whole quite hopeful. It is stated in the Mexican press that the disease was brought to Mazatlan by steamer from San Francisco, and it is further stated that the Mexican Government will present a claim for indemnity to the United States on the ground that the latter failed to do as required under the Vienna Convention.

Pith of Current Literature.

PRACTICE OF MEDICINE.

A Case of Larvated Pernicious Malaria.—Dr. Micela Salvatore (*Gazzetta degli ospedali e delle cliniche*, January 4th) makes the case of a soldier, aged twenty-one years, a text for some interesting observations on the subject of larvated pernicious malaria. The patient had been suffering from a subcontinuous malaria which yielded readily to quinine. One day he presented himself for duty, but a few hours later he was taken suddenly with a marked somnolence and apparently fell asleep. When his companions tried to wake him he was found to be unconscious, with a slow and hardly perceptible pulse; cyanotic, with cold extremities and weak cardiac sounds. The ordinary causes of an attack of this kind having been excluded, on the basis of a previous thorough examination of the patient, the possibility of a pernicious malaria with overwhelming destruction of the red cells was thought of. Quinine, caffeine, and ether were immediately injected under the skin, and after twenty minutes the patient began to recover consciousness. Cold frictions and the inhalation of ether were continued until the symptoms improved. A second attack of the same character threatened on the second day, but was less marked, owing to the immediate treatment. The patient remained weak, anæmic, slightly jaundiced, with an enlarged spleen. The author thinks that he had to deal with one of the intensely toxic forms of malaria of the æstivo-autumnal type in which there was an extensive destruction of the red cells of the blood and an abundant production of toxins. The pernicious nature of the trouble was due to the toxæmia. No matter under what clinical form malaria manifests itself, it is a disease of the blood; therefore, although in this case the symptoms were those of heart disease they were due to the action of the malarial poison on the nervous system, especially on the vasomotor ganglia. It is well known that in latent malaria the attacks come on readily in consequence of an accidental occurrence that interferes with the normal organic equilibrium, such as, for instance, exposure to cold, emotions, and injuries. Heat is one of the most common accidental causes and it is sufficient that the body temperature be raised a little to evoke an explosion of fever. If the malaria happens to be of the cerebral or comatose pernicious type, it can give the picture of sunstroke. The author has observed this in his own case, and emphasizes the importance of considering the malarial element as a possibility when face to face with such attacks.

Dimness of Vision in Diseases of the Kidney Characterized by Albuminuria.—Dr. A. Maitland Ramsay (*Glasgow Medical Journal*, December) divides these cases of dimness of vision into two classes: (1) Uræmic amaurosis, where the ophthalmoscope reveals no gross lesions in the retina. (2) Retinitis albuminurica, where marked retinal changes are present. Uræmic amaurosis occurs most frequently in those cases of Bright's disease in which cerebral symptoms predominate. It may

exist alone, but is more frequently accompanied by headache and vomiting, and an attack is often preceded by a convulsive seizure. It may be said that it is due to blood poisoning brought about by waste products that ought to have been eliminated from the system by the urine. The resulting blindness is usually bilateral and complete, and though, as a rule, it passes off entirely after some hours, yet, in exceptional cases it may last for days.

Cases of albuminuric retinitis naturally divide themselves into two groups according as the lesions in the fundus oculi are inflammatory or degenerative. The inflammatory form is characterized by the occurrence of œdema, hæmorrhage, and inflammation, and is usually found associated with dropsy and with the presence of albumin in considerable quantity in the urine. The retinal lesions, however, are dependent neither upon dropsy nor upon the amount of albumin. It is rare, indeed, to find albuminuric retinitis during a first attack of acute parenchymatous nephritis. The eye changes occur most commonly when an acute attack supervenes on previously existing chronic nephritis. Under favorable conditions it passes off leaving no trace, as is well illustrated in the phenomena observed in retinitis albuminurica during pregnancy. The kidney affection should be treated; for the eye changes themselves little can be done, except to advise the patient to avoid straining the eyes over fine work, and to protect them from exposure to bright light.

Human and Bovine Tuberculosis. A Preliminary Note. By Dr. N. Raw. (*British Medical Journal*, January 31st).—The author's conclusions are as follows: (1) That there are two distinct varieties of tuberculosis affecting the human body, one produced by human tubercle, the other produced by bovine tubercle. (2) That human and bovine tubercle are separate and distinct. (3) That bovine tuberculosis entering the alimentary canal in milk may set up tabes mesenterica, especially in children. (4) That bovine tuberculosis is probably the cause of enlarged lymph glands, tuberculous joints, and lupus. (5) That true human tuberculosis, or phthisis pulmonalis, is always conveyed from one person to another by infection and generally from advanced cases of phthisis. (6) That every effort should be made to stamp out tuberculosis in cattle and that milk should be boiled before use by children.

The Ætiology of Acute Rheumatism and Allied Conditions. By R. M. Beaton, M. B., and Dr. E. W. A. Walker. (*British Medical Journal*, January 31st).—As a result of their own observations on the subject, the authors agree entirely with the assertion that a micrococcus is constantly associated with acute rheumatic lesions, and is the causal agent in their production. And they believe the coccus which they have isolated from rheumatic cases to be identical with that obtained by Triboulet, Wasserman, Paine, and Poynton. The same organism is obtainable from cases of chorea, and on injection into animals may produce a typical attack of acute rheumatism. They have obtained the organism from some fifteen cases—namely, from

eight cases of acute rheumatism, three cases of chorea, and four cases of acute endocarditis in rheumatic subjects. In most cases the organism was obtained in a pure condition in the original cultures. It is a tiny micrococcus, arranged in pairs and short chains. It retains Gram's stain, stains well with all ordinary dyes; it is not capsulated, and is not agglomerated by the serum of men or animals convalescent from rheumatism. Without animal experiments it would be taken to be an ordinary streptococcus. That it is not, is shown by Marmorek's test; *i. e.*, it grows well on a fluid medium in which human streptococci have previously been grown and filtered out. Bacteria generally can flourish in such a fluid, but streptococci of human origin are unable to multiply in it. The authors give a careful description of the cultural characters of the organism, and of animal experiments performed with it. Unlike Poynton and Paine, they could not produce chronic valvular disease of the heart in rabbits from inoculations of the micrococcus, nor did they see a true chorea result.

SURGERY AND ANATOMY.

An Anomaly of the Muscles of the Leg.—Dr. Giuseppe Urso (*Gazzetta degli ospedali e delle cliniche*, January 4th) reports a rare anomaly of the muscles of the leg, which he has found in a cadaver in the dissecting room at Catania. This deformity consisted in the presence of a supernumerary sulcus, situated between the normal sulcus and the deep muscles of the posterior aspect of the leg. The sulcus was elongated, rectangular in shape, measuring 27 centimetres in length, and 2.8 centimetres in width. Above it was formed by two tendinous fasciæ, one of which, the external, was inserted into the head of the fibula, together with the tendon of the normal sulcus, and the internal one was inserted into the oblique line of the tibia. From these points of attachment the peroneal fibrous fasciæ ran downward and inward, and the tibial obliquely outward, until at the junction of the superior and middle thirds of the tibia they united in a strong muscular belly, which was inserted into the upper surface of the os calcis by means of a broad tendon. At a distance of four centimetres from the os calcis, a small bundle was separated from this muscle, passed behind the internal malleolus, and was inserted into the accessory of the long flexor. This anomaly of the muscles of the leg is very rare.

The Surgical Treatment of Gastric and Duodenal Ulcers. By B. G. A. Moynihan, F. R. C. S. (*Lancet*, January 31st).—In this paper the author comments upon a series of cases of gastric and duodenal ulcer. Operative treatment may be required in cases of perforation, of hæmorrhage, and of dilatation of the stomach due to chronic ulcer. The treatment of hæmatemesis will depend upon the nature of the ulcer from which the blood is coming. In hæmorrhage from an acute ulcer medical treatment alone will suffice; surgical measures will very rarely be necessary. If any operation has to be done gastroenterostomy will probably prove the most effectual. In chronic ulcer operation should

be advised as early as possible. If the ulcer is solitary and readily exposed it may be excised, but a simple gastroenterostomy is usually sufficient to arrest the hæmorrhage and bring about healing of the ulcer.

The characteristics of the hæmorrhage from an acute gastric ulcer are spontaneity, abruptness of onset, the rapid loss of a large quantity of blood, the marked tendency to spontaneous cessation, and the infrequency of a repetition of hæmorrhage in anything but insignificant quantity. The characteristics of hæmorrhage in chronic gastric ulcer are the onset after a long history of digestive disturbances, the tendency to recurrence with brief intermissions of a few hours or a day or two, the moderate amount of blood lost, and the condition of profound anæmia produced by the repeated hæmorrhages. In cases of dilatation of the stomach or of inveterate dyspepsia due to chronic ulcer the author has performed gastroenterostomy with most satisfactory results. In connection with this operation the following points should be carefully attended to: (1) The sterilization of the mouth, stomach, and jejunum. The teeth are frequently brushed with Condy's fluid, the stomach is washed out with tepid boiled water twice before the operation, and calomel is given forty-eight hours before the operation. (2) Gloves made of India rubber and boiled are worn by all concerned. (3) The hands and instruments are washed in salt solution; no antiseptic is allowed to touch the peritonæum. (4) Scrupulous care is taken to avoid any infection from the mucosa. The following is a summary of the cases upon which this paper is based. Perforated gastric or duodenal ulcers, ten operations and four recoveries; gastroenterostomy for chronic ulcer, etc., fifty-one operations, one death; and pyloroplasty, three cases with no deaths. Eight cases were operated on for hæmorrhage; one by excision, one by excision and gastroenterostomy, and six by gastroenterostomy alone. The subject of the excision operation died.

The Treatment of Abdominal Emergencies. By J. R. Morison, M. B. (*Lancet*, January 31st).—The author's experience has taught him that in at least ninety per cent. of patients who have died in consequence of abdominal emergencies, death has been brought about by septic infection of the peritonæum, and in the great majority of cases of general peritonitis, the more elaborate and thorough the operation undertaken for its treatment, the more quickly the patient dies. The most acute and serious abdominal injuries and diseases give rise to such characteristic symptoms and signs that a probable diagnosis can be made. The physician's first duty is to arrive at a definite conclusion as to whether the patient will die in default of surgical intervention. When this has been settled, but not until then, morphine should be given hypodermically. Not only relief, but real temporary good, by the diminution of shock, follows the use of morphine. The treatment of such cases, too often from delay, resolves itself into the treatment of septic infection of the peritonæum. In such cases, if the patient survives beyond the fourth day he has a fair chance of recovery. Surgical treatment does

not always give the best results. Operation when once the abdomen has become distended is too late. If operation is decided against, stop the administration of all food and drink by the mouth, giving them by enema; wash out the stomach with hot water as frequently as vomiting is troublesome. Keep the patient perfectly quiet by means of small and repeated hypodermic doses of morphine; apply a large linseed meal poultice over the whole abdomen for an hour, repeating every eight hours.

The Radical Cure of Inguinal Hernia with Local Anæsthesia. By J. A. Bodine, M. D. (*Medical Record*, February 14th).—Dr. Bodine reports forty-eight cases of inguinal hernia operated on under local anæsthesia. The patients ranged in age from sixteen to seventy-six years, and in five the hernia was strangulated. In five cases the omentum was ligated and excised without pain and as much as sixteen ounces were removed in one case. In another case an adherent appendix was amputated. In eighteen cases there was absence of pain, in twenty-eight the pain was moderate, and in two it was acute when the neck of the sack was ligated. The author is almost convinced that cocaine should always be used in hernia operations. He believes that with cocaine a herniotomy is practically without danger. The author describes the distribution of the three important nerves that have to be blocked in order that the operation shall be painless. In the order of their importance they are the hypogastric branch of the iliohypogastric, the inguinal branch of the ilioinguinal, and the genital branch of the genitocrural. Both these last named nerves may be absent, and not infrequently they cannot be found, yet with the aid of a small amount of infiltration anæsthesia, this difficulty is easily surmounted. The technics of the operation is minutely described, as well as a slight modification of the ordinary Bassini operation, which is made necessary by the impossibility of ligating arteries without pain. In the forty-eight cases reported the maximum amount of cocaine used was half a grain.

Hernia of Traumatic Origin.—Professor G. Sultan (*Münchener medizinische Wochenschrift*, February 3rd) in discussing the forensic influence of traumatic hernia, says that it may be regarded as accidental (1) only if it actually follows an accident or if exertion such as would increase the intra-abdominal pressure has taken place; (2) if it can be proved that previously no hernia existed in the same place; (3) if the hernia suddenly appeared with pain and compelled cessation of work, and if the physician, called soon thereafter, could elicit pain on pressure; (4) such a hernia is usually small and is frequently found still in the inguinal canal and only exceptionally is larger than a lemon. The results of laceration in the region of the inguinal canal rarely give external evidence through swelling or hæmorrhage. The fact that other places apparently susceptible if hernia exist, does not disprove the existence of a traumatic hernia, nor does the difficulty of replacing it militate against it.

OBSTETRICS AND DISEASES OF WOMEN.

Lymph Glands in Uterine Carcinoma.—Dr. E. Wertheim (*Centralblatt für Gynäkologie*, January 24th) has examined the pelvic glands in cases of uterine cancer. He found in two thirds of the cases, cancerous masses in the alveoli with polymorphous cells, in the other third tubular forms of cell masses with a single layer of epithelium. Most authors regard these glandular masses as derivatives of the Wolffian bodies, rather than as carcinomatous. The author does not agree with this view on theoretical and empirical grounds. In a great number of dead bodies of persons who had not died of cancer he found not one example of a glandular formation of this kind; and in three cases, he was able to demonstrate the changes in the glands until a typical alveolar carcinoma was developed. Wertheim, therefore, concludes that in cases of cancer of the cervix, metastasis plays a much greater rôle than has hitherto been assigned to it, and that the changes found in the glands can be regarded only as carcinomatous in character.

The Therapeutic Value of White Light (Incandescent Electric Lamps) in Some Inflammatory Affections of the Uterus and Annexa.—Dr. A. I. Orloff (*Roussky Vrach*, January 4th), in this preliminary communication, gives the results which he attained in a series of inflammatory conditions of the internal female genitals with the application of white electric light. He has employed cold white electric light in these diseases since November, 1901, at the suggestion of Professor A. I. Lebedieff, making use of a special apparatus invented by Dr. I. I. Makaveyeff. The sources of light were incandescent lamps, at first of 5-candle power, later of 16-candle power. The total number of observations was 50, of which 38 were on out-patients, and 12 on hospital patients. The full report of the results attained will be published later. According to the author, electric light is indicated in the treatment of metritis, parametritis, perimetritis, salpingitis, oophoritis, etc., both acute and chronic. The chief and most noteworthy effect of this treatment is the disappearance of pain. Under its influence the purulent, as well as the serous, exudates diminish in volume or disappear entirely. The pains of dysmenorrhœa are considerably diminished. The pains of retroflexions, and of ovarian neuralgia, considerably diminish under this treatment, and, in the case of retroflexions, electric light can sometimes reduce the flexion and bring the uterus into normal position in a short time, almost without pain. Erosions of the cervix can also be treated by this method, and the discharge is diminished from both uterus and cervix in cases of gonorrhœal disease of these parts. During menstruation and in cases of uterine hæmorrhage these applications of electric light are contraindicated. The method should not be used on pregnant women, in view of the fact that the effect of electric light on gestation is not known. No tumors, benign or malignant, of the uterus or annexa were treated in this series of cases. The only unpleasant effects of using electric light in this way were a feeling

of weakness and numbness in the legs after three or four sittings, and a general depression. These passed away when the sittings were interrupted for a few days. The number of sittings used in each case varied from eight to forty, and each lasted from ten to twenty minutes, the séances being repeated daily or every other day. This method cannot compete with surgical means when they are indicated, but among the conservative measures it will not occupy the last place.

Disadvantages of Ventral Fixation.—Dr. R. Gradenwitz (*Centralblatt für Gynäkologie*, January 31st) reports five cases occurring in Asch's clinic in which abdominal hernia, dystocia, and consecutive metritis followed the performance of a ventral fixation of the uterus for movable retroflexion. The author condemns the operation, especially if the stumps of the round ligament are not separately sutured. Even if diseased appendages are removed by the abdominal route, the Alexander-Adams operation is preferable so far as a good result is concerned; and, further, ventral fixation favors the development of pockets. Ventral fixation by means of the anterior wall of the uterus is a certain means of curing a retroflexion, but should not be performed on account of the dangers of a metritis, ventral hernia, and disturbances during pregnancy and labor. Ileus is possible if the round ligament is simultaneously drawn out of the wound.

Instrumental Dilatation of the Cervix During Pregnancy or Labor.—Dr. Zangemeister (*Centralblatt für Gynäkologie*, January 24th) calls attention to the fact that in the dilatation of the cervix there are always more or less bloody lacerations. By the use of Bossi's and Frommer's instruments, although he dilated very carefully, he regards the danger as double, involving not only a laceration but the danger of sepsis as well. He prefers the use of intrauterine balloons of the various patterns, combining dilatation with some tugging.

Lateral Section of the Pelvis by Gigli's Method.—Dr. E. Pestalozza (*Centralblatt für Gynäkologie*, January 24th) records two cases in which he used this method. The patients were both multiparæ with much contracted pelves. The operation was successful in both instances, there being very little hæmorrhage. One of the children died at the end of three weeks of convulsions, the other is still alive. Pestalozza regards Gigli's method as a decided advance over symphysiotomy.

DISEASES OF CHILDREN.

Lobar Pneumonia in Children Accompanied by Pain Localized in the Appendix.—Dr. Olimpio Cozzolino (*Gazzetta degli ospedali e delle cliniche*, January 11th) reports the case of a girl, aged fourteen months, in which a pneumonia was accompanied by the misleading symptom of pain in the region of the appendix. Massalongo has reported four cases of pneumonia in children resembling an appendicitis, and very justly observes that a great deal of care should be exercised in distinguishing

such cases from appendicitis, and thus saving them from the interference of impulsive surgeons. A number of authors since then have discussed the same subject. Massalongo asserted that there was no symptom by which these cases could be distinguished from appendicitis before the appearance of local signs in the lungs, but the present author believes that this statement is somewhat exaggerated. In the case here reported the child was taken with high fever and marked pain localized in the right side of the abdomen, vomiting, and complete loss of appetite. The child lay on its right side with the thighs strongly flexed upon the abdomen. The temperature was 39.7° C.; the pulse was 156; the heart sounds clear; the respiration 52, superficial and accompanied by dilatation of the nostrils. Nothing was found in the chest on auscultation that would point to the existence of a pneumonia. By delicate palpation the point of maximum tenderness was found to be in the region of the appendix corresponding to the region known as McBurney's point, although no increased local resistance could be noted there. The diagnosis of acute appendicitis was, therefore, excluded and an enema, a teaspoonful of castor oil, and an ice bag upon the abdomen were the means of relieving the abdominal symptoms. On the second day the signs of pneumonia appeared in the lungs and the remainder of the disease ran the ordinary course of pneumonia with a crisis on the sixth day. This case teaches, on the one hand, that we must be guarded before making a diagnosis of appendicitis in a child that presents a train of symptoms resembling that of appendicular inflammation; and, on the other hand, it shows that we must use the differential sign of Guinon, who called attention to the following fact: If in a case of pneumonia with abdominal symptoms and pain in McBurney's region, instead of pressing heavily at that point, we depress the abdominal wall softly with the whole hand, pain is no longer produced, nor is there a defensive muscular contraction.

NERVOUS AND MENTAL DISEASES.

Acute Myelitis.—M. E. Mouratoff (*Revue de médecine*, January 10th) says that *acute focal hæmorrhagic myelitis* is characterized anatomically by a grave affection of the vessels, by hæmorrhages, and by a mechanical destruction of tissue, in the presence of which primary parenchymatous inflammation of the nervous elements and diffuse inflammation of the neuroglia may take place. Clinically, this form is expressed by irreparable symptoms and by an acute development. Isolated or multiple foci may appear; in the latter event, the disease during its development, may show exacerbations and remissions. *Acute focal interstitial myelitis* is marked anatomically by considerable vascular transudates and by active alterations in the neuroglia, which can be followed by parenchymatous changes. This form is sometimes curable, but may leave severe traces. As in the hæmorrhagic form, the interstitial myelitis may have solitary or multiple foci. The *acute ascending and descending parenchymatous form of myelitis* expresses itself anatomically by the predominance of parenchymatous changes over

the interstitial. It develops slowly and gradually. It is curable in certain cases, as in those originating in the various infections and toxæmias; but in grave cases, and especially in those of a chronic character, its lesions may be incurable.

Hypodermoclysis in Pneumonia, with Report of a Case. By Maurice Kahn, M. D. (*American Medicine*, February 7th).—Dr. F. P. Henry, of Philadelphia, was the first to use hypodermoclysis in the treatment of pneumonia. Apart from clinical experience, the theoretical justification for this form of treatment rests on the theory that pneumonia is a general constitutional disease whose chief local manifestation is in the lungs. As it is not possible to cut short the disease, rational treatment would seem to consist, first, in sustaining the system against the toxæmia, and secondly, in attempting to eliminate as far as possible the toxins already in the system. It is in accomplishing this latter object that hypodermoclysis will be found of great value. Dr. Kahn reports one case of pneumonia in a woman aged fifty years in which a fatal termination seemed inevitable and in which the patient, after having received four injections of normal salt solution, aggregating about three pints in six hours, began to improve in a most "astonishing" manner. Following the initial hypodermic use of the salt solution, the patient received for the succeeding two days rectal injections of normal salt solution. Recovery took place.

The Bilberry (*Vaccinium Myrtillus*) as a Remedy in Typhoid Fever and Other Infectious Diseases of the Intestine. By M. M. Bernstein, M. B. (*British Medical Journal*, February 7th).—The author believes that a specific remedy, capable of meeting all the indications of typhoid in the intestine during the disease, will be found in the fruit of the bilberry shrub (*Vaccinium myrtillus*, N. O. *Ericaceæ*). He first used bilberries as an intestinal astringent, and found them to have a prompt antifermentative action. The berries are not poisonous, and the infusion or the jam has a pleasant and fragrant taste, can be taken hot or cold, or mixed with mineral waters, milk, etc. Neither the acid juice of the stomach nor the alkaline contents of the bowels interfere with the action of the drug, which reaches down to the lowest portion of the bowel. Bilberry juice has a distinct bactericidal action in the typhoid bacillus, killing it in about thirty-six hours. In typhoid fever *Vaccinium myrtillus* keeps the intestine aseptic and prevents reabsorption and reinfection. It cleanses and heals the ulcers, and by its antifermentative action prevents their rupture. It is also of great value in dysentery, both acute and chronic.

Spinal Hydatid Cysts Causing Severe "Compression Myelitis." Operation, with Successful Results. By Dr. P. Tytler and Dr. R. T. Williamson. (*British Medical Journal*, February 7th).—Compression myelitis due to spinal hydatid cysts is an extremely rare affection. A case occurring

in a woman aged twenty-seven years, is summarized as follows: "Compression myelitis" in the dorsal region; complete paralysis of both legs; anæsthesia of both legs, and lower half of the trunk; complete paralysis of bladder and rectum. Removal of fifteen spinal hydatid cysts (extra dural); gradual improvement; complete recovery of sensation and of control of bladder and rectum, marked recovery of motor power in legs; two years and a half after the operation, legs spastic, but patient able to walk alone with the aid of one stick.

Cysts causing compression myelitis are usually external to the spinal dura mater, and in the majority of cases the cysts are on the posterior surface of the spinal dura mater. Symptoms of compression of spinal nerve roots in a case where hydatid cysts are known to exist elsewhere in the body, and where no other cause can be ascertained, should lead to a diagnosis of spinal hydatids.

HYGIENE AND SANITARY SCIENCE.

How to Seat School-children According to Vision.—Dr. R. A. Katz (*Roussky Vrach*, January 4th) calls attention to the importance of a subject of school hygiene that is often neglected—the proper seating of the pupils according to their ability to see. Many teachers and school physicians now insist on the necessity of such an arrangement of the pupils in each class that those who cannot hear or see well are placed in front. The author observes, however, that the rule usually followed is to bring the nearsighted pupils nearer to "the board," while it is just as important sometimes to bring them nearer to the windows. He recommends that each pupil be individually examined in each class as to two questions, namely: Can he see what is written on the board from his seat without straining the accommodation (blinking, etc.)? (2) Can he read his text-books for a long time without growing tired? The second test should be made by requiring each pupil to read the smallest type used in the schools through a "smoked glass" which absorbs light. The pupils then should be marked according to the following scale: A. The pupil can see what is written on the board (a) distinctly from his seat; (b) not from his seat but he begins to see well from one of the front seats; (c) neither from his seat nor from the front bench. B. The pupil can read through smoked glass (a) at his own desk; (b) not at his own desk, but at a seat nearer to the window; (c) neither at his seat nor at the window. The last group of marks may be poor on account of the poor illumination of the room. The pupils should now be seated according to the marks thus given. Those who cannot see at the window and in the front seat should be examined by an oculist and given eyeglasses. The fact that a pupil is supplied with glasses does not necessarily mean that he should not be placed in front, as in nearsighted children the correction is not completed by the glasses, and there is always an under correction. In the same way, glasses for astigmatism do not, as a rule, correct to normal vision. These examinations should be repeated each year.

Immunization from Tuberculosis. By Simon Flexner, M. D. (*Philadelphia Medical Journal*, February 14th).—Dr. Flexner believes that the agglutination test of Gruber and Durham and the cytolytic reaction of Bordet and Pfeiffer have furnished reliable means by which bacteria may be proved to be of the same or different species. The importance of such a method is well illustrated in the aid it has been in the differentiation of typhoid, cholera, dysentery, and other bacilli. It now comes to our aid in giving us a new basis for our belief in the unity of bovine and human tuberculosis. "It would seem to be an unphilosophical and unprofitable, if not unpardonable, attitude to assume longer any genetic distinction between bovine and human bacilli." This conclusion, which is the opposite of Koch's recent teaching, is based on the three following sets of experiments: (1) McFadyen's, reported in 1901 and 1902. They were undertaken for the purpose of immunizing cattle against tuberculosis, and on the whole were fairly successful. (2) Von Behring's, reported at the end of 1901. While this series of tests has not yet been concluded, the immunized and inoculated cattle being still alive, yet the mere fact that the cattle are alive goes a long way toward proving that the attempt at artificial immunization has in great part been successful. (3) Pearson's and Gilliland's experiments. This last set is the most conclusive of any. By using suspensions of cultures of human bacilli for the inoculation of healthy cattle they succeeded in affording almost absolute protection against bovine bacilli otherwise virulent to such cattle. All scientific discoveries are the result of a process of evolution, and the credit for them can never really rest on any one man. Yet, with this understanding, if the question be asked: To whom belongs the credit of protective inoculation against tuberculosis? It must be answered by giving the credit to two Americans, Theobald Smith and Trudeau.

The Control of Consumption by the Public Health Authority.—Dr. T. Percy C. Kirkpatrick (*Dublin Journal of Medical Science*, January) points out that the question of the proper control of consumption is one of very pressing interest to Irishmen, because Ireland occupies the unique and unenviable position of still having an increasing mortality from tuberculous disease. In the year 1900, phthisis caused 10,076 deaths, out of a total of 87,606, or a rate of 225.6 per 100,000 of the estimated population. He alludes to the fact that in New York city the death rate from phthisis has been reduced by over thirty per cent. since the adoption of preventive measures some years ago, and that similar gratifying results have been obtained elsewhere. He quotes with approbation the scheme drawn up by the city council of Manchester, England, in the year 1899. The main lines of this scheme may be grouped under the following heads: (1) Voluntary notification of consumptive cases. (2) Education of the public in general, and of the patient and his friends in particular, in the nature of the disease. (3) Treatment of the patient's surroundings. (4) Supervision. (5) Provision of isolation hospitals. (6) Protection of

the food supply from contamination by the tubercle bacillus. The author then outlines the precautions which other countries are taking against the spread of phthisis, and sketches a plan which he considers suitable for Ireland to meet the pressing wants of public health. He formulates a practical, rather than an ideal, plan, considering that the poverty of the country precludes the possibility of adopting any scheme which would involve it in great expense. He points out, however, that the money so expended is for the advancement and improvement of the race, and if, through the expenditure, the mortality and morbidity from phthisis can be reduced, a real economy will be effected in the national wealth. Vast sums of money are being spent on the education of the people, which are no doubt necessary for the advancement and improvement of the community; but the very existence of the race in the future will depend upon the success of efforts in preventive medicine.

A Contribution to the Study of Cancer Mortality. By Dr. C. Templeman. (*British Medical Journal*, February 14th).—The author's conclusions, based on a study of the cancer mortality in Dundee during the past twenty-five years, are as follows: (1) That the death rate from cancer as a whole during the twenty-five years under review has more than doubled, having increased from 7.27 to 16.92 per 10,000 of the population over the age of twenty. (2) That this increase is greatest at ages over forty-five, is common to both sexes, but more marked in the male sex, though the actual mortality is higher among females. (3) That in females this is chiefly due to an increase in malignant affections of the abdominal viscera. (4) That uterine cancer and cancer of the breast in females have increased, though not in any marked degree. (5) That cancer of the rectum also shows a slight increase in both sexes. (6) That in males the highest mortality is from cancer of the abdominal viscera. (7) That in males cancer of the mouth and also of the upper digestive tract has also greatly increased. (8) That therefore cancer of the regions which may be described as "accessible" has increased, as well as that of parts which are not so accessible, and where the diagnosis is more difficult, but the increase in the latter is out of all proportion to that in the former class. (9) That, during the same period, there has been a great improvement, both in clinical and pathological diagnosis, as well as in death certification, and consequently a considerable diminution in returns from such indefinite conditions as "old age" and "disease" of the various organs (without any specification of its nature). (10) That this must, to a considerable extent, have helped to swell the returns of death from cancer.

The Significance of the Presence of Streptococci in Market Milk. By Raymond Clinton Reed, Ph. B., D. V. M., and Archibald Robinson Ward, B. S. A., D. V. M. (*American Medicine*, February 14th).—There is a fairly widespread belief that certain diarrheal diseases in children, and occasionally also in adults, have for their causative ætiological factor the presence of streptococci in cow's milk. It was in order to determine the ac-

curacy of this belief that the authors undertook the studies that they now report. The question has not been settled, but certain preliminary conclusions have been reached that will be of use in future investigations. The authors draw the following conclusion from their work: (1) The classification of streptococci is indefinite. So far, their differentiation has been based mostly on the character of the lesions that have been produced. Until a more specific nomenclature has been evolved it will be unwise to attempt to state too definitely what the consequences of streptococcus contamination of mitis in cow's constitutes an important source of streptococci in market milk. (3) The transition from the condition in which a few streptococci remain after a mild attack of mammitis to one in which streptococci are found in a healthy udder, is a slight one, and there are no means by which such streptococci can be differentiated. (4) Streptococci are found in the healthy udder probably more frequently than was formerly believed to be the case. (5) To understand the conditions under which these streptococci harbored in the healthy udder will become virulent will require a further study of the pathology of mammitis.

GENITO-URINARY DISEASES.

Irrigation in Acute Urethritis. By Arthur L. Chute, M. D. (*Boston Medical and Surgical Journal*, February 12th).—There are three chief misapprehensions with regard to the employment of irrigation in acute urethritis: (1) It is generally believed that the object of such treatment is to abort the attack by the bactericidal action of the fluids used. This would be an impossible accomplishment, since any solution strong enough to kill the gonococci would also kill the lining mucous membrane of the urethra. The irrigations merely keep the urethra clean and the solutions used in virtue of the temperature at which they are employed and their slightly irritating qualities increase the blood supply and phagocytosis, and so lead to cure. (2) It is believed by some that the risk of infecting the posterior urethra is increased. The author believes that posterior urethritis occurs less frequently in patients treated by irrigation than in those treated by other methods. (3) It is believed that the method should only be used after the most acute stage has been passed. This belief is also erroneous. Irrigations should be begun as soon as the diagnosis has been made. The author claims the following advantages for the method: "A great increase in comfort; in the vast majority of cases a speedier recovery; a somewhat lessened liability to the complications which attend the acute stage; probably a very considerably decreased liability to the late complications." The solutions recommended are either a potassium permanganate solution of 1-10,000 to 1-8,000, or a silver nitrate solution of 1-15,000 to 1-10,000. Both solutions should be gradually increased in strength, and the second one is probably more effective in the chronic than in the acute stage. The temperature of the solutions should be a little over 100° F. and one or two quarts should be used at one time. When it is possible, two irrigations a day should be given

for the first week, then daily for another week, then twice a week till the condition is cured. Occasionally the method fails and other measures have to be resorted to. The author summarizes his conclusions as follows: "That while irrigation is at times and in occasional instances disappointing, it gives in acute urethritis the best individual results, the best general results; that it offers the patient the greatest immediate comfort, the greatest immediate safety; that as prompt if not more prompt recovery takes place than by any other means; that there is more certain recovery and with less probability of late complications."

MATERIA MEDICA, PHARMACY, AND THERAPEUTICS.

Potassium Permanganate as a Specific Antidote in Morphine and Opium Poisoning.—Dr. S. A. Finkelstein, of Kieff, says that too little attention has been paid to potassium permanganate as an antidote in acute opium and morphine poisoning. The latest textbooks on pharmacology dwell chiefly on the symptomatic treatment, and the administration of atropine. Tappeiner, Kohler, and others recently have expressed serious doubts as to the antagonism of atropine and morphine, which is purely theoretical. The question is still unsettled whether the stimulation of the respiration and the increase in the blood pressure produced by atropine are due to the action of this drug upon the respiratory centre and the vasomotor centre in the medulla oblongata, or are the results of its action on the vagus nerve endings in heart and lungs. W. Moor, of New York, has reported 71 cases of morphine poisoning treated by potassium permanganate with marked success. The doses used are from 30 to 60 minims of a four to five per cent. solution in water, subcutaneously, until improvement is noted. Internally, it should be given in doses of four grains of potassium permanganate to each three grains of morphine taken, and for each ounce of infusion of opium six grains of potassium permanganate should be given. If the amount of poison is unknown, then from eight to ten grains of potassium permanganate are given in a glass of water, and then the stomach should be washed with a weak solution of the same salt. The author reports the following case in which he used the Moor treatment. A young woman had taken about a gramme of morphine hydrochloride an hour and a half before the physician arrived, and was found unconscious, pale, with froth at her lips, lying perfectly relaxed. Her respiration was slow, interrupted, resembling the Cheyne-Stokes type, eight per minute; her pulse slow 36 per minute, small and irregular. The reflexes were absent and the pupils were greatly contracted and insensible to light. A bottle with the remains of the solution was found on the floor next to her bed. One gramme of a four per cent. solution of potassium permanganate was injected under the skin. After ten minutes a marked improvement set in. The pulse and respiration became more rapid and more regular. The injection was repeated after half an hour, and within three hours the improve-

ment was so marked that the patient could be left alone. There is no question that in this case the antidote suggested by Dr. Moor saved the patient's life.

Remarks on the Treatment of Pneumonia. By Frederick P. Henry, M. D. (*Philadelphia Medical Journal*, February 14th).—Dr. Henry considers only that form of primary pneumonia due to the diplococcus of Fränkel. He reviews the ætiology, prophylaxis and the indications for treatment in a very gentle way. He then considers in succession the various forms of medication that are in most general use in the treatment of this disease. We shall only attempt to abstract those portions of his article that differ most widely from the usual text-book article. (1) *Pain*. Much stress is laid on the importance of abolishing pain, especially when it interferes with pulmonary movements. To the objection that pain is not often complained of, answer is made that it is often latent—that is, that it is kept in suppression by an expiratory position of the lung. With pain, suppressed expectoration will be promoted and congestion relieved. (2) *Oxygen inhalations*. They have not given the author uniform satisfaction, and at times are even a source of annoyance to the patient. (3) *Quinine by hypodermic injection*. Petzold, of Magdeburg, has conclusively demonstrated its value in cases of lobar pneumonia due to Fränkel's diplococcus, and it deserves to be regarded as a specific. The dose for adults is 0.5 [grammes?] of quinine in 17 parts of water. In children from ten to fifteen years the dose is 0.25 [grammes?] in 9 parts of water. Two such injections on two successive days are generally sufficient. "I have used quinine in the way recommended by Petzold, and am convinced of its efficacy." (4) *Saline hypodermoclysis*. Dr. Henry was the first to use hypodermoclysis in pneumonia, though he does not claim to have done so in his paper. It is, however, natural to find that he believes that it has often turned the scale in favor of recovery. He considers that the method is now accepted as at least a rational one in the treatment of pneumonia. (5) *Venesection*. The author does not think there are many cases in which venesection is indicated. In conclusion he quotes with approval the remark of Dujardin-Beaumetz: "There is no treatment of pneumonia, there is only a treatment of pneumonics."

Alcohol as a Medicament.—Professor Binz (*Berliner klinische Wochenschrift*, January 19th and 26th) concludes from his experiments that alcohol in moderate doses increases the respiratory capacity in most persons to a small degree. The same doses given to persons on an empty stomach or when they were tired, always had this result, as well as when those experimented upon slept as a result of the ingestion of alcohol. This increase of respiratory capacity is due to a direct irritation upon the nervous centres by the diluted alcohol circulating in the blood. The author also found that the presence of aromatics in the alcohol increased the exciting action of the pure alcohol. The favorable action of alcohol in collapse cannot be disputed, and it has been unquestionably proved that mod-

erate quantities of alcohol save the consumption of fat and proteids. The author concludes that the present attitude of some of the profession in condemning all alcoholic beverages costs many a life, and that a good wine or brandy is often of the greatest value.

PHYSIOLOGY AND PATHOLOGY.

Pathogeny of Intermittent Hydronephrosis.—M. P. Bazy (*Revue de chirurgie*, January 10th) says that hydronephrosis, especially of the intermittent type, has its origin in a congenital disposition of the pelvis of the kidney and accessorially of the ureter. A congenitally voluminous pelvis of the horizontal type, offers the best opportunity for the development of a hydronephrosis, especially if it has a bend or the shape of a bagpipe. This form of pelvis is quite rare and its occurrence is in proportion to the rarity of intermittent hydronephrosis. The accessory factors producing this form of hydronephrosis lie in the strictures, folds, and torsions of the upper extremity of the ureter.

A movable kidney can be the cause of the hydronephrosis; but the author thinks the ptosis and the mobility are more often the sequel of the condition. The production of the hydronephrosis is favored by a possible stagnation of a small quantity of urine in a congenitally large pelvis, congenitally disposed to permit such stagnation, which will allow it to take place under the influence of a slight cause. This evoking cause, repeating itself, will finally bring about a more and more marked stagnation, until the kidney having increased in size and weight, falls from its normal position and then meeting a new condition of stagnation, brings about an intermittent hydronephrosis through the very fact of its ptosis. The torsions, folds, and twists resulting from the ptosis, or created or increased by it, may become permanent through the formation of adhesions or through a parietal sclerosis originating in some irritative process, which may be aseptic or of a feebly septic nature.

The author reports a number of cases of this condition and has illustrated his paper voluminously with cuts of injected pelves and ureters.

Relation of the Innervation of an Organ to the Influence of Suprarenal Extract upon it. By S. J. Meltzer, M. D., and Clara Meltzer, B. A., M. D. (*American Medicine*, February 7th).—This is a preliminary communication from the Rockefeller Institute for Medical Research. The experiments from which the conclusions are drawn were performed upon rabbits, whose sympathetic cervical nerves and ganglia were mutilated in a variety of ways. "Our results demonstrate in the first place that the suprarenal extract, which in the normal animal causes by subcutaneous injection no effect upon the pupil and nearly no constricting effect upon the blood vessels, causes a distinct and lasting effect when the sympathetic is cut. In other words, a substance which exerts no effect upon a normal organ can exert a considerable effect of long duration if this organ is deprived in some way of a nervous control. This appears to us to be a principle of fundamental importance."

Mercurial Combinations in the Urine.—Dr. A. Laquer (*Berliner klinische Wochenschrift*, January 19th) has found experimentally that normal urine almost always is capable of dissolving the red blood cells of rabbits which have been fixed in bichloride of mercury; but when the blood cells have not been so fixed, no solution takes place. The urine of syphilitics treated by mercurial injections possess the same property although mercury can be previously demonstrated as being present. It appears from these observations that the power of the urine to combine with mercury is more than abundantly present. The rôle of the proteid bodies in this chemical reaction is not yet clear. The author concludes that mercury combines in the urine principally with the acids and acid salts and also appears in the excretion of creatinin.

Relation of Pacchionian Granulations to Sarcoma and Psammoma of the Dura Mater.—Dr. Martin B. Schmidt (*Virchow's Archiv*, December 5th) says that in adults, one finds solid cell masses in the cerebral dura mater especially localized in the convexity of the upper half of the cerebrum and about the middle meningeal artery. They are derived from the endothelial covering of the arachnoid. There is also found an extensive vascular cell layer with or without intercellular substance and with various types of cells—spindle cells among them—which have the power of producing fibrillæ and a tendency toward the formation of calcareous concretions. The so-called sarcomata of the dura mater arise from the arachnoid and its endothelial cells, which are pushed into the tissue of the dura from the smooth surface of the arachnoid by means of the Pacchionian granulations and the masses of cells first described.

Some Questions Relating to the Acetone Bodies.—Dr. Giuseppe Satta (*Riforma medica*, December 22, 1902) discusses two questions in connection with acetonuria: (1) The independence of the elimination of acetone and the destruction of living protoplasm; (2) the influence of the carbohydrates upon the production and elimination of the acetone bodies. Weintraub, Hirschfeld, Magnus Levy, and others have demonstrated that the proteid substances cannot be considered as the source of the acetone bodies. Yet it is not absolutely impossible that the acetone bodies may be formed from proteids, for it has been shown experimentally that small traces of acetone can be produced by the oxidation of proteids. Yet in this case we have to deal only with minute traces of acetone, and it is not proved that in diabetes there is acetone formed in sufficient quantities to give acetonuria from the decomposition of the protoplasm. The action of carbohydrates in acetonuria is illustrated by the fact that, if a diet which is sufficient in calories to support life, but is devoid of all carbohydrates, is given for a time to both healthy and diabetic persons, an acetonuria results; but when these persons are given carbohydrates, the acetone both in the urine and in the expired air is reduced to the normal. The author fed healthy persons on

diet exclusively carbohydrate and found very little acetone eliminated, but as soon as the diet was changed to one of proteids and fats acetone reappeared in increasing quantities. The administration of fats increases the amount of acetone in the urine of diabetics, especially the eating of butter and the administration of butyric acid. The author has studied particularly the relations of the acetone bodies to the ingestion of fats, and concludes as follows as regards the results of a study of ten cases of diabetes: In mild cases the increase of fats ingested has little or no influence on acetonuria, but in severe cases it suffices to increase the amount of butter taken in by 12.15 grammes to increase the elimination of acetone bodies. The increase, both in mild and severe cases, is at the charge of the beta oxybutyric acid. Other fats and oils raise the amount of acetone bodies eliminated less than does butter. The increase in acetone elimination ceases on the day following the cessation of the administration of butter, and the acetone-producing property of butter is due probably to the presence of lower fatty acids. Whether acetone is produced from fatty bodies by oxidation or by synthesis is not as yet known. The practical conclusion from these findings is that we should not exclude butter too rigidly from the diet of diabetics, and that we should give due weight in each case to the severity of the disease. Washing butter removes most of the fatty acids, so that it is rendered more fit for the use of diabetic patients. Fats are an important part of the diet of diabetics who are deprived of carbohydrates. Large amounts of butter increase the acetone elimination but slightly even in severe cases, and the acetone bodies produced may be eliminated quickly with the aid of alkalies. Moreover the acetonuria produced by eating butter ceases within a week after the butter is removed from the diet. All these facts must be remembered in treating diabetics and a too severe exclusion of butter and fats is not necessary.

Multiple Myelomata of Bone.—M. Vignard and M. Gallavardin (*Revue de chirurgie*, January 10th) declare that, among the many groups of tumor affecting the skeleton, the name "multiple primary tumors of the bone" may be given to one. These growths are characterized by simultaneous development in several places of bony tissue, for it is not possible to distinguish which is the primary growth and which are metastatic. The softer parts of the skeleton are specially susceptible to this manifestation, such as the sternum, the ribs, the vertebrae, the skull. The tumors are never accompanied by visceral complications, but confine themselves exclusively to the bones. Histologically, the growths are not homogeneous. Some are like lymphadenomata, others like endotheliomata, while others have a special structure to which the name myeloma has been given. The last have certain distinctive characters—the multiplicity of the tumors is often extreme, their clinical latency is possible, cachexia is rapidly developed, and the clinical picture terminates with fever, coma and with the presence of the albumosuria of Bence Jones, but it is not certain that the last named symptom is a constant accompaniment of this class of growth.

Letters to the Editor.

THE PREVALENCE OF CONSUMPTION IN NEW YORK.

105 EAST EIGHTIETH STREET,
NEW YORK, February 13, 1903.

To the Editor of the NEW YORK MEDICAL JOURNAL:

Sir: Having perused with some interest the article of Dr. Henry L. Shively in your issue of February 7th, I hereby take the liberty of calling attention to a few fallacies in the statistical and other references, which I trust my learned colleagues will not take amiss.

Dr. Shively states that, according to the ratio of the figures of the United Hebrew Charities, 23,893 tuberculous immigrants (4.8 per cent. of the total) entered this country last year. By the same calculation there are about 180,000 tuberculous individuals in New York city; a palpable overstatement, but parallel to the popular mistake that the prevalence of tuberculosis, or any chronic disease, in the population is proportionate to the death rate therefrom. I would respectfully call my worthy colleague's attention to the work of Cornet (*Die Tuberculose, Nothnagel's Specielle Pathologie u. Therapie*, Vol. XIV. 2, II, pp. 203 seq.), in which he estimates the proportion of the tuberculous to the total population at 0.7 per cent. Dr. Shively will surely not gainsay that only the poor, in sickness and distress, not the hale, hearty, and prosperous, apply at the United Hebrew Charities. Cornet's exposure of the prevailing error is worthy of most attentive study. Nothing is ever gained by making a bad matter worse through exaggerating its proportions.

In quoting Dr. Fishberg's statement as to the stature of the Jews, he inserts an error which Dr. Fishberg has himself admitted, to wit, an underestimate of one or two inches. The line of argument he employs would tell heavily against the sturdy Magyar and Sicilian, and the wiry Japanese. But the doctor's whole theory of the correlation of racial physique and vitality is refuted by the statistics of the New York Health Department, which show tuberculosis to be less prevalent in the so called Ghetto than in any other portion of the city. Furthermore, the statistics of the United States government (Census of 1900) show that the greatest proportionate consumptive contingent in our population is of stalwart Scandinavian, Irish, and Canadian origin (21 to 18 deaths per 10,000). Some of our best authorities (H. Mackenzie, *British Medical Journal*, February 27, 1892) would set this down to alcoholism, but I should be willing in this matter to accept the verdict of not proven.

Dr. Shively quotes from the Report on Tuberculosis that "the distribution of pamphlets was attended with but little success," etc., but failed to see the excellent results of the methods actually pursued, as stated six lines below, where he left off reading. It is a pity that the whole report did not meet with the appreciation that certain passages evidently obtained, and I feel certain that my esteemed colleague will thank me for calling his attention to this little inadvertent oversight.

In conclusion, I beg to submit that I have no

animus either way on the immigration question, the seriousness and difficulty of which I deeply appreciate; but in the Report on Tuberculosis I am vain enough to feel some pride, and I have a curious preference for being quoted accurately or not at all. I might also mention that some half dozen errors in the article still remain uncorrected, but I am conscious that your valuable space can be more profitably employed than by further refutations.

F. L. WACHENHEIM, M. D.

Book Notices.

Development and Evolution, including Psychophysical Evolution. Evolution by Orthoplasy, and the Theory of Genetic Modes. By JAMES MARK BALDWIN, Ph. D., Hon. D. Sc., LL. D., Stuart Professor in Princeton University. New York and London: The Macmillan Company, 1902. Pp. xvi-395. (Price, \$2.60.)

It would be fair, we think, to call the "organic selection"—or "orthoplasy," to use the author's word—of Professor Baldwin, a neo-Lamarckian hypothesis; for "the perpetuation and development of congenital variations in consequence of individual accommodation" is in a certain restricted sense but the expression of Lamarck's theory of use and disuse in another form. And, yet, the principle enunciated by Professor Baldwin, Professor Morgan, and Professor Osborn almost simultaneously has this new element in it, that it is founded on the belief that new characters acquired by the individual are shared over long periods of time by all the individuals of a race or species, and that thus autogenetic variations of congenital nature tend to become phylogenetic because they are in harmony with individual modification and because they exist in all individuals.

At first blush, this seems like an admission or an assumption of the heredity of acquired characters—the great stumbling block of the Darwinian school, the *causa loquendi* of the opponents of the evolutionary theory. This would be, however, but a superficial view; for the value of orthoplasy lies in the fact of its offering a suitable working hypothesis by which an indirect transmission of acquired characters may be accounted for. To attempt to cover the entire field of the author is impossible in a short review, but we believe we express the principle involved in the expression organic selection by saying that the hereditary transmission of characters—acquired or congenital—is brought about by the assumption on the part of the individual of the characters of his parents in relation to his environment. That is, through external circumstance (environment), or by conscious or unconscious imitation, the individual partakes of the characters of the older members of the species, especially those which are useful or advantageous.

While this theory is in seeming contravention of natural selection as it was described in Darwin's first edition of the *Origin of Species*, or even as it was subsequently modified by him to meet just and honest criticism, its basis is practically the same. It is an amplification of Darwin's natural selection

in that it takes account of "selection by the organism," the employment of the higher faculties in the struggle for existence, which Darwin assigned a secondary place while he did not fail to recognize the advantages which mental strength gave to species and to individuals. Darwin himself recognized the weaknesses of natural selection as he first enunciated the principle, especially the fact that a variation, favorable or unfavorable, in a single individual would rather tend to be lost than to be perpetuated, since the varying individual would be compelled to mate with one which had not varied; and that by repeated crossings the variation would be lost. In the theory of orthoplasia we have a working basis for the accounting of variations and their transmission and perpetuation, which will be certainly helpful in the solution or in the working out of problems connected with evolution.

The appendix contains the original statements of the three inventors of the theory of organic selection, as well as a quotation from Professor Conn on the subject. To one familiar with the literature of recent years in evolution, its progress and its processes, Professor Baldwin's book is most readable and most interesting. It is scarcely a work for the novice in the study, but even to him it will give light as to the intellectual warfare which has been going on for the last half century and more, and as to the methods by which competent men seek to bring facts into harmony with the great principle of organic evolution.

Manual of Antenatal Pathology and Hygiene. The Fœtus. By J. W. BALLANTYNE, M. D., F. R. C. P. E., F. R. S. Edin., Lecture on Midwifery and Gynæcology, Medical College for Women, Edinburgh, etc. New York: William Wood & Company, 1902. Pp. xvi-527. (Price, \$5.)

Dr. Ballantyne in this large volume, has undertaken to introduce a new element into the field of preventive medicine, the care of the child before birth. If the hygiene and care of the child before its entrance into the world can be made a subject of scientific accuracy, certainly a remarkable step forward will have been accomplished. As to certain factors in the health or disease of the fœtus, there is no doubt that much has already been accomplished, as in cases in which a child will almost certainly be infected with syphilis, or in instances in which the fœtal size has been kept within moderate limits by the use of a certain diet. But, after reading Dr. Ballantyne's most interesting work, written though it is in a thoroughly scientific spirit and with more than usual knowledge and more than usual research illumining its pages, we must confess that we feel only that the scheme "promises well." We are not certain that the author expected to do more than this. Here and there he is dogmatic in his statements, at other times less certain, but always enthusiastic and hopeful. Thus, the report of the case in which a hæmophilic mother who had twice had post partum hæmorrhages, had twice given birth to hæmophilic children, in her third pregnancy was given chloride of calcium, arsenate of iron, and strychnine, and who

subsequently gave birth to a male child who was not a bleeder—in this case, we say, the author fairly talks it into himself that this was no coincidence, but the result of antenatal treatment. He considers both sides very logically and very fairly, and we cite the instance only as showing the fervor with which Dr. Ballantyne has attacked his subject.

But whether he has worked with enthusiasm or not, there is no doubt that this pioneer has given us much to think about. Considering carefully the chapters on Diagnosis of Fœtal Morbid States, Therapeutics of Fœtal Diseases, and Hygiene and Therapeutics of Fœtal Life, we find that the author has summed up most admirably the almost total lack of knowledge which we have of intrauterine life. The careful anamnesis of the mother with reference to the mother's family, her own medical history, her reproductive history in its minutest detail, her symptomatology, and the results of her physical examination—these are important data to start with. The author then lays stress upon the physical examination of the fœtus by palpation and auscultation, and believes that by much more frequent observation than has yet been given to them, the sounds of the fœtal heart and their variation can be made to tell more than we suspect at present. By mensuration of the fœtus and by Röntgen ray photography more still can be elucidated as time goes on and observations become more numerous. But it will be seen at once how quickly the limitations appear to more than a superficial examination of the unborn fœtus and how misleading a conjecture may be if founded upon a single observation of, let us say, considerable or little *liquor amnii*. We do not urge this as a discouragement, for Dr. Ballantyne has pointed out how these things may be ultimately accomplished, and certainly every means to further scientific research, however difficult or recondite it may be, should be stimulated; but for the present, we fear—at least until the "pre-maternity hospital" which the author suggests shall be founded—much of this knowledge will continue to be theoretical and to be haphazard in its collection and dissemination.

In the course of the work, the relations of antenatal pathology and hygiene to forensic medicine, to obstetrics and gynæcology, to general pathology, to anatomy, to embryology and to the other special departments of medicine are very fully considered and discussed. The anatomy and physiology of the fœtus are next taken up, then its pathology, first the transmitted diseases, then the idiopathic diseases of the fœtus being regarded in detail. Chapters on the diagnosis and treatment of abnormal conditions and their hygiene close the book, to which is added an appendix containing ten pages on which are listed the author's contributions to medical literature. Perhaps the appendix might as well have been omitted.

To sum up our views, it is fair, we think, to say that Dr. Ballantyne has given us a thoughtful, scientific work on the subject which has most occupied him, and that in this branch of medicine we know of no other work in English with which it can be compared. The book is suggestive, too, and full of hints as to the breadth and the scope of the

work in general; but even granted that a very few abnormalities or diseases susceptible to treatment can be diagnosticated with the fœtus *in utero*, there is nothing in the book to suggest even a method of treatment in the scores of cases in which fœtal disease is suspected. But this is not the fault of the author; it is a difficulty inherent in the subject. Dr. Ballantyne's labor is well done and the publication of his book puts the profession in his debt.

The Force of Mind, or the Mental Factor in Medicine. By ALFRED T. SCHOFIELD, M. D., M. R. C. S., Hon. Physician to Friedenheim Hospital, etc. Philadelphia: P. Blakiston's Son & Company, 1902. Pp. xiv-309. (Price, \$2.)

In the preface the author tells us that the *British Medical Journal*, in 1897, in commenting on the author's address to the Victoria Institute, on The Scope of Mind, asked "to have one or two diseases named in which the unconscious mind plays the part of causation or cure; and some suggestion as to the use of the knowledge in respect to cure." This is the reason assigned for the appearance of the work before us. On the whole, we think that the questions asked are fairly answered by the author. But here, at the outset, explanations are called for. Are we to limit mind to consciousness? If so, of course there can in the nature of things be no such thing as an "unconscious mind." Those psychologists who hold that opinion, who insist that consciousness is the only manifestation and evidence of mind, who, in short, agree to the theory that "the brain secretes mind as the liver secretes bile," cross swords with the author at the outset. Says the author: "Consciousness after all only represents what I *see* of mind; but surely there are many ways of detecting its presence besides sight; and one might as well limit the body to what one can see of it, ignoring those parts that are discerned by touch, as make consciousness the only proof of mind. We can, of course, see the image of our faces in a glass, but we can just as clearly see the unconscious mind reflected in actions, and we have no more right to deny the existence of the one than of the other Mind, in fact, may be conscious, subconscious, or unconscious. The second state may be brought into consciousness by effort, the last cannot." But whether we extend, with the author, the meaning of the word "mind" so as to embrace all purposive adaptation of means to ends, conscious or unconscious, or whether we restrict the word to conscious adaptation, the fact remains that there are innumerable evidences of the existence of such purposive adaptation under circumstances in which consciousness cannot for one moment be supposed to exist; and it is this faculty to which the author refers by the term "unconscious mind," for want of a better. "The terms 'conscious mind' and 'unconscious mind,'" he says, "are in themselves misleading, and give the idea that there are two minds, and thus obscure its essential unity. I only use the latter term here provisionally until 'mind' means all mind, and not only, as now, a small part of it. The mind is one; but, as I have said, while one part is in constant illumination, another is never lighted by con-

sciousness; and between the two stretches a tract of uncertain extent that is sometimes in light and sometimes in darkness—the subconscious region."

As to the sphere of operation of the unconscious mind, the author says: "The power to *use* our lives through the voluntary muscular and nervous systems appears to have been committed to our reason and conscious will power; while the power to carry on the processes of this life and existence generally is under the control of instinct or unconscious mental power. We may be said to *live* consciously and to *exist* unconsciously Wherever the conscious limits are reached, there the powers of the unconscious mind begin, and its actions, though only styled instinctive, may be truly said to be on the whole far more rational and beneficial than those inspired by what is always assumed to be reason, but which just as often is unreason, and, indeed, becomes at times a positive power for evil over the body; a disaster which rarely happens in the case of the unconscious mind. We think we live entirely as reasonable beings, but it is very rarely that we do, and none of us could exist for a day, were we not guarded and guided incessantly by a never-erring instinct."

With this preliminary survey of the point of view from which the author approaches his task, it will suffice to say that the book is divided into two parts, the first, consisting of eight chapters dealing with the action of the mind in causing disease; the second, also of eight chapters, and dealing with the action of the mind in curing disease. The author adopts the unusual but excellent plan, of heading each chapter after the manner of Euclid, with the theorem to the establishment of which the chapter is devoted. In enumerating the titles and theorems of the chapters, the entire scope of the work will be made abundantly clear: They are as follows: The Force of Mind: "Though leaders in the profession have recognized the mental factor in all ages, it is generally ignored to-day." The Unity of Mind: "As the action of the mental factor in disease is unconscious, it cannot be recognized as mental by those who limit mind to consciousness. The word 'mind' must therefore be extended to include all psychic action." On Psychophysiology: "The double action of the 'mental factor' on the body in health consists *generally* in carrying on the functions of life; and *specially* in physically expressing mental states." On Psychopathology: "The mental factor is present in some way or other in all diseases." The Mental Factor in Organic and Other Diseases: "We have examples of the mind as a causal factor in most organic diseases." The Cause and Symptoms of Functional Nerve Disease: "The mental factor in neurasthenia is generally admitted." The Ætiology of Hysteria: "The mental factor in hysteria is the unconscious mind." Phenomena, and Illustrations of Hysteria: "The phenomena of hysteria are due to the perverted action of the unconscious mind." On Psychotherapy: "The force of mind in therapeutics, so largely ignored by the profession, is generally exploited by quacks for their own ends." The *Vis Medicatrix Naturæ*: "The testimony of the profession as to the presence and importance of the '*vis medicatrix naturæ*' and the power of mind over disease."

Some Varieties of Mental Therapeutics: "The effective agent in all faith cures is the unconscious mind." Illustrations of the Curative Power of Mind: "The force of mind is a therapeutic agent in every disease." Mental Therapeutics in Functional Nerve Diseases: "Functional nerve diseases are mostly cured by suggestions presented in various ways." The Treatment of Functional Nerve Diseases: "Success in the treatment of neurasthenia depends equally on psychical and physical details." The Therapeutics of Hysteria: "In hysteria the cure lies in restoring the healthy action of the unconscious mind." The Practical Conclusion: "The neglect of the mental factor in medicine is a source of weakness to the profession which should at once be removed." The book closes with a seven page bibliography of works bearing on the subject in one direction or another, and a fairly complete index.

In closing, it is only right to call special attention to the author's caution that in such a work as this the sense of proportion is necessarily lost. "It is inevitably so in any book occupied exclusively with one side of a question; and it must not be supposed for a moment that (as explained in the text) one does not fully recognize that, after all, in many diseases the part played by the mind is *very small indeed*, either in cause or cure—though we believe that to some extent it is ever present."

La figure humaine. La beauté de la femme. Par Le Dr. C. H. STRATZ. Traduit de l'allemand par ROBERT WALTZ. Ouvrage orné de 180 illustrations. Paris: Gaultier, Magnier et Cie, 1902. Pp. iv-337.

The advance of experimental medicine and the multiplicity of investigation into questions directly concerned with the physician's work in pathology, diagnosis, and treatment have been so marked, not only in the accumulation of valuable information, but in revealing the depth and complexity of strictly scientific problems as well, that we are apt to overlook a phase of intellectual activity as interesting as it is characteristic of our times, one which represents a broader view of the relation and interdependence of our profession and the manifold aspects of human life and progress.

An attractive book might be written—numerous articles have, in fact, appeared—in the light cast by medicine on subjects which at first sight would appear to be purely social, literary, economic, theological, or artistic. The novelist, the dramatist must in their analyses of motive, their portrayal of types, their scenes of action or of emotion, be influenced by considerations of the unmistakable factors of heredity, of environment, even of pathology. Is it not a fact that whole museums (or shall we not rather say clinics?) have been found in literature as well as in art? Even the critic finds the medical standpoint an important one for a complete judgment of the individuality, as expressed in his art work, of the poet, the painter, or the musician.

In the volume under consideration a physician, of wide experience, sound training, and cultivated tastes, discusses from such a point of view a question, that of woman's beauty, which a less perfectly equipped judge, æons ago, failed signally to solve,

albeit a demigod and aided by Venus herself. The subject has ever been one on which almost every mortal, certainly every painter, would be a law unto himself, and construe *de gustibus non disputandum*, to mean "of my taste there can be no question."

One of the most valuable points in the admirable treatise of Dr. Stratz is the demonstration that, general opinion to the contrary notwithstanding, feminine beauty is not a question of taste at all, but one of general, not individual, standards, all of them quite definite, logical, easily applied, and authoritative. Personal feeling, predilection, and sentiment do, of course, play their part, not in judging, but in the choice or idealization of what has been otherwise judged, or, too, as the author has shown by analysis of a number of famous paintings, in sacrificing technical beauty for the subtle effect on temperament and emotion of what one would like to style the secondary beauty of minor significance.

The standards presented and analyzed are those of perfection in health, proportion, development and conformity to sexual characteristics; the beauty to which they are applied, that of form, color, and motion. Not the least valuable chapters are those in which the influence of disease, nourishment, mode of life, sex, age, race, heredity, and apparel is considered in detail and illustrated by photographs, not of one female form, but of more than a hundred, of which each demonstrates a quality or a defect of beauty, and the least attractive are perhaps the most instructive. All are chosen with this point in view, posed with art and with excellent judgment as well, so as to bring out clearly the features of which mention is made in the text, whether that is a well turned ankle, a charming mouth, or a crooked back. The effect, on the form, of muscular activity, of posture, and of their combination in locomotion, even the influence of gravitation as shown, most strikingly, in the lying figure, is taken into consideration and made to teach its lesson of æsthetic criticism.

If it is the province of art to hold, as it were, the mirror up to Nature, science, as the author of this charming monograph has shown, may be of no little aid to her sister. In a review of the first volume of this series, an introduction to the study of the human figure, by Dr. Paul Richer, expression was given to the expectation with which the appearance of the succeeding number was awaited. The result has been beyond expectation, for Dr. Stratz has given us in *La beauté de la femme*, a volume which is at once a work of science and a work of art.

Obstetrical Nursing for Nurses and Students. Being an Elaboration of the Lectures in Obstetrics to the Pupils of the Training School for Nurses of the John N. Norton Memorial Infirmary and the City Hospital of Louisville. By HENRY ENOS TULEY, A. B., M. D., Professor of Obstetrics, Kentucky University, Medical Department, etc. Chicago: G. P. Engelhard & Company, 1902, Pp. 9 to 198. (Price, \$1.)

The tendency to accuracy in obstetric work is being exemplified on every hand by the multiple publication of books for physicians and nurses in the minor but essential details of midwifery. The antiseptic era is now replaced by the aseptic age.

and it is this important fact which is emphasized in the book before us as in those which have preceded it. Dr. Tuley's book represents the outcome of many years' experience in this special branch of work, and is replete with suggestions of a valuable character to the monthly nurse. Sufficient of anatomy, physiology, and embryology is given for the nurse not to be entirely ignorant of the processes of gestation and birth, and these chapters are followed by minute instructions as to the conduct of the nurse in obstetric complications. The care of the mother and that of the child are carefully considered, and a brief but good chapter on infant feeding is added. There are several pages of advice to pregnant women in which food, clothing, exercise, and hygiene are discussed in a sensible manner. The appendix contains data on the preparation of diluents and various kinds of infants' food.

Altogether, the book can be commended to nurses who take obstetric cases and to physicians whose limited time does not permit them to give personal instruction to their nurses.

Diseases of the Skin. A Manual for Students and Practitioners. By JOSEPH GRINDON, Ph. B., M. D., Professor of Clinical Dermatology and Syphilis, Washington University, etc. Series Edited by BERN B. GALLAUDET, M. D., Demonstrator of Anatomy and Instructor in Surgery, College of Physicians and Surgeons, Columbia University, New York, etc. Illustrated with 39 Engravings. Philadelphia and New York: Lea Brothers & Company, 1902. Pp. 5 to 377. (Price, \$2.)

This attractive looking little book by Dr. Grindon seems on examination to be as good as it looks. As an epitome should be, it is a condensation of the writings of many authorities well digested. In this particular case the authors especially acknowledges the writings "of members of the American Dermatological Association, whether in textbooks or in the *Journal of Cutaneous and Genitourinary Diseases*."

Little that is essential at least to an elementary knowledge of skin diseases, has been omitted, and much more there is in condensed form regarding these multifarious affections than one would expect in so small a work.

The definitions are good, its descriptions are clear, graphic and animated, and the outlines of pathology and treatment are sufficiently full and satisfactory. The book is also well indexed.

Regional Minor Surgery. Describing the Treatment of those Conditions daily Encountered by the General Practitioner. By GEORGE GRAY VAN SCHAICK, M. D., Attending Surgeon to the French Hospital, New York. New York International Journal of Surgery Company, 1902. Pp. 5 to 226. (Price, \$1.50.)

A few of the most commonplace minor surgical affections encountered in out-door dispensary practice are here made the subject of comment embodied in book form. The serious manner in which

these affections have been considered—and rightly so—will raise them in the estimation of the reader to the level of major importance. The methods of treatment suggested are simple, sound, and easy of execution.

Diseases of the Rectum and Anus. Designed for Students and Practitioners of Medicine. By SAMUEL GOODWIN GANT, M. D., LL. D., Professor of Rectal and Anal Surgery at the New York Post-graduate Medical School and Hospital, etc. Second Edition. Rewritten and Enlarged. With Thirty-seven Full-page Plates, Twenty of which are in Colors, and Two Hundred and Twelve Smaller Engravings and Half-tones. Philadelphia: The F. A. Davis Company, 1902. Pp. xxiv-687. (Price, \$5.)

This edition has been elaborated by the addition of chapters on diseases, injuries, and tumors of the coccyx, venereal diseases of the anorectal region, rectocolonic enteroliths, and concretions. The chapter on cancer and colostomy contributed in the first edition of Allingham is from the pen of the author himself, and, finally, a chapter on the examination of feces may be noted as an innovation. A number of new illustrations and photomicrographs of excellent reproduction contribute to make this new edition as graphic as it is explicit in its text.

Transactions of the American Dermatological Association at its Twenty-fifth Annual Meeting, held in Chicago, May 30 and 31 and June 1, 1901.

The Chicago meeting, to which these *Transactions* relate, was one of unusual interest, and their publication under the competent editorship of the secretary, Dr. Montgomery, is correspondingly valuable. Aside from the fact that the papers were fully equal to if not above the average of contributions to the association, special interest was added to the proceedings by the presentation of clinical cases. The feature of a clinical session has been only added within a few years, together with the custom of holding the annual meetings only in large cities, where abundant clinical material may be gathered. A special feature of this session at its Chicago meeting was the presentation of a number of cases of blastomycosis of the skin, an affection that seems to occur not so very seldom in Chicago and some other places, but, judging from the fact that no case has yet been reported here, must be extremely rare in New York.

Numerous photographs greatly enhance the value of the publication, which is creditable also in other respects.

An Introduction to Dermatology. By NORMAN WALKER, M. D., Assistant Physician for Diseases of the Skin to the Royal Edinburgh Infirmary, etc. With 43 Full-page Plates and 47 Illustrations in the Text. Second Edition, Revised and Enlarged. New York: William Wood & Company, 1902. Pp. xvi-301. (Price, \$3.)

This manual contains many valuable points, both in treatment and in diagnosis, which should be of great value to the student and physician. We

heartily commend the subsidiary position given to eczema, warranting the suspicion that the term is too loose. That there are several undistinguished diseases classed under the term eczema is beyond doubt; that there is no one treatment for it no one can gainsay.

The parasitic nature of seborrhœa and the connection between this disease and psoriasis are well brought out, opening the way for experimental work in this direction.

Human Anatomy. A Complete Systematic Treatise by Various Authors, including a Special Section on Surgical and Topographical Anatomy. Edited by HENRY MORRIS, M. A., M. B. Lond., F. R. C. S. Eng., Member of the Council of the Royal College of Surgeons of England, etc. Illustrated by 846 Woodcuts. Third Edition. Revised and Enlarged. Philadelphia: P. Blakiston's Son & Company, 1902. Pp. xxxiv-1328. (Price, \$6.)

With the exception of the division on the eye, every chapter in this edition has been subjected to revision, and a large number of illustrations have been changed and printed in colors. These innovations, indicative of the progress of so well worn a subject as anatomy, make this an essentially new book and tend to arouse the renewed interest of the student and lover of anatomy.

In the light of x ray studies of bones and joints, we have reason to expect somewhat more explicit teachings bearing on epiphyses and epiphysal lines with their all-important relation to everyday surgical experience. If regional, topographical and surgical anatomy are so well rendered, it remains to incorporate in a general textbook of anatomy that much anatomy *in vivo* which Röntgen ray examination is capable of showing.

The International Textbook of Surgery. By American and British Authors. Edited by J. COLLINS WARREN, M. D., LL. D., Hon. F. R. C. S. Eng., Professor of Surgery in Harvard Medical School, etc.; and A. PEARCE GOULD, M. S., F. R. C. S., Surgeon to Middlesex Hospital, England, etc. Second Edition thoroughly Revised. Volume I. General and Operative Surgery. With 461 Illustrations in the Text and 9 Full-page Plates in Colors. Pp. 3 to 965. Volume II. Regional Surgery. With 499 Illustrations in the Text and 8 Full-page plates in Colors. Pp. 9 to 1122. Philadelphia and London: W. B. Saunders & Company, 1902. (Price, each volume, \$5.)

To keep this excellent work abreast of the constant changes wrought in surgery, the entire book has been subjected to a revision. The editors direct special attention to the newer principles and lessons learned in the practice of military and naval surgery, based on the experience of recent wars.

The chapter on Diseases of the Lymphatic System has come in for a very thorough revision, but we fail to recognize the material gain. After a painstaking search of these pages, we cannot too strongly praise the editors for having unstintedly given to the readers of this second edition the bene-

fits of their diligent reading and widened experience in recent surgical methods and innovations. This versatility of teaching greatly enhances the sphere of usefulness of this cosmopolitan work.

A Manual of Surgery for Students and Practitioners. By WILLIAM ROSE, M. B., B. S. Lond., F. R. C. S., Professor of Clinical Surgery in King's College Hospital, London, etc., and ALBERT CARLESS, M. S., Lond., F. R. C. S., Surgeon to King's College Hospital, London, etc. Fifth Edition. New York: William Wood & Company, 1902. Pp. xiv-1213. (Price, \$5.)

The distinctive feature of this fifth edition, as pointed out in the preface, is a rearrangement of the order of topics. The authors are impressed with the importance of teaching the principles of surgery by beginning with bacteriology, inflammation following as a logical sequence. This holds good for surgery as a finished ideal product; but this is a synthetic presentation of surgery, and deprives the student of the analytical concept in which bacteriology as the *causa causans* is wont to be placed last in the daily practice of clinical surgery. Bacteriology, therefore, rightly belongs, by process of evolution and practice, midway between inflammation and its bearing on operative measures—asepsis and antisepsis.

Numerous other changes, indicative of surgical progress, are evident throughout the work.

BOOKS, ETC., RECEIVED.

Experiments on Animals. By Stephen Paget. With an Introduction by Lord Lister. New and Revised Edition. New York: G. P. Putnam's Sons, 1903. Pp. xvi-387.

Inorganic Chemistry Syllabus. By Hubert S. Carel, B. S., Assistant Professor in the University of Minnesota. Third Edition. Minneapolis: H. W. Wilson, 1902. Pp. 9 to 182.

Clinical Treatises on the Pathology and Therapy of Disorders of Metabolism and Nutrition. By Professor Dr. Carl von Noorden. Authorized American Edition Translated under the Direction of Boardman Reed, M. D., Professor of Diseases of the Gastrointestinal Tract, Hygiene, and Climatology, Department of Medicine, Temple College, Philadelphia. Part I, Obesity: The Indications for Reduction Cures. Pp. x-11 to 59. Part II, Nephritis. Pp. 5 to 112. (Price, \$1.50.)

Manual of Bacteriology. By Robert Muir, M. A., M. D., F. R. C. P. Ed., Professor of Pathology, University of Glasgow; and James Ritchie, M. A., M. D., B. Sc., Reader in Pathology, University of Oxford. American Edition, with Additions, Revised and Edited from the Third English Edition by Norman MacLeod Harris, M. B. (Tor.), Associate in Bacteriology, the Johns Hopkins University, Baltimore. With One Hundred and Seventy Illustrations. New York: The Macmillan Company, 1903. Pp. xx-565.

Inoculation against Malaria. By Dr. Philaethes Kuhn, Staff Surgeon to the Imperial Troops of the South West Africa Protectorate. Translated by H. A. Nesbitt, M. A. With a Table of Curves. London: H. K. Lewis, 1902. Pp. 32.

Arbeiten aus dem pathologischen Institute zu Helsingfors (Finnland). Herausgegeben von Professor Dr. E. A. Hömén. Die Wirkung einiger Bakterien und ihrer Toxine auf Verschiedene Organe des Körpers. Mit 13 Tafeln. Helsingfors: Druckerei der finnischen Literaturgesellschaft, 1902. Pp. iv-220.

Die Technik der speziellen Therapie. Ein Handbuch für die Praxis. Von Professor F. Gumprecht, Med.-Rat in Weimar, Dozent an der Jenaer Universität. Mit 205 Abbildungen im Text. Dritte umgearbeitete Auflage. Jena: Gustav Fischer, 1903. Pp. x-402.

New Inventions.

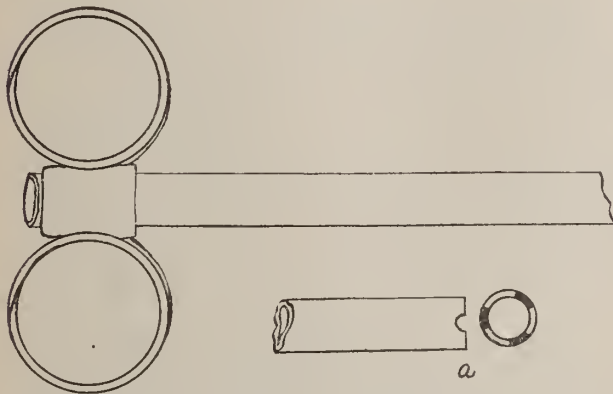
Miscellany.

A CORING INSTRUMENT FOR OPERATING UPON VARICOSE VEINS.*

By FREDERIC GRIFFITH, M. D.,
NEW YORK,

SURGEON, BELLEVUE DISPENSARY; FELLOW OF THE NEW YORK
ACADEMY OF MEDICINE.

The subcutaneous dissection of varicose veins has lessened the time of healing fully one half that required after an open operation. The instrument which I have devised depends upon the same principle for its action as that of the ordinary apple corer. It consists of a metal tube twelve inches in length and from five sixteenths to three eighths of an inch internal diameter, and of standard thickness. The handle is constructed of two rings one inch and a quarter in diameter, soldered, and stiffened by means of a band, to the tube end. The tip



Dr. Griffith's Coring Instrument.

(a) is chamfered at three points upon its circumference to the depth of one eighth of an inch.

In cases where the saphenous vein is to be removed in its entirety (tortuous branches being as readily followed from their surface markings) it may be picked up either at the saphenous opening or behind the inner condyle at the knee. The vein is to be ligated and severed. The ends of the ligature upon the part to be removed are to be left long and drawn through the tube. Rotation of the tube with one hand, drawing meanwhile upon the ligature with the other, effects the dissection. My idea is that the branching veins being torn through will cause no bleeding which cannot be controlled by elevation and snug bandaging. The advantage gained by the use of this instrument over a fumbling finger dissection is the certainty of avoiding infection.

805 MADISON AVENUE.

Crystallized Wisdom: Epidemics.—The *New York Times* for February 19th says: "In these days there are no excuses for epidemics of filth diseases; there are only explanations of them."

* Presented before the surgical section of the New York Academy of Medicine, January 12, 1903.

The Future Pathway of Scientific Knowledge.

—Dr. C. Sedgwick Minot, in his address as president of the American Association for the Advancement of Science, at the Pittsburgh meeting, in June last (*Science*, July 4, 1902), says: "The biologist must necessarily become more and more the supreme arbiter of all science and philosophy, for human knowledge is itself a biological function which will become comprehensible just in the measure that biology progresses and brings knowledge of man, both by himself and through comparison with all other living things. We must look to biologists for the mighty generalizations to come, rather than to the philosophers, because great new thoughts are generated more by the accumulation of observations than by deep meditation. To know, to observe. Observe more and more, and in the end you will know. A generalization is a mountain of observations; from the summit the outlook is broad. The great observer climbs to the outlook, while the mere thinker struggles to imagine it. The best that can be achieved by sheer thinking on the data of ordinary human experience we have already as our glorious inheritance. The principal contribution of science to human progress is the recognition of the value of accumulating data which are found outside of ordinary human experience."

The Use of the Title of Doctor by Dentists in France.—According to the *Progrès médical de Paris*, Mr. Evans, the nephew of Dr. Evans, of Paris, who aided the ex-Empress Eugenie to escape, in 1870, has succeeded to his uncle's practice. He has been prosecuted before the police tribunal for illegal exercise of the dental art and for usurpation of the title of "doctor." On the first point, Mr. Evans satisfied the authorities that he was acting within the law; but his explanation that his door-plate, bearing the words "Dr. Evans," was that of his uncle, did not avail him to escape from the fine of 200 francs imposed for usurpation of the title of doctor.

Responsibility of Surgeons.—Damages to the amount of \$3,000 has been awarded to Mrs. Parmelia J. Davis in her suit against Dr. Edwin H. Pratt, of Chicago, on the ground that he performed an operation on her while in Dr. Pratt's private hospital without her consent. In the course of the decision the judge set forth the opinion that damages may be assessed against a physician for performing an operation without the consent of the patient should serious results follow.

Vital Statistics of the State of New York show that during 1902 the death rate was 17 per 1,000 of population, which is the same average which prevailed for the five preceding years, though lower than the mortality of 1901. The total number of deaths during the year in the State was 124,160. The infant mortality is low, almost 5,000 less than the average. The zymotic mortality was 14 per cent. of the total, being above the average. Stomach troubles caused a very low summer mortality. Scarlet fever continues the abrupt increase of last year. Diphtheria has the same rate of the last four years. Typhoid fever increased moderately in the maritime

and Hudson Valley districts. Smallpox existed in the early months throughout the Adirondack region, where it has not recurred save to a limited extent this present winter. During the year the disease has developed in 135 municipalities in all parts of the State, including New York City and towns in Westchester County. It caused the same mortality as in 1901, but was more extensively prevalent. It exists now at Rochester and vicinity, abating, and in towns in Clinton, Chautauqua, and Delaware Counties. There were 8,800 deaths from pneumonia and about 5,500 from Bright's disease. The acute respiratory mortality was a little below the average. Grip was estimated to have caused 4,000 deaths in the early months of the year. Its annual recurrence in November and December has been moderate, causing probably not more than 500 deaths.

Subjective Sensations and their Objective Causes in Relation to Consciousness.—Dr. Charles Sedgwick Minot. (*Science*, July 4, 1902) in his presidential address at the Pittsburgh meeting of the American Association for the Advancement of Science, said: "A sensation gives information concerning the external world. Perhaps science has achieved nothing else which has done so much to clarify philosophy, as the demonstration that the objective phenomena are wholly unlike the subjective sensations. Light is a series of undulations, but we do not perceive the undulation as such, but as red, yellow, and green, or as we say, colors; the colors give us available information, and we use them as so many labels, and we learn that reactions to these labels may be helpful or hurtful, and so we regulate our conduct. Objectively red, yellow, and green do not exist. Similarly with the vibrations of the air, certain of which cause the sensation of sound, which is purely subjective. But the sound gives us information concerning our surroundings, which we utilize for our teleological needs, although in Nature external to us there is no sound at all. Similarly all our other senses report to us circumstances and conditions, but always the report is unlike the external reality. Our sensations are symbols merely, not images. They are, however, biologically sufficient because they are constant. They are useful not because they copy the external reality or represent it, but because, being constant results of external causes, they enable consciousness to prophesy or foresee the results of the reactions of the organism, and to maintain and improve the continual adjustment to the external reality. The metaphysicians have for centuries debated whether there is any external objective reality. Is it too much to say that the biological study of consciousness settles the debate in favor of the view that the objective world is real?"

Proximity in Relation to the Sense of Smell.—The *Lancet* for November 1st refers to the curious fact that foul odors are often more perceptible at some distance from their source than close to it. "It is well known, again, that persons in a crowded room are oblivious of the foulness of the air until they go outside and come in again. A person entering the room from the fresh air outside at once complains of stuffiness. There would seem

to be a subtle connection between an abundance of air and the sense of smell. A trace of scent is agreeable, an excess is sickly, some scents or flavorings being positively nauseating when in the highly concentrated state. The artificial oil of jargonelle in bulk smells more like garlic than the jargonelle pear, but a mere trace of the oil diffused in the air gives a smell indistinguishable from that of the fruit. The offensive smell of sulphuretted hydrogen is more marked when the gas is freely diluted with air than when it is not so diluted. The pure gas seems to possess hardly any perceptible rotten-egg smell at all but a sweetish odor not unlike that of chloroform vapor. These observations would tend to show that smell is in some way connected with the presence of oxygen and that in the absence of this element odors is no longer perceived. In an atmosphere free from oxygen it is just possible that odors would not be observed and it is probable that the smell of a substance is due to a change brought about in that substance by contact with oxygen."

Biochemisches Centralblatt is the title of a new publication which has recently been founded in Berlin under the direction of leading teachers. Dr. Heinrich Stern, of New York, has been appointed editor for the United States and Canada. The publication is designed to cover the field lying intermediate between chemistry and medicine, including such phases of chemistry as physiological chemistry, chemistry of the ferments and fermentation, hygienic chemistry, and the applications of chemistry which are of particular importance to the physician.

The Ethics of Adolescence and Unwholesome Reticence on Sexual Matters.—Pruriency consists, not in the matter of a topic, but in the manner in which it is handled. In the converse sense, so does modesty, which is the antithesis of pruriency. Reticence, no less than curiosity, mental direction, and discussion, may be unwholesome, as Le Gallienne (*Prose Fancies*, p. 150) expresses admirably as follows: "But I am warned that I commit impropriety even in naming such matters. They are 'sacred'—which means that we ought to be ashamed to mention them, however reverent our intention. Motherhood, it would appear, is not, as one had regarded it, a sanctifying privilege, but a shameful disability, of which not the Immaculate Conception, but the ignoble service for the 'purification' of women is the significant symbol. It behooves not only the unmarried, but the married mothers, so to speak, to wear farthingales upon the subject, and pretend, with as grave a face as possible, that babies are really found under cabbages, or sent parcel post, on application, by her Majesty the Queen."

Decrease in the Number of Medical Students in Germany.—According to the *Journal Medical de Bruxelles* for December 18th, official reports state that the number of students inscribed in the faculty of medicine in the German universities is decreasing. Formerly it had been doubling itself in ten years: in 1880 it was 4,017; in 1890, 8,274; and in 1900, 7,433.

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SOME OF THE COMPLICATIONS OF ABDOMINAL SURGERY.

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Anæsthetics.—Perhaps we should first consider the matter of anæsthetics. With our modern refinements in anæsthetics, with nitrous oxide as a preliminary to the other anæsthetics, or in conjunction with oxygen as a complete anæsthetic, we have fewer of the complications from this source than were formerly seen.

In several thousand operations of my own or that I have witnessed, there has not been a death from the anæsthesia so far as I know, but there have been a number of cases in which anxiety was caused from that source and the prognosis was one of very acute interest for the time being.

In chloroform paralysis of the vasomotors, the symptoms are very alarming for the moment, but when the patient has been relieved by prompt application of our resources, there seems to be but little further trouble to be apprehended in the way of lasting effects.

With ether we have a number of complications in which the prognosis must remain more or less uncertain for a considerable length of time. Ether, or its decomposition products when excreted by the mucous membrane of the stomach, respiratory tract, or kidneys, frequently causes complications which engage our attention. The researches of Hess and others have shown that ether is excreted by the mucous membrane of the stomach very rapidly during the progress of anæsthesia and for some hours afterwards.

The gastritis which results from this source may be modified by keeping a considerable amount of fluid in the stomach, and this result is perhaps best obtained by giving the patient small quantities of hot water at frequent intervals after an abdominal operation; but if the vomiting is very severe, relief may be obtained by washing out the stomach freely with warm water, provided the patient does not object to the use of the stomach tube.

The stomach tube can be more easily employed if we make use of one or two nice little points in

technique. The tube should be oiled with the best quality of sweet oil, flavored with wintergreen, so that it tastes good, and the patient should be instructed to chew for a little while before attempting to swallow it. If it is impossible for the patient to swallow it, the tube should be taken away and brought back again in the course of a half hour or so. If the fauces are unusually sensitive to the presence of a tube, they may be sprayed with cocaine.

Ether gastritis usually subsides in the course of forty-eight hours, but in some cases may persist, or may aggravate a preexisting gastritis so that the latter becomes a serious element in the case.

The bronchial mucous membrane seems to be irritated in three ways by ether; by its refrigerating influence, its direct irritation on inhalation, and by irritation of the mucous glands during the process of excretion. The prognosis in ether bronchitis, so far as my observation goes, does not differ much from that of bronchitis caused by exposure to cold; it is usually transitory and the after effects involve simply the consideration of dealing with inflamed bronchial mucous membranes.

In the kidneys a preexisting nephritis is often excited to the point of exacerbation, and primary nephritis may be caused by prolonged ether anæsthesia; but here again the cause is transitory, and the prognosis of the after effects is not very different from the prognosis of a similar nephritis caused by exposure to cold. Curiously enough, some cases of nephritis caused by excretion of toxins from an acute infective process in the abdominal cavity will cease instantly in many cases after ether anæsthesia, provided that the focus of infection has been rendered inactive by the operation.

I have seen many cases of appendicitis in which consultants thought that an acute nephritis present made an objection to operation, and yet when the operation was performed, the nephritis disappeared almost immediately. We presume that in such cases the toxins that were being excreted by the kidneys were more irritating than the ether that was being excreted, or else that the ether neutralized such toxins. There is bearing upon these points a large field in physiological chemistry that has not yet been explored, and that is to give us a great deal of extremely valuable new knowledge within the next decade.

The laws of osmosis and of the influence of the kations and anions of irritating substances in diffused solution are so little known that the prognosis of such irritations to-day cannot be given as it will be a few years hence.

The Complication of Iodoform Poisoning.—The complication of iodoform poisoning in abdominal surgery is one which offers a broad field for the exercise of much erudition. At the present time iodoform is used freely in the peritoneal cavity by surgeons in all parts of the world, and it seems to me to be particularly dangerous in this field because of the absorptive powers of the peritonæum.

Iodoform poisoning is commonly mistaken for septicæmia, and the symptoms are frequently so much alike that the diagnosis is not easily made by the members of the house staff of a hospital.

There is one point of constant difference between the two conditions. In iodoform poisoning the wound looks remarkably well, the patient does not. In septicæmia, neither the wound nor the patient looks well.

In iodoform poisoning free iodine is found in the urine and its presence can be determined in a simple way by putting a little of the urine together with some calomel in a saucer and stirring them with a splinter. The brownish color which appears from iodide of mercury resulting from the reaction gives us a clue to the nature of the case.

In iodoform poisoning the prognosis is extremely grave unless the nature of the case is recognized early, and unless the iodoform which is causing the trouble can be removed from the tissues which are taking it up.

I have seen, in consultation, a number of cases in which it was not known why the patient was doing badly, until it was discovered that there was an element of iodoform poisoning. In cases in which the iodoform element can be withdrawn before serious complications have progressed too far, the prognosis is favorable, but I have seen one death occurring from this source after all iodoform influence had been removed.

Hæmorrhage.—In hæmorrhage occurring after abdominal operations, the prognosis is not so grave if the blood remains within the peritoneal cavity, as it is when the blood escapes externally, provided that the blood within the abdominal cavity does not become septic. To be sure, one may have a fatal hæmorrhage within the abdominal cavity, but as a general thing the danger is far less in cases in which the abdominal cavity remains closed. The reason for this is because the blood in the peritoneal cavity is still in circulation in a way, owing to the action of the lymphatics of the peritonæum, which take up the fluid portions rapidly and return them

to the blood vessels, even though after making the round they again escape into the peritoneal cavity. This is an interesting point, and explains the good prognosis in cases in which we have had an effusion of blood into the peritoneal cavity so great that its escape externally would have proved quickly fatal.

The rapid absorption of blood from the peritoneal cavity allows us to neglect oozing from torn adhesion surfaces. In many cases in which the surgeon, following tradition and his own inclinations, is likely to expend too much time in controlling such hæmorrhage before closing the abdominal cavity, a degree of shock may be caused from prolonged operation, which is very much more injurious to the patient than moderate hæmorrhage would be.

The prognosis in shock after abdominal operations depends largely upon the methods of treatment that are employed. If the surgeon is a believer in long operations, the patient will lose much of his natural resistance, and will not be prepared to react quickly from the effects of the operation.

If he believes in the use of gauze packing in the abdominal cavity after severe operation in septic cases, the presence of the gauze very distinctly has a tendency to keep the patient in a condition of shock, and the prognosis in such cases has been a matter of so much interest to me in former years that I have given up the use of gauze packing entirely, and have found that it is practically an unnecessary feature of the surgery of to-day.

In septicæmia beginning or continuing after an abdominal operation, the prognosis will depend very largely upon our knowledge of the physiology of the peritonæum, and an intimate knowledge of this subject is necessary for successful abdominal work. The subject is too large and too important to be treated of briefly, and the prognosis in any case of septicæmia depends so largely upon the qualifications of the practitioner who has the case in charge, that no special classification of points can be made.

A Medical Preparatory School at Madison, Wis.—A bill has been introduced into the Wisconsin Legislature appropriating \$300,000 for the establishment of bacteriological, histological, pathological, physiological, and chemical laboratories, at Madison, Wis., in connection with the State University. This measure, which has the support of the Board of Regents, or, of at least one member, of the board, is looked upon as inimical to the project for the establishment of a large medical school in Milwaukee in affiliation with the State University. Dr. Puls, of the Board of Regents, who favors the bill, denies that the establishment of the laboratories in question means the establishment of a preparatory medical school, stating that these laboratories are needed to complete the courses already being carried on at the university.

THE DIAGNOSIS AND TREATMENT OF HEREDITARY SYPHILIS.

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Years ago, if a child had a persistent cough he was called scrofulous. An enlarged gland in another child was called a scrofulous swelling. If a child had on the side of the nose a large ulceration that had destroyed the greater part of that member, he had scrofula. If he had on the tongue an ulceration that did not heal after it had been treated locally by silver nitrate or a dozen or more caustics, and the patient had been fed upon cod liver oil, he had scrofula. The exfoliation of the bones of the nose, an ulceration on the side of the neck, meant scrofula.

But times have changed. Medicine has its fashions, as a lady has her dresses.

All the cases are still grouped together and are now called tuberculous cases. It is not necessarily an advance in medicine because the name is changed. The advance can only come when these cases are considered separately, their histories closely dissected, and tabulated where they belong. To-day they are looked at under one head, kept in the same ward of a hospital, and buried under the same certificate. Some of these cases are syphilitic cases direct, while others that are called tuberculous cases are cases pure and simple of hereditary syphilis.

Let more attention be paid to hereditary syphilis, let this disease be better understood, and then this most important classification could be made and the hereditary syphilitics could be looked at by themselves, a proper diagnosis made, and a treatment administered that would not leave our patients with noses fallen or sunken in, to say to all mankind when the children reach puberty, "We have inherited our parents' disease, syphilis."

It is a common mistake to suppose that the ragged teeth called Hutchinson's teeth are present in every case of hereditary syphilis. These teeth are a rarity and not the rule.

Hutchinson's teeth are present in about only ten or fifteen per cent. of the cases of hereditary syphilis. A patient is examined, and if these teeth are not found syphilis is excluded from the diagnosis. Thus over eighty-five per cent. of these cases are improperly diagnosticated.

CASE I.—A gentleman aged forty-three years applied at the clinic with a sore throat. Mucous patches were found upon his tongue and tonsils. He denied ever having syphilis. An examination of his

body showed a syphilitic gumma about the size of a twenty-five cent piece on the scrotum. One testicle had been removed previously by a surgeon who had diagnosed tuberculosis of the testicle. His wife had died a month before this operation, from tuberculosis of the lungs. The surgeon told this patient that he had contracted consumption from his wife, and that it was necessary to operate immediately upon his testicle and remove the same, otherwise he was liable to die of the same trouble.

I again questioned the patient in regard to a past syphilis. He now admitted having had a sore on his penis, ten years previously; this sore had been followed by an eruption and loss of hair.

The mucous patches in his mouth were decisive, and the gumma on his testicle showed a plain case of syphilis—syphilis that had been mistaken for tuberculosis. The patient paid the penalty of the mistaken diagnosis by the loss of his testicle. The mucous patches and the gumma quickly healed under antisyphilitic medication.



FIG. I.—Case II. Hereditary syphilis of the tongue in a girl, aged seven years.

CASE II.—The foregoing patient now asked my permission to bring his little daughter, aged seven years, to the clinic for treatment. He stated that she had been under treatment for one year and six months for consumption of the tongue at a noted throat dispensary. When the child was examined a large superficial ulceration was found on the right side of the tongue, extending from the tip to the posterior portion. This had existed for over eighteen months. The child had been treated by various physicians. The principal treatment had been cod liver oil. The little patient had that care-worn expression which is always found in this class of cases. She was anæmic, much undersized for her age, and had that stupid look, as if her pharynx was filled with adenoid tissue.

I brought the patient to the lecture room and gave a lecture on hereditary syphilis. I mention this fact because, one month afterward, I again showed this patient and not one medical student recognized the little plump girl I now exhibited as the one who had been one month under syphilitic treatment. Her tongue was completely healed and no vestige of her disorder was to be seen. This result was secured by a proper diagnosis of her complaint, and a treatment that it is in the hands of every physician to prescribe.

The accompanying cut (FIG. 1.) gives a very fair appearance of the child and the ulceration on the tongue. The picture was taken when the child first applied for treatment.

To mistake a syphilitic testicle for another disease is a common mistake.

My associate, Dr. Sharp, treated a case in his private practice where the patient had been told again and again that he did not have syphilis. This same patient applied to Dr. Sharp with a deep ulcer of his pharynx and his palate nearly lost by syphilitic ulceration. He had submitted to two operations on his scrotum and each operation consisted in the removal of a testicle. His wife had died of consumption and he also had been told that he had contracted this disease. His syphilis had been overlooked.

CASE III.—B., a man, aged fifty-two years, applied at the clinic with a sore throat, which had existed for six months. This patient was just able to be supported to a chair, he was so emaciated. He was able to swallow only with the greatest difficulty, not because he had so *much pain*, but because the food *would not go down*.

An examination of his larynx showed the entire anatomy one extensive ulceration, involving also the pharynx with a complete loss of the epiglottis. This accounted for his difficulty in swallowing. The appearance of the ulceration led me to suspect syphilis of the larynx and not tuberculosis.

A distinct syphilitic history was obtained upon questioning the patient. The diagnosis was one of syphilis of the larynx pure and simple. Yet the patient had never received a particle of antisyphilitic treatment, but had been treated as a case of tuberculosis of the larynx, because he had a cough.

His three children showed well-marked lesions of hereditary syphilis and his wife's miscarriages following her marriage, with a history of an eruption, gave the diagnosis of her infection.

A number of cases of so-called hereditary syphilis in children are, I believe, simply cases of tertiary syphilis, where the disease has been overlooked in its primary stage and allowed to take its course unchecked. Primary inoculation of children through carelessness, either on the part of the parents after they have become infected, or from some extraneous source, I believe to be common. I have seen numerous children with primary syphilis.

I reported some years ago the cases of a male child, aged nine years, with a chancre of the lip; a brother, aged twelve years, with a chancre on the tonsil; and a sister, aged fifteen years, with a chancre of the upper lip.

The first inoculation took place by drinking from a tin pail. The second brother, with the chancre of the tonsil, became inoculated by sucking a stick of candy which the first brother had sucked. The sister became inoculated by kissing her brothers. A baby

in the same family had a sore with a syphilitic history.

In some of these cases of so-called hereditary syphilis, if we can obtain a history of the parent being first inoculated and the living child breaking out with a distinct sore and a subsequent eruption, the diagnosis is simple. But this history is not always obtainable.

CASE IV.—E., a boy, aged ten years, applied with a sore on his nose, which had destroyed the lip and the power portion of this organ. The sæptum was completely destroyed. Dead bone formed the base of the nares, and necrosis of the turbinates was also present. The father of the child was an Italian. He gave a history of infection after the child had been born. To have had hereditary syphilis, this child would have had to receive the inoculation in the womb. The history of a sore on the child, and of its eruption taking place when the little one was two years old and after the father had been inoculated, gave only one possible diagnosis, a case of tertiary syphilis, where the primary syphilis had been overlooked and not treated.

I give a picture of this patient herewith (FIG. 2).



FIG. 2.—Case IV. Tertiary syphilis of the nose, in a boy aged ten years.

This ulceration granulated and healed under large doses of the potassium iodide. When the nose was healed the parent would withdraw the child from treatment, but a few months would see the child back in the clinic, as medication was never taken for any lengthened period.

These cases of tertiary syphilis, where the ulceration plays such an important rôle and where necrosis and caries of the bone are present, demand a lengthened period of treatment in which to hold the ulceration in check.

Syphilis in a parent may often be overlooked. I treated a case this summer in which the wife had infected the husband. The wife had contracted the disease while performing on the stage from kissing another member of the company who had mucous patches of the mouth.

This couple kissed their children repeatedly before their disease was properly diagnosticated, and the proper diagnosis of syphilis was not given until six months after the primary inoculation.

How easy it was to infect their children; and if their disease failed of recognition by the number of physicians who had examined them, how much easier it would have been to mistake the diagnosis in their offspring.

When syphilis is introduced in a family, all the children born will show symptoms of the disease, and the severity of the symptoms will depend upon the amount of poison that is in the blood of the parents at the time the child is procreated. This statement is true unless the parent or parents have received proper treatment, and for such a lengthened period as to combat these symptoms.

Some years ago, I was called to see a case in which the family practitioner had diagnosticated gangrene of the throat.

CASE V.—The patient was a woman, aged sixty years. An examination of her throat showed a large deep ulcer on her pharynx, extending from one pillar of the fauces to the other, and as high as the nasal pharynx.

This ulcer was covered with a mucopurulent secretion. The patient's legs were covered with large ulcers, and necrosis of the tibia was present. A more typical case of tertiary syphilis could not be shown. The patient had caught her chancre on the finger while she was washing her son-in-law's clothes. Her daughter had had three miscarriages in succession. The fourth child was born alive, and later developed paralysis. The fifth child developed deep ulceration of the pharynx and repeated abscesses of the neck, which were healed under antisiphilitic treatment. The sixth child was born with an eruption of syphilis, which was mistaken by the family physician and treated as a case of measles.

When I saw the patient, I immediately recognized syphilis. The child had no fever, but was covered with a typical roseola, which subsided under mercurial treatment.

The mother was treated and the child had the benefit of the medicine through her milk. This child reached the age of ten years without any history of further syphilis and was the strongest of the children born to this parent, who subsequently conceived again and the child was free from any syphilitic lesion.

The father in this case was addicted to liquor, his mouth was covered with mucous patches, and he refused to take treatment. The Hutchinson's teeth were conspicuously absent in all these cases. Fernel says we draw our greatest strength from our birth; *maxima ortus nostri vis est*.

CASE VI.—Female, aged twelve years, came to a hospital on the upper East side for treatment of a small sore the size of a pea, situated on the left side of the ala of her nose. She was treated there for three months. The ulcer spread rapidly, notwithstanding the treatment she received. The sore was treated locally and cod liver oil given internally.

The ulceration continued to spread until the lower border of the nose was completely lost; the *sæptum* had necrosed and exfoliated. The turbinated bones had also been blown out on the handkerchief. Some

dead bone was present when I saw the patient. I could lift the lip of the nose upward and touch the centre of the organ; by doing so I could look into the nasal cavity, which was bereft of the *sæptum* and turbinates, and presented one large cavity filled with crust, having a most penetrating and disgusting odor. After the crusts had been removed, the walls of the cavity were seen to be covered with one large ulcer. This ulcer extended backwards and involved the nasopharynx.

An examination of the buccal cavity showed the lower pharynx involved in the ulceration. There was a large perforated ulcer on the pharynx. Her throat was not sore when she first applied to the hospital uptown. Now, she had difficulty in eating. I use the word difficulty to differentiate from pain, which is present in true tuberculous cases, and is not a factor in cases of syphilis or of hereditary syphilis. The difficulty in eating was due to the gummatous condition of her pharynx and soft palate. The patient's speech was much impaired, owing to the opening in the soft palate.

The patient was very anæmic, poorly nourished, and had lost considerable weight in her three months' treatment. Her teeth were normal. Her forehead was of the peculiar shape that is generally found in these cases of transmitted syphilis.

The diagnosis was impeachable. The history of an eruption, hair falling out, and subsequent miscarriages was given clearly and decidedly by the mother. This child was her first living child. The mother had taken little, if any, internal treatment for her syphilis. She was a hard working woman and, as she expressed herself, she did not have enough money to bring a doctor to the house or the time to go to a dispensary for treatment. Her eruption disappeared without medicine and her sore throat gave her very little pain, so why should she bother?

This child was treated as I have before noted in a prominent hospital, not one hundred, but only eight, years ago. Medicine is supposed to have advanced in that time, but if this is advancement give us retrogression. Here was a case of a child applying with a sore the size of a pea on her nose and the sore allowed to spread under improper treatment, simply because it was called a tuberculous ulcer and not by its own proper and easily diagnosticated name, viz., syphilis inherited from the parents.

This patient was placed on the combination of mercury and potassium iodide; with large increasing doses of the latter, namely, sixty to eighty grains in solution, three times a day. This extensive ulceration was brought under abeyance in twenty-four hours, and the ulceration healed completely in less than thirty days.

This result can be attained in every case of transmitted syphilis, but not by the favorite remedies of the average practitioner, namely, cod liver oil and the *syrupus ferri iodidi*. If the latter (the *syrupus ferri-iodidi*) is prescribed, I know of but one dose of it that might improve a case of progressive ulcerative syphilis of the nose or buccal cavity—that is to give a patient a bath in it four times a day, and then direct him to drink the medicine that remains. This is the only dose of the *syrupus ferri iodidi* that will do any

good in these cases, and if it was prescribed thus, the drug would soon be ostracized from this class of cases and a treatment that would do some good substituted. By all means banish *syrupus ferri iodidi* from the medicines that are used in hereditary syphilis in a progressive stage.

These mistakes of not recognizing hereditary syphilis have occurred in the past and will occur in the future till the membrane of the buccal cavity is inspected in every case. The buccal cavity has been looked on as belonging to the dentist and the throat man, and by the latter as the site of a diphtheria or a catarrhal affection. But in truth it belongs to no specialty. It is a cavity the inspection of which throws more light on an average diagnosis than any other cavity of the body.

It has its patches in diphtheria, its exudations in follicular diseases, its mucous patches and ulcerations in syphilis, its erythema in scarlet fever and measles, its ulcerations in cases of typhoid, its pustules in small pox, its bleached and blanched appearance in anæmia.

Its cicatrices speak louder than words and tell a practised eye of a syphilitic ulceration that may have been transmitted by a diseased father or mother to its offspring.

Yet this cavity of so much moment is passed over lightly, and little time is devoted to its study in the various medical colleges. The A B C of medicine is skipped and we expect the graduated practitioners to be able to diagnose those diseases that are not taught. Give this cavity the importance it should occupy in medicine, and these diseases will be better diagnosed.

A case occurred at a prominent hospital, where a woman complained of pain in her knee joint. The diagnosis made was tuberculosis. The leg was amputated. One week after the operation the throat was examined by a throat man, who found the pharynx one large ulcer and the soft palate nearly destroyed by a progressive syphilitic ulcer. The patient had not received an iota of antisyphilitic treatment, although her husband had seen the surgeon and had admitted an infection. It is a good adage in medicine to know a subject thoroughly, and it is better still never to be too sure of your diagnosis till you have used every means to disprove it.

This case is a common one in general medicine. The correct diagnosis is passed over because the cavity that speaks both literally and figuratively is not examined thoroughly.

A chancre or an ulceration occurring on the penis has its label as thoroughly as a bottle of medicine in a drug shop; but let this sore or ulceration occur outside of the home locality, and the practitioner is as lost as a poor pharmacist who loses the label from his bottle of medicine.

CASE VII.—A girl, aged fourteen years, was sent to me by a physician to have her nose treated. She had been under his care for the previous nine months. She first applied, complaining of a discharge from her nose; this discharge was mixed with pus and blood. The child was put on the *syrupus ferri iodidi* and cod liver oil. This treatment had been maintained for nine months.

Soon an ulceration broke out on the edge of the nose, at first the size of a pea. The ulceration spread rapidly till the lower part of the nose was lost. Small pieces of dead bone came away with the discharge.

The child now complained of difficulty in swallowing, and was given a gargle of potassium chlorate. The throat grew worse, the nose was now swollen to about twice its natural size. The external aspect was of an angry red color; pressure on its surface left a pitting, similar to that found on the leg in Bright's disease. The exfoliation of dead bone had been constant, only now the pieces were larger and the discharge had a very offensive odor. The patient's smell had been lost for some months. This was the condition in which I received the case.

An examination of the nose showed complete loss of the cartilaginous septum; the posterior portion of the canal and the turbinates were one large ulcer. The pharynx and the palate were also involved. The mother and father of this child were healthy and an absolutely negative history of syphilis was obtained. The mother had never miscarried and had only two children. The elder child was healthy and did not have any symptom of syphilis.

The appearance of the child and the history pointed more to a direct inoculation than to transmitted syphilis.

She was placed under large doses of potassium iodide and the ulceration healed quickly. The septum being destroyed, the nose fell in and gave rise to that peculiar nose found in these cases. The treatment in this case was followed out for three years, when the patient married. She had three children, none of whom had the Hutchinson teeth and all appeared healthy. She never had a miscarriage.

CASE VIII.—A man, aged twenty-six years, very much undersized, weighing about sixty pounds, applied with a sore throat. His frame was very slight and his face had that old look that I have spoken of before.

An examination showed complete loss of the lower border of the palate and an extensive ulceration of the pharynx extending from one pillar of the fauces to the other. The ulceration involved the nasopharynx and extended far downward. Necrosis of the bones of the nose was also present.

This patient was placed on large increasing doses of potassium iodide. The ulceration was quickly healed. In this case, the patient had more comfort while the throat was in an ulcerated condition than when the ulcerations were healed, as in this condition the remains of the soft palate would unite with the pharynx and obstruct the postnasal space to such an extent that the patient could not breathe through his nose. After I had healed the ulcer several times, he would stop treatment and preferred an ulceration to a closed space.

The patient eventually had necrosis of the inferior

maxillary bone. His brother was five years younger, but had a very large physique; diametrically the opposite of my patient's. He weighed, at the age of nineteen, one hundred and sixty pounds. His throat was also affected with an ulceration of the pharynx, which subsided under antisyphilitic treatment. The teeth in both brothers were perfect. The father admitted syphilis previous to his marriage.

CASE IX.—A slight, frail girl, aged seven years, applied at the clinic with a sore throat. She had had a cough for years and had always been a delicate child from birth. The mother had had three miscarriages previous to giving birth to the child. She gave a distinct history of an infection. Her husband had had an eruption and sore throat and she became infected shortly after marriage. The child complained of a discharge from her nose, attended with large crusts and streaked with blood.

An examination showed dead bone in the roof of the mouth. This dead bone was removed at the first visit, an operation I never do at the present time. I now try to keep the dead bone in position, if it is in this locality, as it serves as a shelf for new bone cells to form on, and I have in several cases been able by this procedure to form a new hard palate or roof to the mouth, and prevent that opening which will always be permanent and which gives rise to the peculiar speech.

The diagnosis was easily made. The child was placed under a mixture of potassium iodide and mercury. The ulceration quickly healed. The child's body at this period was covered with small ulcerations of a syphilitic nature. Hutchinson's teeth were absent. This patient was treated medicinally for four years.

To-day this lady is twenty-five years old. She has not had any re-occurrence of her disease. I had a plate made for the roof of her mouth to fill in the opening. She wears this constantly and performs her occupation of a trained nurse.

The external nose in this case was not involved in the ulcerative process.

The sister of this patient was two years younger. She also showed an ulceration of her pharynx. She was placed under treatment. Hutchinson's teeth were also absent in this case.

CASE X.—A boy, aged eight years, brought to the clinic as having in his nose something that the parent desired removed. The mother had been told that it was a shoe button by several physicians in another dispensary. They had tried to remove it without success. An examination by the probe showed dead bone. An examination of the roof of his mouth showed necrosis of the hard palate.

I placed the patient on large doses of potassium iodide and after several weeks removed the dead bone from the nose by forceps and slid the bone out in the roof of the mouth.

I saw this patient fourteen years after the operation. I had forgotten the patient's face and he had forgotten mine. When I asked him who had operated, he stated that a Dr. Griffin had, and then named my house.

The patient's palate was perfect and, but for a slight ridge, it could never be known that his present palate was one produced by potassium iodide and by not removing the dead bone at the first sitting. Hutchinson's teeth were present in this case. A history of syphilis was obtained from both parents.

CASE XI.—A girl, aged one year and a half, was brought to the hospital on a pillow. The child weighed twelve pounds. She was thin, anæmic, and unable to retain any nourishment. She had a large abscess on the side of the neck. This abscess had been opened several times by a number of physicians. The patient had gone the rounds of every hospital in the city. The disease had been diagnosticated as scrofula, tuberculosis of the intestine, tuberculosis of the lungs, tuberculosis of the neck. It had also been called anæmia, malnutrition, and various other diagnoses had been made in the case. A distinct history of repeated miscarriages following an eruption was obtained from the mother.

I opened the abscess in the neck. The child was fed upon milk given in a bottle. She was in such a condition that a prognosis was out of the question. I expected her death day by day. The child was placed under the following

R
Potassii iodidi 5iv.;
Hydrargyri bichloridi gr. i.;
Syrup. sarsæ co. 5ii.;
Aquæ. q. s. ad 5iv.

M. From ten to thirty drops three times a day to be given in the milk.

Also:

R
Potassii iodidi 5iv.;
Aquæ 5iv.

M. From three to ten drops to be added to the other and gradually increased.

In a few days the child was on thirty drops of the former and twenty drops of the latter in a bottle of milk three times a day.

The child rapidly increased in weight and the abscess of the neck did not recur, although previously to the visit to my clinic this abscess had been opened a dozen times.

It think it is a common error in these cases to suppose that the knife is the panacea for all evils. The knife is only the means to an end, and the end is to liberate the pus. It does not answer the question, What is the cause of these abscesses? and it does not prevent these abscesses from recurring. A recurring abscess on the neck should always be looked at with suspicion and a cause should be sought for its reformation.

This child was kept under this treatment for four years. To-day she is eight years old and has all the appearance of a healthy child. She attends school and is well advanced for her age. Hutchinson's teeth are absent.

The reason that these cases are not diagnosticated properly is, First, that Hutchinson's teeth are looked for in every case, and if they are not found, hereditary

syphilis is excluded. Secondly, these diseases are very seldom touched on in a medical college. The student is taught that the syphilitic mother will mis-carry and her skin will bear the copper colored spots of her infection. Her child, if she comes to term, will inherit her disease, but here the story ceases at its most interesting point. Nothing is said as to how the child will inherit, in what shape it will be infected, or as to the nature of its inheritance. These symptoms are passed over and the student is left, like the lecturer before him, to grope for the symptoms in the dark, untaught and uninformed. Thus the common practice of the past and the universal practice of to-day is, If a case is not understood, give the patient potassium iodide; it may be tertiary syphilis or possibly hereditary syphilis. This is not medicine, this is chance. This condition, though, has arisen because this class of cases is not properly or thoroughly brought before the medical student.

Thirdly, the buccal cavity is not given the prominence it deserves in medical teaching. Teach the cavity thoroughly to students and these cases will be understood. Syphilis would not then be called diphtheria by the surgeons of two prominent hospitals. Syphilis of the larynx, after passing through the throat and chest rooms of one of our largest medical colleges, would not be reported to the board of health as consumption. These diseases would be understood; but to-day they are classified under every head except that to which they belong. Blame the mother of the student (his alma mater), no one else.

The disease exists, has existed from time immemorial, but the student, and later on the practitioner, gropes his way in the dark, with only one sign post, Hutchinson's teeth, to guide him, and this sign post is present only ten times in one hundred cases.

No wonder the traveller becomes lost, and the disease, hereditary syphilis, is passed over, unfound, undefined, and unclassified. The patient dies just the same, under another name, but unhappily some of these patients do not die, and those who survive go forth with noses oftentimes so shaped, so formed, that even the layman will point them out to his fellows as cases of syphilis.

Teach this disease more thoroughly or the time may not be far distant when the question, What did he inherit? which to-day means money, will mean, with money so common and abundant, Did he inherit a clean bill of health or that common commodity syphilis?

112 WEST FORTY-FIFTH STREET.

The New York Polyclinic Medical School and Hospital.—At a recent meeting of the faculty of this school, Dr. Charles Gilmore Kerley was elected professor of pædiatrics, and Dr. J. A. Bodine, professor of surgery.

SOME OBSERVATIONS ON TUBERCULOSIS.

By J. O. COBB, M. D.,
LOS ANGELES,

SURGEON, U. S., PUBLIC HEALTH AND MARINE-HOSPITAL SERVICE.

This disease kills a hundred thousand people in the United States every year. There is no way of procuring even the approximate number of the new and standing cases each year. That three hundred thousand is a low estimate is more than likely. The mortality from tuberculosis for the five great nations of Europe alone, gives us half a million, and surely the other nations of the world will complete the figures for a million deaths each and every year from a partially, to say the least, preventable disease. The loss of men in our great wars with the havoc of fighting and shooting and maiming, yes, and all the sickness caused thereby, does not begin to compare in fatal results with this one disease. It is so constantly among us that we have become accustomed to its presence and thereby indifferent to its insidiousness. We actually treat a death from tuberculosis as we do one from old age—as if it were entirely unavoidable. This phase of the subject has been gone into by so many faithful and brilliant workers that I would pass it by with the strong assertion and contention that it is a preventable disease and that its frightful ravages in this age of enlightenment are a standing disgrace to the world.

The material mind, cannot, as a rule, reason or calculate beyond the realm of dollars; but even so, if one is given to statistics or interested in complex or abstract speculation on the remote effects of sickness and death upon the earning capacity of the body politic, he is urged to grapple with the stupendous problem of the losses caused or gains not accomplished through the sinuous windings of this slayer of man.

No one will question that the method of infection by the tubercle bacillus is by inhalation, by inoculation, and sometimes by ingesta. However, in man the tubercle bacillus grows best deep down in the tissues of the lungs. The bacilli penetrate the air vesicle, enter the underlying intercellular tissue, and reach the lymph or blood capillaries, or, if arrested, form tubercles. If they reach the lymphatic glands in only small numbers, they are probably destroyed. This, like all such infections, depends much upon the numerical invasion as to whether the attack is severe or mild or occurs at all. This bacillus probably does not grow in the air cell with mucus as the medium, but in the lymphatics and underlying areolar tissue. Usually the first arrest of bacilli is in the bronchial glands. "Pizzini inoculated lymph

glands from forty people who had died of accident or acute disease, into guinea pigs. From the results of the inoculation experiments he concluded that forty-two per cent. of healthy people have tubercle bacilli in their glands, mostly in the bronchial. Statistics of the Paris morgue show that a considerable proportion of all who die of accident or suicide have evidences of some tuberculous disease in connection with the respiratory system." (Lartigau.)

This observation would lead one to believe that the bronchial glands are combating the constant invasion of small numbers of bacilli more or less successfully. Theobald Smith pointed out several years ago that, in certain necropsic findings in bovines, widely separated, infected areas appeared to be more recent than others, some of these foci showing undoubted recent infection while many were in different degrees of healing. If the contagion is widely disseminated, as it seems to be, then it is highly probable that bacilli enter our air vesicles more or less constantly, and having entered the air sac they are either devoured by phagocytes, or they penetrate the walls of the vesicle and enter the lymph capillaries or blood vessels and circulate as simple foreign bodies, doing no harm whatsoever unless that mysterious condition which we call susceptibility supervenes or exists, when we have the disease produced in all its classical pathological phenomena.

When the invasion is by inoculation it is usually mild and confined to lesions of the skin with slight systemic disturbances.

That it is seldom introduced by ingesta seems to be capable of demonstration from the simple clinical observation that fatal lung cases with known virulent bacilli so seldom on the post mortem table show evidences of intestinal or mesenteric infection, notwithstanding we are perfectly certain that in these fatal cases the patients have swallowed quantities of sputum, before meals, after meals, at all times of the day. That there should be so few secondary infections of the bowels from primary infection of the lungs is queer, and is one of the hardest problems to solve as it would seem one of the hardest for Ravenel and Salmon to controvert.

Another side of the controversy has been overlooked, and it is that if man is infected from milk, bacilli must penetrate the intestinal mucous membranes and reach the circulation as simple foreign bodies without lesion in the abdomen, as the primary colonization is in the lungs. There is not the slightest doubt that they can and do penetrate the intestinal mucous membrane and reach the lymphatics below without demonstrable lesion of any kind, and if we will only keep in mind that

bacilli may enter the blood vessels and circulate as simple foreign bodies, doing no harm at all until arrested, we can then comprehend that the infection could be by ingesta as Ravenel asserts. If we will go further and look into the histology of the lung tissue, and especially of the terminal arteries, the method by which bacilli and such foreign bodies are screened out of the circulation and cared for by the pulmonary glands and lymphatics will be readily understood. 'As Hutchinson and Theobald Smith have said, wherever and however introduced, tubercle bacilli sooner or later show up in the lungs. All of us must have noted that in intraperitoneal injection of bacilli into guinea pigs quite often the lung lesion shows the first colonization, and with intravenous injection this is nearly always the case.

It certainly requires tremendous and constant dosage to infect man if milk is the medium. All observation goes to show that the intestinal tract of the mammalia is decidedly refractory to the bacillus (or in fact to any disease) when introduced by food or drink. This is true to a certain extent, even of the most susceptible animal, the guinea pig, for to infect him with any regularity and certainty by this means, the dosage must be constant and powerful. The intestinal tract of man is nearly immune to infection from the constant dosage of virulent sputum from his own lungs, and there appears no good reason, then, to believe that the bovine bacillus will attack us more readily than our own human bacillus. Minute dosage of bacilli injected into the peritoneal cavity reach the same set of lymphatics and glands as bacilli would if entering from the intestine, and yet with the injection method we invariably produce fatal tuberculosis.

If it is true that bacilli do penetrate the intestinal tract and enter the circulation to be screened out in the lungs, the reasons for this strange action would be that they did not meet the nutritive conditions elsewhere, and it is necessary for a bacillus to be arrested to cause chemotaxis and produce a lesion. Before this time it acts as a simple foreign body, and we must admit that bacilli may penetrate the intestinal or respiratory mucous membranes without necessarily becoming arrested, for the reasons previously stated. However, feeding experiments of guinea pigs and swine usually show the first signs of invasion in the abdominal organs. Then, granting that the infection of man is commonly by ingesta, as Ravenel alleges, and admitting that the colonization would be in the lungs, even though introduced through the intestinal tract or tonsils, we nevertheless come back to the first steps of the investigation and ask, Whence comes the infection of the cow? She has clean food,

clean hay, clean bran. She is not a feeder on milk. When we find out how the cow is infected, then, and not till then, can we hope to work out the infection of man.

The assumption is, then, that nearly all human tuberculosis is contracted by the method of inhalation. Whether one case is infected directly from another in an endless chain, or whether the contagium is universal and it becomes infective because of lowered vitality incident to life in squalor and overcrowding, does not alter the question. It would appear that there is some other agency at work besides sputum in the spread of bovine tuberculosis, since it cannot be from human sputum, for Theobald Smith has demonstrated to our satisfaction that bovines are with *difficulty* infected by inoculation from human bacilli. That there may also be some other method of spreading it to man than by human sputum furnishes us an attractive speculation.

But it is well to state here that one's belief in Smith's and Koch's investigations must be limited, because neither of them has carried these experiments so far as he should. Each acknowledges that human bacilli causes limited local infection in bovines, and we cannot feel perfectly safe over this until recovered bacilli from such cases are carried on through other bovines, to see if a typical bovine virulence and specificity can be established. Salmon and Ravenel have summed up enough evidence to make caution necessary, especially since the matter involves the commercial side to such a great extent. The question, after all, as to difference may be one of exact biothermal condition which might cause one or the other to become specific to a different species where there was constant exposure. We know that the cow's normal temperature is considerably higher than man's. And this calls to mind that Nocard implanted into the abdominal cavities of fowls human tubercle bacilli imprisoned in collodion capsules, and thus converted the specificity of the human tubercle bacillus to that of the avian tubercle bacillus. There have been other experiments somewhat similar to this with practically the same results.

I cannot but believe it probable that a child constantly dosed with tuberculous milk may eventually become tuberculous. I also believe that constant intravenous injection of large amounts of human tubercle bacilli will finally give the cow general tuberculosis. Taking these bacilli, the human, bovine, and avian, that produce nearly identical lesions, it seems reasonable to believe that here the differences in their individual specificity must have been brought about principally by the element of nutrition and cellular heat in the animal species at-

tacked. In this instance one must not lose sight of this most important fact, that although human and bovine bacilli are similar generically and otherwise, nevertheless the one chooses man as its host and will not develop readily in cattle as a fatal disease, and the other chooses cattle as its host and will probably not grow in man. And, keeping in mind the inherent characteristics of these two bacilli, we are certain that, while each possesses a certain character and specificity of its own, it will not grow when planted until it finds the exact kind, the exact amount of nutritive medium under exact and necessary biothermal conditions. And to make it still plainer, one can understand that, if it is a fact that the two bacilli are different in the matter of specificity, the human bacillus entering the cow's lungs, as it certainly must, acts merely as a harmless foreign body. The converse of this is probably true of the bovine bacillus in its relation to man. There must be, not only susceptibility of the animal, but the necessary virulence of the microorganism itself. And this virulence may be reestablished in an attenuated or diverted tubercle bacillus by a given and constant numerical dosage.

REPORT OF A CASE OF INGUINAL HERNIA WITH INCOMPLETE SAC.

By J. SHELTON HORSLEY, M. D.,
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Cases of inguinal hernia without a complete sac are sufficiently rare to justify this report.

CASE.—J. F. L., American, saloon man, aged thirty-eight years, height five feet seven inches; weight at time of operation, 200 pounds. He had had a left inguinal hernia for more than twelve years, which was incompletely controlled by a truss. His previous health had been good. Admitted to St. Luke's Hospital September 15, 1902. Operation for radical cure of inguinal hernia was undertaken according to the method of Bassini. On account of his fat, the operation was more difficult than usual. After reaching the cord it was noticed that there was some irregularity about the sac. What appeared to be the sac was, on its outer side, exceedingly thick. On the inner side it was almost normal to inspection and palpation; consequently, an incision was made at this latter point. It was then demonstrated that what had at first been supposed to be a thickened sac on the outer side was a portion of the wall of the descending colon. A portion of this intestine, without any omentum, constituted the hernia. There were attached to the colon some masses of fat, the appendices epiploicæ. The gut along the outer portion was moderately adherent to the neighboring tissues. It was bluntly dissected loose, and replaced in the abdominal cavity, pushing it well up. The rest of the operation was finished according to the method of Bassini, as rec-

ommended by Coley, deep sutures of kangaroo tendon uniting the conjoined tendon to the inner shelf of Poupart's ligament. The sutures in the aponeurosis of the external oblique were of catgut. The skin incision was closed by a subcuticular catgut suture. The wound healed by first intention throughout. Pressure on the cord of the left testicle produced some swelling and pain along the region of the cord for several weeks after the operation, but it resulted in nothing serious. This was caused by putting the sutures in quite snugly, in order to overcome the disadvantages of an abnormal amount of fat. The patient was discharged October 11, 1902. At present (February, 1903) he is perfectly well without any sign of recurrence.

Without attempting to go into the literature on the subject, the most reasonable explanation of this case is that the patient, being stout, the parietal peritonæum was more loosely attached than it would be in a thinner individual. The lower part of the descending colon evidently burrowed under the peritonæum at that portion of the gut where it is devoid of serous covering. Having thus formed a pocket, it continued to work its way down to the internal inguinal ring, dragging the attached parietal peritonæum along with it and forming a sort of funnel of it. The internal inguinal ring was finally perforated. The condition resulting from such a procedure would be exactly similar to what was found in this case, that is, a loop of the descending colon devoid of peritoneal or other covering externally, and internally having a peritoneal sac, which was attached to the colon along its middle line and reflected over its inner surface, covering this portion of the intestine.

The operation was performed with the assistance of Dr. M. O. Wright and Dr. A. H. White, of El Paso, and in the presence of Dr. George C. Bryan, of Alamogordo, N. M.

TRANSPORTATION AND THE OPHTHALMIC REFEREE.

By JUSTIN L. BARNES, B. S., M. D.,

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On both land and sea the importance to the public and to transportation companies as well, of thorough testing of the sight, color-sense, and hearing of operating employees, can scarcely be overestimated. In Sweden, in 1875, an engineer passed a danger signal and hurled his train upon another, resulting in loss of life and property. The affair was shrouded in mystery, until Holmgren, suspecting the accident might have been due to color blindness, pursued investigations and confirmed his suspicions,

which finally led to the general adoption of color-sense examination, of more or less perfect character, in nearly every civilized country in the world.

In the United States, within a couple of years of this writing, and notwithstanding the fact that color testing is in this country widely practised, similar accidents have occurred. Naturally, the public is ignorant of this fact. That after a lapse of about a generation, such an occurrence can be ascribed to deficient color sense, seems impossible and the questions naturally arise: How is this to be explained? What is the solution of the problem? How is the public safety to be guaranteed? The plain answer is that even with the best intent the subject is generally but superficially understood, and the importance of really rigid and repeated expert investigation of the color sense of employees is greatly underrated. This is certainly shown by the fact that among American railway companies we have all grades of efficiency in color testing, from the well-nigh perfect systems of certain roads to the line that is "going in for something of the sort shortly."

The Committee of the American Ophthalmological Society on Standards and Methods of Examining the Acuteness of Vision, Color Sense and Hearing for Railway and Marine Service recommended, among other things: "That a trained ophthalmic surgeon be selected by each company, who shall instruct and examine the man selected by the company to make these tests, shall recommend the standards and methods to be used, shall see that the equipment furnished to each examiner is sufficient, that it is kept in proper order and renewed when necessary, and who shall be the *authority to whom doubtful cases shall be referred for final adjustment*" (italics mine). This recommendation was adopted by the society.

In order to obtain as clear a view of the situation as possible, I have been in active correspondence with fifty leading railway companies of the United States and Canada, submitting to them, under the promise of professional confidence, the following letter and accompanying form of questions.

DEAR SIR:—I herewith request your cooperation in preparing an article for a medical journal on the subject of eyesight and hearing among railroad employees. If you should feel disinclined, let me urge upon you that, if so indicated, your reply will be strictly confidential, the code of medical ethics guaranteeing entire respect for your expressed and implied wishes.

I will thank you if you will kindly and promptly fill out the enclosed form, and mail it to me with as little delay as possible. If this subject is not within your province, will you please refer my letter to the proper officials?

Yours truly, etc.

EYESIGHT AND HEARING ON AMERICAN RAILROADS.

Department of Examination.

1. Do you employ an oculist and aurist? 2. If so, whom (name and address)? 3. If not, whom (name, address, capacity in which examiner is employed)? 4. What methods are used in testing—(a) for sight? (b) For color perception? 5. Do you record findings (please send specimen blank form)? 6. Is the ophthalmoscope used? 7. Is each eye examined separately? 8. Is any test made to prove that an employee sees simultaneously with both eyes? 9. Are all employees as well as candidates examined? How often (if more than once)? 10. Have you discovered any who have color blindness? 11. About what proportion have you rejected for—

one state that they retain a medical expert (ophthalmologist) for ensuring accurate examination of sight, color sense, and hearing, while the remaining one-third confess that they do not make use of such advice, but either resort to examinations by officials of their own lay bodies or are "contemplating the idea of examinations." It is probably safe to assume that corporations not replying do not resort to a medical referee. A curious feature of this subject is the fact that most of the companies which do not retain a consulting medical expert referee are among the older and eastern companies (with one very notable exception), while those that do rely upon such referees

TABULATION OF REPLIES TO DR. BARNES'S CIRCULAR LETTER.

Table.	Examiner.	Sight tests.	Color tests.	Hearing tests.	Records kept.	Ophthalmoscope.	Exam. of each eye separately.	Binoc. vision tested.	Frequency.	Rejections for C. B.	Rejections for defective vision.	R. Rs. addressed.	Replies.	Percentages.	Remarks.
Lay	7	..	..	..	..	..	..	..	..	..	..	..	..	22	Variable efficiency.
Medical	21	..	..	..	..	..	..	..	..	..	..	..	..	66	Rely chiefly on laymen.
None	4	4	4	4	..	..	..	..	4	..	..	..	..	12	Some chiefly contemplating.
Snellen, Jaeger, etc.	..	28	..	..	..	..	..	..	..	..	..	..	..	87	Probably well done.
Holmgren	..	..	26	..	..	..	..	..	..	..	..	..	..	85	Probably well done.
Scripture's Dial	..	..	1	..	..	..	..	..	..	..	..	..	..	3	Not in common use.
Lanterns and flags only ..	..	..	1	..	..	..	..	..	..	..	..	..	..	3	Very unsatisfactory.
Watch and voice	..	..	..	26	..	..	..	..	..	..	..	..	..	85	Variable efficiency.
Acoumeter	..	..	..	2	..	..	..	..	..	..	..	..	..	6	Note small number.
Filed	..	..	..	..	26	..	..	..	..	..	..	..	..	85	
Not filed	..	..	..	..	6	..	..	..	..	..	..	..	..	20	"Except when defective."
Used	..	..	..	..	..	13	..	..	..	..	..	..	..	40	
Not used	..	..	..	..	..	19	..	..	..	..	..	..	..	60	Note large number.
Yes	..	..	..	..	..	..	23	..	..	..	..	..	..	70	This means on Snellen types.
No	..	..	..	..	..	..	9	..	..	..	..	..	..	28	Probably means no test of B.V.
Yes	..	..	..	..	..	..	..	10	..	..	..	..	..	31	Uncertain efficiency.
No	..	..	..	..	..	..	..	22	..	..	..	..	..	7	Note large number.
Once	..	..	..	..	..	..	..	..	10	..	..	..	..	31	About once in 3 years.
More than once	..	..	..	..	..	..	..	..	18	..	..	..	..	58	About once in 3 years.
Percentage	..	..	..	..	..	..	..	..	..	3% 5%	..	..	..	..	Replies very doubtful.
	..	..	..	..	..	..	..	..	..	..	..	50	32	..	

(a) defective vision? (b) defective color-sense? 12. What methods are used for testing hearing? 13. Any further information?

The recommendation, above noted, is certainly justified and the importance of a referee, both to the public and to the companies concerned, is plainly shown by an analysis of the statistical table prepared from the replies received.

The essential question is: "1. Do you employ an oculist and aurist?" This was done to learn whether the several companies relied upon lay or medical advice. Of the fifty companies addressed, full replies were received from thirty-two; and of these, twenty-

are commonly western, newer, and progressive companies.

Probably, I can in no better way demonstrate the importance of the committee's recommendation than by commenting upon the usual methods now in force, especially among those transportation lines which rely upon lay examinations and judgment.

(I) *The Examiner.*—The examiner should, properly speaking, be a medical expert, but as probably no one oculist could be found with time enough to examine all the employees, even of a single line, a trained ophthalmologist should nevertheless be retained as a referee. However, as at least one-third of

American railroads rely wholly upon lay advice, and inasmuch as this paper, not being a treatise on sight and hearing, will deal neither with the science of color perception, nor with a history of the study of color sense or color blindness, I shall confine my efforts to a demonstration of the necessity of accurate and scientific testing.

The lay examiner, upon whom the public safety depends to no little extent, is commonly a yard master, who, be it said in justice, though usually first subjected to an examination himself, may never have been competently examined, if at all. On one prominent eastern railroad the last examination of the men was conducted with wools, test cards, flags, yard lights, and the voice, certainly a primitive outfit, and by a conductor, who, in the nature of things, should not, in legal phrase, have been "competent" to referee a doubtful case, particularly in the case of old employees. This examiner, being a layman, cannot use the ophthalmoscope or perform more than the very perfunctory tests ordered by "the company rules and regulations." He could not distinguish between congenital and acquired color blindness, or diagnosticate the often temporary and curable loss of central vision due to certain toxic influences, such as alcohol or tobacco, the result being that a dangerous man might be overlooked or a temporarily disabled but good man might be returned "not satisfactory"; while, on the other hand, it might require argument and proof to convince a superintendent that a man whom he had examined and declared "satisfactory," might, after all, be color blind. It is difficult for him to believe he has not learned or cannot be taught colors; yet a scientific examination will prove the matter.

(II) *The Conditions*.—While the examinations should be conducted with every endeavor to safeguard fairness to the employees, it must be remembered that they should be held, not alone in the interests of the men or of the companies employing them, but of the public at large, from whom transportation lines derive their support. Therefore, the examiner should see that the condition of light, materials, instruments, test cards, lanterns, flags, etc., is *uniform*; that there shall be no hurry in the examination; that he takes into consideration the nervousness natural to an ordeal which is fraught with vital significance to the man before him; that a careful *written* record is made and *filed* for reference, to which appeal may be made; that all possibility of deception or unfairness shall be eliminated; that no unnecessary persons be allowed in the examining room; that sufficient, intelligent variety in the tests be prepared to prevent a dishonest man from competing with an honest one; and that, above all, every doubtful case shall be reported with a recom-

mendation that the examinee be sent to an expert ophthalmologist.

(III) *The Outfit*.—This should consist, as a minimum, of several cards of Snellen's test types, or an assortment of cards bearing single lines from the same; cards bearing, in sizes corresponding to the Snellen types, the various signals shown by the "semaphores"; Jaeger test types; a case of trial lenses, including spheres and cylinders, prisms, colored glasses, etc.; perimeter; phorometer; ophthalmoscope; the ophthalmometer; the Hirschberg double spectroscopy; the Stilling charts; the Holmgren wools; the cobalt blue glass; the Williams's lantern; the flags; the Kroll charts and stereoscope; the acoumeter; the stop-watch; the aural mirror; specula, etc.

The whole of this outfit must be kept in the best of order, guarded against exposure to light when not in use, and replenished from time to time. It should be accessible only to examiners or officials.

How much of this outfit can the lay examiner use? It will be found that he limits himself at best to the Snellen and Jaeger types; the + two-dioptre-lens spectacles and plane glass spectacles; the semaphore cards; the Holmgren wools; the lantern; the flags; the watch (or voice), leaving an important and valuable number of exceedingly efficient instruments and tests alone.

At this point it may be well to repeat that, as the object of this paper is to demonstrate the propriety of referees in connection with transportation companies, and not to be a treatise on ophthalmology, the details of the various tests will not be enlarged upon, but the reader is referred to the well-known text books and articles, especially to those mentioned in the bibliography.

(IV) *Visual (form) tests*. (1) *Distant vision*. (a) This should be ascertained by examining one eye at a time, carefully maintaining exclusion of the other, by setting before the candidate a series of Snellen's test types, and also by displaying semaphore charts. These tests are commonly well done by the lay examiner; but he must vigilantly discriminate in details, such as not permitting the examinee to turn his head to one side, having a large supply of charts, or better still a series of cards, each bearing but a single line of letters, and varying the size of letters from one card to another.

(b) Each candidate should be examined at distance, not alone with the naked eye, but with plane glass spectacles and + two-dioptre-lens spectacles, in order to see if he can read Snellen types as well with a + lens as without. This is done to find out whether he has *hypermetropia* (far-sight) or not. If he can do this, there will come a day when he will require glasses, even for distant vision. This test is

now made by many lay examiners. It is, however, no less than fair to the candidate to warn him that there will come a day when he must be taken from his engine if in youth he can see as well (or better) with a plus lens as without; and because, in later life, his failing sight can be restored only by glasses, no engineer is safe to trust with a train if he must wear glasses, owing to the liability of glasses to accident, clouding from steam, rain, snow, dust, etc.

(c) A test should be made to find out if the candidate has *binocular single vision*, i. e., whether he uses his two eyes simultaneously. This test is not usually, in fact is rarely, resorted to by lay examiners, as is shown by looking over the replies to the query blank sent out as referred to above. This test is a most important one, and its omission is a matter of wonder and grave concern. If an engineer does not possess simultaneous vision of his eyes, it is not difficult to see to what source we must ascribe a certain percentage of accidents. For instance, he may pass an examination of each eye, one proving better than the other. On a "run" he may get a cinder in his better eye, and, relying upon the other, which may have deteriorated from practical disuse, fail to interpret properly his signals, and in an emergency when his fireman cannot be summoned quickly enough. This test is one which should be made with great care, patience, and perseverance, and involves an experience and degree of skill not within the province of a layman.

(d) When the examiner finds a man who has defective vision, a careful examination of this man should, in fairness to the candidate, be made with the ophthalmometer, the trial case, the ophthalmoscope, etc., in order to learn just what lies at the bottom of his failure to come up to the standard, whether the deficiency is permanent or temporary. None of this work can properly be done by a layman.

(2) *Near Vision*.—The customary, and usually satisfactory, test is the use of the Jaeger test types, which are employed to ascertain whether a man can read train orders, bulletin notices, despatches, etc.

There would be little to criticize here in the lay examination, provided in the latter the questions of simultaneous or binocular single vision were investigated; for, as indicated above, want of binocular vision might lead to complications, though probably not to such a degree of consequence as in distant vision.

Here the stereoscope with Kroll charts and reading through an obstruction, such as a pencil, should especially be employed, and also the phorometer.

(V) *Visual (color) tests*. (a) Color blindness may be temporary or permanent, acquired or congenital. Of congenital color blindness, I may say at once that no way of acquiring color perception is

known, which is true also of certain forms of acquired color blindness. The acquired forms may be temporary, as in hysteria and the amblyopia (defective sight) of users of alcohol or tobacco, or may become permanent. A man who has been proved to have perfect color sense may lose this faculty, especially if he is a consumer of tobacco or alcohol; and the very essential danger of a lay examination is that such a man may pass successfully, in the examining room, matching colors correctly, interpreting lantern signals perfectly, and doing all this through correct interpretation of his eccentric vision which he can employ in proportion to propinquity; when, on the road he is liable to confuse distant color lights, because, at and in proportion to distance, the images of the lights fall upon the very portion of the retina, governing central vision, affected by the toxæmia.

A very prominent cause of a gradual and insidious process by which the optic nerve degenerates, leading to defective vision and color sense, is syphilis—beyond a certain stage of which there is no hope of saving a man his position of responsibility.

(b) The essentials of color sense testing lie, not in naming colors, but in matching them, and in being sure that a candidate really matches through a sense of color rather than by keen observation of differences in illumination, and whether by yarns, lights, flags, or spectra.

For these tests the Holmgren wools are very properly and commonly used by lay as well as medical examiners. Now it is a curious and interesting fact that a man color blind may acquire a truly remarkable accuracy in distinguishing colors, by noting their differences in degrees of illumination, and may point out under favorable conditions in the yard the red, green, and white lights of the various signals. This is done through careful comparison, but is the more unreliable because changes in atmospheric conditions, such as fog or smoke, may be sufficient to make a man think he sees a light of a different color from the actual one, or if of slight degree of obstruction may cause him to name the color correctly when really color blind. Moreover, such interposing obstructive media may subdue the intensity of light from a color signal to such a degree as to be incapable of perception by a man of feeble color sense. In the yarn matching test, such a man is found to select in addition to correct colors, those of the confusion class, thus proving himself color blind.

The difference in degree of efficiency between the two classes of examiners lies in the personal equation, very much in favor of the ophthalmologist. For instance, ask any official if he would be willing to trust his life to an engineer who can tell signals only by their difference in intensities of illumination; or if he would be willing to sit behind an engine driven by

a man before whom, for argument, we will say, there have been placed for signals uncolored lanterns varying only in intensities of light? A prompt negative will follow; and yet this engineer may have successfully passed the lay examiner. Furthermore, I can assert that any examiner who relies upon the very valuable Holmgren test, a test which should never be omitted, a test upon which the lay examiner chiefly relies, takes upon himself a responsibility, albeit ever so unwittingly, to which may be serious consequences. For, as indicated above, the man who can match yarns with his eccentric vision, may have an uncertain central vision, and yet may have fairly passed his distant test for form vision—which test might naturally be deemed sure to exclude possibility of overlooking central scotoma (blind area). Again, the fact that a man can tell yard lights proves nothing; it is merely confirmatory. If he is color blind and carefully distinguishes degrees of luminosity, he can acquire an accuracy in interpreting signals which might be reasonably reliable, if the atmospheric conditions were constant; but as they are not, in varying atmospheric conditions a man who is color blind is sure to fall into some disastrous error.

The lay examiner flatters himself he gets around this difficulty by interposing media of greater or lesser obstructive character; for instance, in testing with colored lanterns. This is proper and satisfactory so far as it goes; but, it does not eliminate the dangerous element of a central scotoma, the eccentric vision of which is capable of detecting colors in the short range of an ordinary yarn examination. The remedies for this defect in the examination are numerous, all of which have as their object the compelling of an exhibition of what the examinee can do in the way of *central* vision. So far as I know no railroad has attempted, through lay examiners, to accomplish this object, nor has any company apparently known of its importance or understood its full significance.

Another important matter is the fact that only one eye should be tested at a time, for very important and obvious reasons. Very few companies test each eye singly, and on this account a central scotoma can easily be overlooked, and should anything happen to exclude even momentarily the better eye, one can easily comprehend the danger of trusting to a man suddenly compelled to rely upon his deficient eye. Moreover, unilateral color blindness is not unknown, and a similar contretemps would operate in the same way. The diminution and limitation of central vision are most insidious, to be feared and carefully apprehended.

(c) The percentage of color blind males has been found, by various and widely separated authorities, to be from four to five per cent. This means that of

every twenty-five men one may be found who is deficient in color sense. The significance of this may be shown by taking the case, for instance, of one of the most prominent American railroads. This road, with its leased lines has, according to the "Railroad Officials, No. 29," more than 1,200 locomotives, with presumably about 5,000 engineers and firemen, not counting yard masters, switchmen, etc. If no examinations were conducted at all, this would mean that there would be not less than between 200 to 250 color blind employees to whom life and property would be entrusted. Upon this road, where lay examinations alone are held, what official can safely assert that the public may not ride behind an engineer color blind at least in one eye? If in spite of the vigilance of the lay examiner even one such engineer is on duty, the chances of accident are not reduced to that minimum which would naturally result from examinations before a medical referee, and the transportation line has not done its full duty or considered its interests until the company medical referee is an established fact.

(d) The test of actual signaling with service lanterns, semaphores, and flags is proper and should not be omitted, but I shall have little to say of these matters at this point, for I do not consider them of great importance, but rather as confirmatory than otherwise. The color ignorant by the way should be excluded from service where signals must be interpreted, unless, as may be, in instances where such a person proves satisfactory on testing after a period of instruction.

(VI) *Hearing tests.* The tests upon which reliance alone should be placed are the use of the acoumeter and stop watch. The voice is not a uniform agent for performing tests and such tests can not be satisfactory to anyone concerned, nor are they susceptible of accurate record.

It is distinctly important that the tests should be uniform in order to be fair to the men, trustworthy for record, and a real safeguard to the public. For this purpose the acoumeter alone constitutes the essential feature of auditory testings. The voice is a confirmatory element, but it is positively unfair to the men, as it enables the examiner to exhibit differences in uniformity which might be ascribed to partiality or disfavor, be they in fact performed never so conscientiously.

(VII) *Test Records.* It is of very great value and importance that a complete and accurate record of all tests of vision, color sense and hearing be made of each candidate and regularly filed for reference, consideration, and comparison.

For instance, suppose an accident occurs by an engineer passing a red light. It would hardly satisfy a suing plaintiff, or be to the credit of the road, for

the latter to be unable to show that this man had satisfactorily passed an examination. The placing of responsibility is ever a very important matter, and a carefully prepared record would go a great way toward unraveling unknown or doubtful features of a disaster. Again, a man might be charged with defects, when an exhibition of his record might save him from a very serious dilemma, and thus result in taking the responsibility from innocent shoulders. In securing the efficiency and honest administration of a railroad or marine service, it is necessary to be fair to the men and to place responsibility exactly where it belongs, for in this way alone can real cooperation of the various departments of the service and public satisfaction be maintained.

VIII. *Frequency of Tests.* All tests of vision, color sense, and hearing should be repeated at stated intervals on every man who has to do with motive power or signaling, and I think that the usual period for reexamination customary with some roads of "once in three years" is too long an interval. I am of the opinion that nothing is gained by such delay, on the contrary that it is a serious defect in the system. These examinations should be repeated annually; after every illness; and perhaps oftener in the case of a man who uses alcohol or tobacco. So great are the changes in the vision and hearing of occasional cases that the public should be protected against the fortuitous opportunities for disasters due to the defects in question.

IX. *The Medical Referee.* The character of the referee's examination is twofold. First, he scrutinizes the chart submitted to him to see that a proper lay examination has been made, so as to gather from it certain data for investigation. Secondly, he performs tests scientific and beyond what is within the province of the layman.

Among these tests are the use of the ophthalmoscope, phorometer, perimeter, ophthalmometer, spectroscope, cobalt blue glass, Stilling's charts, the Williams's lantern (with special contrivance to preclude eccentric vision), stereoscope, aural mirror and specula. If I have been sufficiently lucid in the foregoing pages, it should be apparent to the reader that transportation lines on land and sea should at least fortify their lay examiners with medical and responsible referees.

To illustrate further: I have referred above to the question of interpreting colored lights by differentiating their intensities without recognizing any other differences. It is a remarkable fact that many color blind can indeed pick out a red from a green light, solely by differences in intensity. Yet this can not be a reliable means of distinguishing the lanterns on the road, on account of the varying atmospheric conditions, etc., as explained in a preceding section.

But, as I have said, probably no oculist or aurist could be found, certainly not one of high and responsible standing, who could give the time necessary to examine all the men of even one line. The lay examiner should separate from the simpler those complex cases which should be sent to the referee, to whom *all* doubtful cases should be referred. The referee should control the materials for the examinations and exercise general supervision over the whole function. In order to secure the confidence of the men, the officials employing them, and the public, a scientific expert would be invaluable.

(X) *The Law.* Not only is a referee a legal protection, both to employees and corporations and therefore to their interests, but also testing of vision, color sense, and hearing *should be required by State law and not left alone to private corporate decision*; and here it may be said that only three States of these United States (Ohio, Massachusetts and Alabama) do so require it. The difficulties with private corporations are very great. Here the interests and safety of the public contend with ignorance, prejudice, expense, and the incredulity of supposed immunity. Legislation is here required; for, notwithstanding the fact that about two-thirds of the number of transportation companies rely upon the ophthalmic referee, there remains one-third, a large proportion, of corporations which, failing to recognize their private interests in this respect, do not protect themselves and the public in the manner indicated.

The time should not be far distant when no railroad or marine line can be found which does not possess an expert ophthalmic referee.

Sanitation in San Francisco.—The Chinese Six Companies have caused to be printed both in Chinese and English notices giving the street and room number, the height, width and length of the room, its cubical contents and the number of persons allowed to occupy the space under the Health Ordinance, and under each of these notices is printed a warning to the effect that "all occupants must see that rooms and buildings are kept clean and in good sanitary condition." These notices were posted on the door of every living room in San Francisco, and it is asserted that the influential Chinese merchants are doing everything in their power to aid in the effort to bring about better sanitary conditions. The Six Companies have also notified the United States Public Health and Marine Hospital Service that they will cooperate with the service in every possible manner, and asking for instructions. In view of the absolute authority exercised by the Six Companies over the Chinese inhabitants this turn of affairs warrants a hope that the quarter will be thoroughly policed.

Our Subscribers' Discussions.

A SERIES OF MONTHLY PRIZE ESSAYS.

[Questions for discussion in this department are announced once a month. So far as they have been decided upon, the further questions are as follows:

XXII.—How do you manage occipitoposterior positions of the presenting head? (Answers due not later than March 10, 1903.)

XXIII.—How do you treat ingrowing toenail? (Answers due not later than April 10, 1903.)

XXIV.—How do you treat delirium tremens? (Answers due not later than May 11, 1903.)

XXV.—How do you treat the summer diarrhæa of children? (Answers due not later than June 10, 1903.)

Whoever among our subscribers (with the limitations mentioned below) answers one of these questions in the manner most satisfactory to the editor and his advisers will receive a prize of \$25. No importance whatever will be attached to literary style, but the award will be based solely on the value of the substance of the answer. It is requested (but NOT REQUIRED) that the answers be short, if practicable, no one answer to contain more than six hundred words. So far as our space will allow, we shall publish the substance of such of the answers as seem to us most likely to prove interesting to our readers, and we reserve the right to publish any of the answers in any department of the JOURNAL.

Only subscribers to the NEW YORK MEDICAL JOURNAL (including regular and volunteer officers of the medical corps of the United States Army, Navy, and Marine-Hospital Service, commissioned or under contract) will be entitled to compete, and all persons known to be engaged in medical journalism are disqualified. This prize will not be awarded to any one person more than once within one year. Every answer must be accompanied by the writer's full name and address, both of which we must be at liberty to publish.]

The prize of \$25 for the best essay submitted in February has been awarded to Dr. Adah McMahan, of La Fayette, Ind., whose paper appears below:

PRIZE QUESTION NO. XXI.

THE TREATMENT OF INFANTILE CONVULSIONS.

By ADAH McMAHAN, M. D.,
LA FAYETTE, IND.

The treatment of infantile convulsions resolves itself into (1) the treatment of the convulsion, (2) the removal of the exciting cause or causes in the given case, (3) the prevention of any known cause again acting as an irritant, and (4) the strengthening of the infant's unstable nervous system.

When called for the first time to an infant in convulsions, a few whiffs of chloroform will insure sufficient relaxation to permit of a general examination, including the taking of the rectal temperature, and also the history of the case. Should the diagnosis point to a direct irritation of the cortical cells, as in certain cerebral and spinal diseases, then that condition will demand the bromides, effective elimination, and a room kept darkened, well ventilated, and quiet, together with proper nourishment. Surgical interference may be needed. However, should one of the so called reflex irritations be at fault, such as from improper food, foreign bodies in the nose and ears, adherent prepuce or clitoris, or den-

tition (a very rare cause), correct these as soon as possible.

To secure sufficient obtunding of cortical sensibilities during the spasm, use morphine, $\frac{1}{20}$ of a grain hypodermically, repeated in one to two hours, or chloral, 3 to 8 grains to 4 ounces of warm milk, thrown into the rectum, and chloroform. Each and all can be used to advantage. In addition, if there is a rectal temperature of 102.5° F. to 104° F., a warm pack with ice to the head will be of much value. The pyrexia in itself may serve as an irritation in prolonging or causing the spasm. Should the rectal temperature reach 105° F., to 107° F., the cold or ice pack, with ice to the head and at times heat to the feet will be required. The pack, warm or cold, will (1) reduce the pyrexia, (2) increase peripheral circulation, (3) lessen the rigidity, and (4) assist in elimination—and also permit, in cases of overeating and acute indigestion, without much disturbance to the child, of the giving of stomachic or intestinal lavage. Where lavage is impracticable, syrup of ipecac, 1 drachm, or apomorphine $\frac{1}{40}$ to $\frac{1}{20}$ of a grain will be of service. If stimulation is required stimulate freely. Whiskey, per rectum, in warm milk or water, and nitroglycerin, $\frac{1}{100}$ of a grain; strychnine, $\frac{1}{120}$ of a grain; adrenalin chloride, and ether—each or all hypodermically—will tide over some of the most desperate cases. Ordinarily they are not needed. Oxygen is of much value in oncoming asphyxia. Saline infusions are of value where there has been a large drain from the system, as in dysentery or cholera infantum.

Should an acute toxæmia exist, the above mentioned methods are no bar to the treatment of the acute exanthemata pneumonia, scarlatina, secondary meningitis, and the acute infectious intestinal diseases.

While the infant is still in the pack, should an ileocolitis exist, the large copious enemata can be given; if there is much tympany, add to them a carminative, especially milk of asafœtida or keep in place the rectal tube.

While the child in is the pack, watch the temperature closely. Remove the pack when it falls to 101° F. (rectal), again applying it when indicated.

At times the toxæmia is one of a low degree, as in malnutrition and rickets. Here the disturbance shows itself in certain groups of the muscles as infantile vertigo, carpopedal spasms, and laryngismus stridulus. In proper feedings and good hygienic surroundings, with or without some of the motor depressants, we have some means of relief.

Infantile epilepsy must be distinguished by the

history of previous attacks, no known exciting cause, and a predisposing heredity. Inasmuch as each attack makes more or less inroad upon the stability of a normally unstable condition of the nervous system, at that time of life, and the convulsion is rarely the cause of death in itself, the prevention of convulsions becomes of the utmost importance. The prevention also permits of a more normal growth in stability of the nervous system. All predisposing conditions then should be removed. To bring about these results give to the infant:

(1) Proper food at proper intervals, (2) proper hygienic surroundings, but (3) remove physical defects or abnormalities (adherent prepuce or clitoris, foreign bodies in the ears or nose, and adenoid growths in the pharynx), (4) eliminate stress, (5) prevent birth asphyxias and apoplexies where possible, and (6) prevent by law, an inheritance to children of a syphilitic, alcoholic, idiotic, hysterical, or epileptic predisposition.

7 NORTH SIXTH STREET.

Dr. Edward M. Thompson, of New York, writes:

The great majority of infantile convulsions are no doubt due to an autointoxication brought about by gastrointestinal irritation or high temperature.

The nature of the condition makes the treatment necessarily symptomatic, and the cause is not usually discovered until afterward. The indications are to relieve blood pressure and cerebral congestion, and diminish nerve irritation, then remove the cause.

For the first and second indications the hot pack to the body is the most rational, because the heat dilates the capillaries, permitting a lower blood pressure, and thus draws the blood from the brain; this may be aided by cold compresses to the head. The well known sedative action of heat allays the nerve irritation to a great extent and can be assisted in severe cases by the hypodermic injection of $\frac{1}{24}$ of a grain to $\frac{1}{12}$ of a grain (according to age) of morphine sulphate or by the rectal injection of a solution containing from 5 to 10 grains of chloral hydrate (according to age and severity of the attack).

As soon as practicable, a high enema should be administered to empty the lower bowel and a dose of castor oil, calomel, or croton oil should be given. During these proceedings there should be as little excitement or noise as possible and the windows should be opened and the room kept cool.

The pack should be applied in a manner not interfering with respiration, and the prone position maintained.

When the convulsion has ceased, a search should be made for some external or internal irritation,

and abscesses or swollen gums should be lanced, proper food should be prescribed, if necessary, and a careful examination should be made of the patient and surroundings for the acute exanthemata.

To prevent recurrence of the convulsion, the child should be kept quiet, the room kept cool, and cool sponging employed to reduce temperature if it is elevated.

Dr. H. R. Coston, of Birmingham, Alabama, writes:

We must first discover the cause before we can successfully treat the convulsion. The causes may be divided into four classes, and in proportion to this frequency they are as follows: (1) High temperature from any source. (2) Peripheral irritations, either intestinal or cutaneous (*e. g.*, a belly full of beans or a phimosis). (3) Autotoxæmia: *a*, intestinal; *b*, renal; *c*, hepatic. (4) Injuries or diseases of the brain or its membranes.

When we find a child in convulsions with a high temperature we should at once place ice or cloths wrung out of ice water upon its head, and place the body in tepid water, for the extremities will usually be found to be cold. I empty the lower bowel at once by the use of a copious enema of water at a temperature of about 85° F., thus securing a lowering of the bodily temperature at the same time that I cleanse the bowels. Children bear a full length cold bath badly, and if the temperature cannot be lowered by the above mentioned means I would give a child one year old one grain of antipyrine hypodermically, or 3 to 5 drops of guaiacol may be rubbed into the skin every half hour until the fever abates. I have used both methods with success and have seen no evil results. If the child can be made to swallow, it should have acetanilid, or preferably antipyrine, and bromide of potassium or sodium in doses proportioned to its age. I have found it useful to administer half a grain of calomel in a half ounce of castor oil as soon as the child can take it, in almost all cases, regardless of the cause.

If the trouble is due to peripheral irritation; it is usually accompanied by high fever, and that symptom will receive the same treatment as above outlined. In addition, the source of irritation must be found and removed; if a phimosis, circumcise; if the stomach is full of green apples, give apomorphine hypodermically; if the irritant has reached the duodenum, the calomel and castor oil will sweep it out, aided by copious enemata. The purging should be followed by intestinal antiseptics and sedatives, such as salol, bismuth salicylate, sulphocarbolates, or (that which I prefer) drachm doses of freshly prepared chlorine solution. In

toxic cases we must look to the emunctories; in cases due to renal disease I give, to stop the convulsions, fluid extract of veratrum viride hypodermically, one drop for each year of the child's age; it has never failed me, and I have never seen harm result from its use. Cathartics, diuretics, diaphoretics, and hot baths must be used in all forms of toxic convulsions, to rid the system of the toxine which is producing the trouble. The treatment of cases due to disease or injury of the brain or its membranes will depend entirely upon the conditions present upon examination, and cannot be considered here.

Those cases which are the result of venous cerebral congestion due to pertussis or congenital heart disease will have to be treated in accordance with the symptoms present. Antipyrine, because of its marked sedative action in pertussis, will be found useful, and small doses of digitalis and nux vomica will be serviceable in most heart cases, to ward off the convulsion.

Those due to maldevelopment from rickets or an inherited nervous constitution should receive constitutional treatment suited to such diseases; and this treatment should include a liberal supply of fresh fruit or fruit juice and abundant outdoor air. Bottle fed children should be given the juice squeezed out of a rare steak with an ordinary lemon squeezer if nothing better is at hand. If the child is nursing and the mother found to be pregnant, or the convulsions recur at monthly intervals, it should be weaned at once.

Dr. G. J. Ellis, of Covington, Kentucky, writes:

The causes of infantile convulsions are of two kinds, direct and reflex. The direct are the acute infections, in which the initial chill observed in older patients is often replaced by a convulsion; exhausting diseases, such as continued diarrhoea; toxic causes, such as drug poisoning and uræmia; central lesions, such as tumors, embolism, thrombosis, hæmorrhage, meningitis, hydrocephalus, cerebral syphilis, etc.; and diseases of a convulsive character, such as tetanus, epilepsy, and pertussis.

The reflex causes are very numerous, among them being indigestion, intestinal parasites, foreign bodies in the ear or nose, dentition, and mental disturbance, such as fright. Rhachitic infants, in particular, are disposed to an attack of convulsions on the slightest irritation. It is generally impossible to determine the cause while the convulsion is present. The prognosis should be guarded, for, though the cause may be trivial, death may occur from exhaustion or from spasm of the glottis.

The warm bath and mustard plasters, applied to the nape of the neck, epigastrium, and soles of the

feet, are favorite home remedies. Small time should be wasted on these if they do not act quickly. The best remedy at our command is chloroform, a few drops of which inhaled from a handkerchief relieve almost instantaneously. The intestinal tract should be thoroughly emptied, first by an enema of warm soapsuds, and then by calomel and soda, $\frac{1}{10}$ of a grain each, repeated every hour until free purgation occurs. Should the stomach be suspected to contain irritating matter, syrup of ipecac, which is found in nearly every household, may be given. A child one year old may take a teaspoonful every twenty minutes until emesis occurs. Any recurrence of the convulsion is checked with the chloroform. High temperature indicates the application of an ice cap. Exhaustion indicates stimulants, preferably alcoholic for infants. Muscular twitching or restlessness should be quieted by sodium bromide and chloral. Ten grains of bromide and five grains of chloral may be given in twenty-four hours to a child one year old.

The after-treatment depends on the cause. Any disease should be treated, the feeding regulated, and, if no cause can be discovered, the bromide and chloral mixture should be continued.

Dr. W. D. Macon, of Charlottesville, Virginia, writes:

I shall take the standpoint of a physician who has suddenly been called to treat a case of infantile convulsions, and shall touch on ætiology only so far as it may be involved in considering treatment. I shall assume that he has brought along chloroform, and morphine, with a hypodermic syringe. The usual thing to find on arrival at the house is that the family are in the process of giving the child a hot (mustard) bath, and the first thing to be done is to take the child out of the bath, wrapping it in warm blankets, and immediately to give chloroform in sufficient quantity to relax spasms. At the same time the child should be kept as quiet as possible and an ice bag should be placed on the head, and the body and feet wrapped in a blanket wrung out of hot water, and a dry one over this.

My next procedure is to administer either morphine hypodermically or chloral by enema. My preference is for chloral, if it is at hand, say five grains to a child under one year, to be repeated, if necessary. Very often morphine is most convenient, about $\frac{1}{30}$ of a grain to a child a year old, to be repeated, if not sufficient.

As convulsions are frequently from digestive disturbances, an enema to wash out the bowels is indicated in most cases early in the treatment, and if food has been recently taken, an emetic, or, better,

stomach washing. I generally administer a dose of calomel for the purpose of thoroughly evacuating the bowels. This is indicated whether the cause lies in the digestive tract, thereby eliminating the toxæmia which may arise from that source, or whether convulsions are the onset of an acute disease, say scarlet fever, pneumonia, or meningitis. If the patient has rickets, the after-treatment consists in nutrition and easily digested food along with cod liver oil with hypophosphites and iron (syrup of the iodide). As dentition seems an ætiological factor at times, lancing such gums as are swollen relieves one source of irritation. The after-treatment of cases of cerebral origin, such as abscess, tumor, epilepsy, etc., will depend on the cause. Rest should be enjoined for a time and surgical intervention may later be invoked.

(To be continued.)

Correspondence.

LETTER FROM MONTREAL.

The Montreal League for the Prevention of Tuberculosis.—Annual Meeting of the Graduates of McGill University.—The Mortality of Montreal for 1902.—Hospitals for Infectious Diseases.—The Montreal General Hospital.

MONTREAL, February 23, 1903.

The Montreal League for the Prevention of Tuberculosis is now an assured fact, and definite plans have been laid to carry out the aims of the league. Dr. Richer and Dr. Adami have submitted to the executive committee their plan of campaign; and Dr. Richer has been made permanent honorary secretary of the league. Briefly, the plan of campaign will be a popular statement of what tuberculosis is and what are its dangers. Printed directions about personal hygiene will be sent to all known tuberculous persons. Instructions will also be given in regard to the spread of tuberculosis in houses. The dangers of indiscriminate expectoration will also be emphasized. Circular letters will be sent to the physicians of the city, whether French or English, asking for voluntary notification of cases of the disease, which they consider will be benefited by being in part looked after by the league. The medical health officer, Dr. Laberge, will recommend the council's granting of financial aid, while Dr. Lachapelle, of the Provincial Board of Health, will cooperate in the matter of the distribution of literature. Popular lectures will be given to both English and French; and citizens will be invited to become members of the league by paying a membership fee of \$1.00 per annum. The Hon. Senator Drummond is president of the league.

The graduates of McGill University in British Columbia held their annual gathering in Vancouver on the 14th of February. A large proportion of the entire membership of one hundred was present. Dr. D. H. Harrison, 1864, the oldest graduate, was elected president, and said that he felt as much pride in his alma mater as the youngest graduate present. It was decided to continue the \$50 prize to the best British Columbia matriculant for McGill and an additional \$25 for the second best matriculant. Dr. McGregor, secretary and founder of the society, was reelected secretary, Dr. Tunstall, treasurer, and Dr. G. H. Manchester, of New Westminster, one of the vice-presidents.

The report of the Medical Health Department of Montreal for the past year with regard to the mortality in this city during that time displays the striking feature of a decrease of 700 from the previous year. The total deaths in 1902 were 6,271, as against 6,915 for 1901. The officials of the health department put this remarkable decrease down to the fact of the unusually cool summer of last year, as in very hot summers the infant mortality in Montreal is very high; but this does not account for it all and it is considered that the general health of the community has improved. There were ten deaths from smallpox; 76 from measles; 64 from scarlet fever; 57 from diphtheria; 19 from croup; 28 from whooping cough; 26 from influenza; 86 from typhoid fever; 347 from diarrhoea; 105 from cholera infantum; 664 from consumption; and 541 from pneumonia. Of 100 cities of America from which statistics could be obtained, Three Rivers, Quebec, had the highest death rate and Hamilton, Ontario, the lowest.

On the afternoon of Tuesday, February 17th, deputations from the Royal Victoria, the General, and Notre Dame hospitals, met in the Mayor's Chambers, City Hall, to consider arrangements for the erection of hospitals for the care of cases of infectious diseases. The city council has offered \$15,000 a year each for twenty-five years, to the Notre Dame and one of the English hospitals, to care for these cases of infectious disease, and this meeting was for the purpose of arranging details. So far, Notre Dame has accepted this proposition for the French section of the population; and the Royal Victoria and the General are offering to erect conjointly an entirely new hospital to be known as Alexandra Hospital. On the whole, the offer of the English hospitals for a new contagious diseases hospital was considered satisfactory.

The annual meeting of the Montreal General Hospital was held last week; and the report showed that 2,878 indoor patients had received treatment during 1902. In the outdoor department there were

31,993 consultations. The income for the year amounted to \$87,439, while the expenditure had reached a total of \$99,967, thus leaving an excess of expenditure of \$12,528. Dr. F. G. Finley was reelected secretary for 1903. The indoor patients were fifty-five more than for the previous year. Of the total number, 166 remained over from the previous year. At the end of 1902, 184 remained in the hospital. There were discharged from the hospital 2,652, and there died in the hospital 226. Of the latter 88 died within three days of admission. The mortality was 7.85 per cent., or excluding those dying within three days of admission, 4.8 per cent. The average cost of patients per day was \$1.49.

Therapeutical Notes.

The Treatment of Abdominal Forms of Grippe.

—Dr. E. Michel (*Gazette de Gynécologie*, March 1, 1902) in a paper on the Clinical Forms of Abdominal Grippe, sums up the treatment as follows: In the intestinal forms with free diarrhoeal flux, intestinal antiseptics by means of large irrigations of boiled water, given with Esmarch's douche furnished with a tube, are indicated. The loss of watery fluids must be offset by repeated injections of Hayem's artificial serum at a suitable temperature, and cardiac asthenia must be combated by hypodermic injections of caffeine and sparteine. In the pseudoperitonitic forms, with chilliness and cyanosis of the limbs, the lower extremities may be advantageously enveloped in cotton wool. Saline purgatives, enemata of warm water, and quinine in small doses will suffice in cases of gastric disturbance or of mucous grippe. Cold baths will be useful in the pseudotyphoid forms of grippe with high temperature, and in the associated typhogrippal forms.

For Hyperacidity from Excessive Drinking of Fluids.—Dr. Hugh Edward Rogers (*Brooklyn Medical Journal*, February) says that the hyperacidity in these cases persists for quite a while, and for this a purely alkaline treatment is indicated. As an antacid there is nothing better than sodium bicarbonate used alone; but its effect is not lasting. The combination recommended by Ewald

R Magnesium carbonate }
 Bismuth salicylate.... } equal parts.
 Sodium bicarbonate.. }
 M.

is excellent, one drachm being taken after each meal and before retiring. Its effect is lasting and in the author's hands, has given fine results.

The Medical Treatment of Adenoid Vegetations.—M. Lapeyre, of Fontainebleau (*Revue française de médecine et de chirurgie*, 1903, No. 10) states that he has always been able to bring about the disappearance of even voluminous adenoids by the internal use of iodine. He thus avoids the necessity for surgical intervention. He gives tincture of iodine in increasing doses, beginning

with six drops thrice daily, for children from five to nine years of age, and increases the dose rapidly to sixty drops. This high dose is usually well borne; sometimes some gastric intolerance is noted, but never any serious accidents. The iodine is found in the urine with the proper reagents. M. Sevestre has obtained good results by the use of the wine of iodine (French Codex) and by instillations of mentholated oil into the nasal fossæ. M. Variot points out that Parrot treated adenoids with tincture of iodine in combination with syrup of gentian in a mixture of 6 grammes (a drachm and a half) each of tincture of iodine and potassium iodide in a litre of wine (*Soc. de péd.*, October, 1901). These authors agree in recommending medical treatment, and since the nasal obstruction is a real cause of anæmia in children, appropriate hæmatinics should be added where called for.

Helenine for Grippe.—*Progrès médical* for December 20th says that of all the manifestations of grippe, those of the respiratory passages are the most dangerous. The inflammation of the upper air passages sets up a painful and rebellious cough and is often followed by an extension of the grippal infection to the bronchi, and even to the pulmonary parenchyma. It is in these cases that the action of helenine, as pointed out by Dr. Korab in the *Lancet*, 1885, vol. i, calms the cough, modifies and diminishes the expectoration, and exercises, moreover, a well defined microbicidal action, and has, therefore, as a prophylactic against the bronchopulmonary complications of grippe, a special value.

For Seborrhœal Baldness.—The *Journal des praticiens* for December 6th ascribes the following to Vigier:

R Petrolatum.....60 grammes (2 ounces);
 Turpeth mineral.....3 grammes (45 grains);
 Oil of bergamot.....20 drops.
 M. ft. unguent. To be rubbed in every evening.

The Treatment of Urinary Incontinence.—According to Balfour, says the *Revue médicale* for February 4th, citing the *Journal médical de Bordeaux* the composition of the urine is the principal factor in this disturbance. To remedy this he gives internally boric acid to acidify it, and salol to render it aseptic. Of the other remedies in use, he employs only belladonna and very rarely strychnine or ergotine. Punishment never does any good. It seems serviceable to raise the foot of the bed.

How to Use Calcium Chloride in Metritic Hæmorrhage.—Grosch, according to the *Revue médicale* for February 4th, citing the *Semaine médicale*, recommends a daily injection of ten grammes (150 grains) of calcium chloride in 200 grammes (6½ ounces) of distilled water, preceded by an evacuant clyster; then a tablespoonful every two hours of the following mixture:

R Calcium chloride.....4 grammes (60 grains);
 Syrup of mint.....30 grammes (1 ounce);
 Distilled water.....90 grammes (3 ounces).

M.

If the kidneys act properly the use of the chloride may be continued for a considerable time.

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EDUCATIONAL MATTERS IN THE STATE OF NEW YORK.

The medical men of the State of New York feel the interest of all good citizens in measures calculated to get the utmost possible good out of the educational resources of the State; further than that, they feel a special interest of their own, since excellence of all-round preliminary education seems more requisite to the advantageous study of medicine than to any other branch of professional study over which the State exercises control. They, therefore, perhaps more than any other one class, if we except those whose business it is to teach, are keen in their appreciation of the efforts that are now being made to do away with the present dual system of control, with its attendant friction, and substitute for it the undivided supremacy of the board of regents of the University of the State of New York.

The regents have agreed upon a bill in which it is provided that the offices of the State superintendent of public instruction and his deputies shall be at once abolished, and the powers, functions, and duties pertaining to those offices be continued, but vested in the University of the State of New York, and exercised and performed by its regents or, "as they shall direct, by their officers and appointees and the persons, other than such deputies, now in office as appointees of the present superintendent." The bill further provides that the present superintendent and his deputies shall be entitled to receive their present salaries until the expiration of the term for which the superintendent was elected, but "shall hereafter have, exercise, and perform only such powers and duties as the said regents shall expressly direct."

It will be seen that if this bill is enacted—and we earnestly hope that it will be—no hardship will be worked to anybody; even those who may think themselves entitled to profit by the wretched spoils system will remain secure to the end of their terms. Indeed, if they acquit themselves creditably under the regents' direction, they may confidently look forward to indefinite continuance in office, for the regents' policy has always been to disregard party politics entirely and cling to whatever was found good. We feel confident that they will adhere to this policy—the only safe one—if they are given entire control of the educational machinery of the State.

THE NATIONAL PUBLIC HEALTH SERVICE.

Any misgivings that may have been felt as to the efficiency of the Marine Hospital Service in its recently widened sphere of an avowed national bureau of public health ought to be dispelled, we should think, by reflecting on the promptness with which the Washington conference on the plague situation in San Francisco has been followed by the hearty cooperation of the California and San Francisco officials and influential commercial organizations in the State and the city with the Public Health and Marine Hospital Service's representatives in carrying out the protective measures recommended. There is now no opposition from the governor or from the State board of health, and if there is any at all from the business community of San Francisco, it must be so lacking in popular support as not to constitute any serious impediment to the work of uprooting the last remnants of the infection in "Chinatown."

A mercantile joint committee, representing the California State Board of Trade, the San Francisco Board of Trade, the San Francisco Chamber of Commerce, the Merchants' Association of San Francisco, the Merchants' Exchange of San Francisco, the Manufacturers' and Producers' Association of California, and the California Promotion Committee, was at once organized, and pledged those organizations in resolutions to aid in the harmonious action of all the health authorities concerned. At the same time a supplementary statement of like purport was signed by the governor of the State, by the mayor of San Francisco, and by representatives

of the State and city sanitary boards, the Marine Hospital Service, and the commercial organizations mentioned.

While we may discern in the wording of the resolutions a tendency to underestimate the importance of the few cases of plague that have been ascertained to have existed in "Chinatown," there is no attempt to deny that occurrence itself; indeed, there is an evident, if belated, recognition of the fact that to deny the presence even of a mild outbreak of pestilential disease is not a good course to pursue. The people of San Francisco are now on the right track, and they will meet with the sympathy and support of all the rest of the country.

LEGISLATIVE RESTRICTION OF MARRIAGE OF THE UNFIT.

While there can be no doubt that there is much to be said from the point of view of the race, and from an academic standpoint, for the theory of requiring medical certificates from candidates for matrimony that they are free from those serious defects that are likely to descend to their children, there is also a very strong other side, and we have frequently expressed our views thereon, to the effect that the laws of Nature are stronger than the laws of man, and that the ultimate result of such restriction would be merely the substitution of unsanctioned intercourse in place of matrimony, should evasion of the law be found impossible. The right of the community to restrain for its own benefit the liberty of the individual is not unlimited, but has bounds set by Nature, and no one feels any shame in evading a law which he feels to be devoid of moral right, if he can successfully do so.

In our judgment, this is one of those matters, in which not only will more good be effected by educating the general public up to an appreciation of its importance than by any attempts at forcible control by legislation, but as a matter of fact legislation itself will be entirely dependent on a consensus of opinion as to the fitness of the course for any effect it may have. The mere passing of a law by a majority carries no moral weight to those of a respectable minority who are opposed to its underlying principle; its force is simply the force of the man with the club. It will be evaded if possible, resisted if necessary and if there seems to be any

chance, however remote, of the resistance being effectual, and submitted to only as the highwayman is submitted to, when no other course is possible.

We may, of course, be wrong in our estimate of the result of such legislation as that to which we refer, but, at any rate, we cannot avoid recognizing the sound common sense of a leading article on Medicine and Matrimony in the *British Medical Journal* for February 14th. That editorial, after briefly recounting what steps have so far been taken in various communities toward the attainment of the end that so many have in view, and affirming its lack of novelty by adducing the canon law of the Church as recognizing "certain physical infirmities as impediments to the contraction of marriage, or as rendering it null if already contracted"; and after quoting the well known passage from Sir Thomas More's *Utopia*, concludes as follows: "Neither the canon law nor Sir Thomas More, however, seems to have given any heed, except indirectly, to the healthiness of the offspring, which is the object aimed at by modern reformers. With that object every lover of his kind must have the fullest sympathy. But in regard to the means to be adopted for its attainment there is room for doubt. We have already expressed a strong opinion that the absolute prohibition of marriage to the diseased and the degenerate would be not only cruel, but futile. However strong the law of the land may be, the laws of Nature are stronger still. At any rate, as other countries are disposed to make the experiment, we may well be content to await the results. When Walt Whitman's dream is fulfilled, and the States where Edwin and Angelina are properly certificated before they are made one are peopled by 'magnificent persons,' it will be time to think of asking our government to make the medical referee the arbiter of love's destiny. In the mean time the family doctor can do much to prevent unwholesome marriages, and we look with greater confidence to the fruits of his teaching and persuasion than to legislative enactments, which would necessarily tend to place him before the public which marries and gives in marriage in the position of a peculiarly odious devil's advocate, and thus nullify his power for good."

We have nothing to add to this save to say that we entirely dissent from Dr. Adah McMahan's dic-

tum, in her prize essay on *The Treatment of Infantile Convulsions*, published in this issue of the *Journal*, to the effect that we should "prevent by law an inheritance to children of a syphilitic, alcoholic, idiotic, hysterical, or epileptic predisposition." Nature constantly strives for "the recovery of lost perfection," and we are optimistic enough to believe that the descendants of the syphilitic, the alcoholic, the idiotic, the hysterical and the epileptic may be very creditable specimens; for which one of us could trace his ancestry back for five generations without finding some individual representing one or another of the lapses from perfection alluded to? At any rate, what can be gained by forbidding marriage to anybody, thereby adding illegitimacy to the drawback of a disadvantageous inheritance?

THE DIFFICULTY OF ELUDING NEWSPAPER NOTORIETY.

We feel that members of our profession have often been unjustly accused of conniving at extravagant newspaper accounts of their professional achievements. We are confirmed in this feeling by the perusal of a long and highly seasoned article which appeared in the *Philadelphia North American* for March 5th under the following sensational headings: *Cut Off a Third of Patient's Body; Rare Operation Performed First Time in America by Local Surgeon; Knives Used Three Hours; Amphitheatre at Jefferson College Crowded with Experts and Students; Great Skill Required; Life of Sufferer Saved Several Times by Use of Salt Solution.*" The "local surgeon" was Dr. W. W. Keen, an ex-president of the American Medical Association. If such a man, operating in the amphitheatre of the Jefferson Medical College, is powerless to protect himself against the minions of the press, can we reasonably accuse our lesser lights of collusion in like cases? The operation was amputation of the entire lower extremity, together with a portion of the pelvis, for osteosarcoma.

CHICAGO'S DRINKING WATER.

The alert health department of Chicago keeps the citizens informed as to the quality of the drinking water supplied to the city. But it seems that a critic has said that the value of its warnings "becomes somewhat problematical" when it is considered that twenty-four hours must always elapse between the collecting of the water for examination and the publication of the report, "so that the people

who read on Tuesday morning that the water at a certain station is bad and take precautions accordingly are a full day late, for they were drinking the bad water on Monday." "As a matter of fact," answers the commissioner, Dr. Reynolds, "the water samples—except those from the Carter H. Harrison tunnel—are collected at the pumping stations on the lake front between 8 and 9 o'clock each morning; the results of the analyses are given to the press before noon and appear in the afternoon papers of the same day."

THE ALLEGED CHOLERA INFANTUM GERM.

The reputed discovery by Dr. Simon Flexner of the specific microorganism of cholera infantum has, as was to be expected, set the newspapers agog, and a number of well known medical men have been interviewed concerning it. It is refreshing to find among the responses such a sober and well considered statement as the following, by Dr. Henry D. Chapin, published in the *New York Herald* for March 6th: "As far as I know, the germ of cholera infantum has never been discovered. It is quite possible that several germs may be responsible for it. The true cholera infantum is rather rare in this latitude. A remedy will have to be tried in a very large series of cases and through different years before it can be thoroughly accepted, as the mortality of such diseases varies a great deal from year to year under practically the same treatment. These studies are hopeful and should be encouraged, but premature conclusions should not be drawn."

THE SERUM TREATMENT OF SCARLET FEVER.

A good deal has been said of late about the serum treatment of scarlet fever, and much of what has been said has been indicative of confidence in the actual or rapidly approaching achievement of success with the treatment. Of all the recent publications on the subject, those of Professor Adolf Baginsky, of Berlin, have probably attracted most attention. Those publications, however, while hopeful in tone, have not been characterized by the triumphant style in which the newspapers treat the matter, and a letter from Dr. Baginsky, recently received at this office, informs us that he is not at present prepared to make any stronger statement than he has already published. In this letter he emphasizes the fact that the credit of preparing the serum most recently and promisingly used by him is due solely to Aronson. While there are very encouraging indications that we are in a fair way to possess an efficient scarlet fever antitoxine before long, it would still be premature to proclaim its actual existence.

News Items.

Society Meetings for the Coming Week:

MONDAY, March 16th.—New York Academy of Medicine (Section in Ophthalmology); New York County Medical Association; Hartford, Conn., Medical Society; Chicago Medical Society.

TUESDAY, March 17th.—New York Academy of Medicine (Section in General Medicine); Buffalo Academy of Medicine (Section in Pathology); Ogdensburg, N. Y., Medical Association; Syracuse, N. Y., Academy of Medicine; Medical Society of the County of Kings, N. Y.; Baltimore Academy of Medicine.

WEDNESDAY, March 18th.—Woman's Medical Association (New York Academy of Medicine); Medico-Legal Society, New York; North-Western Medical and Surgical Society of New York (private); New Jersey Academy of Medicine (Newark); New York Society of Dermatology and Genitourinary Surgery (private); New York Academy of Medicine (Section in Genitourinary Diseases).

THURSDAY, March 19th.—New York Academy of Medicine; Brooklyn Surgical Society; New Bedford, Mass., Society for Medical Improvement (private); Medical Society of City Hospital, St. Louis; Atlanta Society of Medicine.

FRIDAY, March 20th.—New York Academy of Medicine (Section in Orthopædic Surgery); Clinical Society of the New York Post-Graduate Medical School and Hospital; Baltimore Clinical Society; Chicago Gynecological Society; Manhattan Medical and Surgical Society (private).

Change of Address.—Dr. Wendell C. Phillips announces the removal of his office and residence to 40 West Forty-seventh Street, New York City. Dr. Harris Moak announces his removal from Albany, N. Y., to 153 Underhill Avenue, Brooklyn, N. Y.

A Reception to Dr. Osler will be tendered at the Hotel Bellevue, Philadelphia, by the Medical Club of Philadelphia, on Friday evening, March 27th.

Dr. Don Sang, a Chinese physician, and reputed to be one of the wealthiest members of his race in the United States, died on March 9th, at his home in Chicago.

The Association of Former German Students will hold its annual "Kommers" this evening (Saturday) in the hall of the Arion Society at Fifty-ninth Street and Park Avenue.

Dr. H. Dearborn Injured.—Dr H. Dearborn, of Elizabeth, N. J., lost three of his fingers by falling under a train which he was attempting to board in that city on March 8th.

The Brooklyn Medical Society gave its second annual dinner at the Bushwick Club, Brooklyn, on March 5th. Brief addresses were made by Dr. Alexander Hutchins, the Rev. J. L. Bedford, and Andrew McLean.

St. Paul Doctors Dine.—The annual dinner of the Ramsay County (Minn.) Medical Association was held recently at the Merchant's Hotel, St. Paul, Dr. Angus MacDonald, president of the association, acting as toastmaster.

The Medical Association of the Greater City of New York will meet on Monday evening, March 9th, at the Academy of Medicine. Papers

will be presented on Suprascrotal Operation for Varicocele, with Ligature of the Spermatic Artery, by Dr. E. Styles Potter, and on Perforated Gastric and Duodenal Ulcers, with a Report of Four Cases Treated by Operation, by Dr. Albert A. Berg.

To Prevent Contamination of Drinking Water.—The bill which has been introduced into the Senate of the New York State Legislature relative to the discharge of sewage and other waste matter into the waters of this State is receiving the support of the committees of the various medical associations. It is hoped that this law will be of service in reducing the liability to typhoid fever.

Vacancies in the German Hospital.—A competitive examination for six positions on the house staff of the German Hospital, Seventy-seventh Street and Park Avenue, New York City, will be held at the hospital on Saturday, March 28th, at 2.30 p.m. Knowledge of the German language is required. Candidates should send applications in writing, accompanied by a *curriculum vitæ* to the secretary of the medical board, Dr. F. Schwyzer, 54 East Fifty-eighth Street, before March 24, 1903.

Columbus Hospital.—The following appointments were made at a recent meeting of the Medical Board of the Columbus Hospital, New York. Dr. Frank Farquhar Ferguson was transferred from visiting to consulting physician to the hospital; Dr. Frederick C. Keller, assistant attending physician, was appointed attending physician; Dr. Henry Hazen was appointed attending physician in children's diseases, and Dr. G. A. De Santos Saxe was appointed assistant pathologist.

Formalin and Formaldehyde: A Correction.—On page 422 of our issue of March 7th it is stated that in the treatment of septicæmia Dr. Barrows used a solution of formalin equivalent in strength to an 0.008 per cent. solution of formaldehyde gas. While the proportion of formaldehyde gas is correctly stated, an error was made regarding the strength of the solution of formalin. Dr. Barrows used a solution containing 1 part of formalin in 5,000 parts of water, or 0.02 per cent. of formalin, instead of 1 per cent. as was stated in the item referred to.

Cholera in Port?—The Anchor Line Steamship, *Karamania*, from Mediterranean ports has cast anchor in the Lower Bay under orders from the quarantine officers. She has about 800 persons on board including passengers and crew, and six deaths have occurred during the voyage over. While it has not been definitely determined as to the cause of these deaths, newspaper reports are such as to indicate that they are possibly due to Asiatic cholera. Pending the results of an investigation, the officers and crew will be strictly quarantined. Even if it does turn out that Asiatic cholera has made its appearance on ship board there is no occasion to feel any alarm in New York city, as the quarantine officials have ample facilities for handling any cases which may develop in such a way as to prevent any possibility of the transmission of the disease to the shore.

The Manufacture of Vaccine Lymph by the State.—The question of whether or not the State of Massachusetts shall engage in the manufacture of vaccine lymph was discussed recently before the Committee on Public Health of the Lower House of the Massachusetts State Legislature. President Eliot, of Harvard University, appeared in favor of the manufacture of the lymph and of diphtheria antitoxine likewise by the State Board of Health. He opposed placing this work in the hands of the State Board of Agriculture.

The International Congress of the Medical Press.—The second congress will be opened at Madrid, on Monday, April 20th, by the King of Spain. Dr. Cornil, president of the International Association of the Medical Press, will preside. Among the matters to come before the congress will be a proposal for the formation of an International Bureau of Scientific Information. All who propose to take part in the proceedings of the congress should communicate with the secretary general, Dr. R. Blondel, 8 Rue de Castellane, Paris.

The Bronx Eye and Ear Infirmary, a new institution with a building situated in East One Hundred and Forty-second Street, east of Willis Avenue, was opened for patients on February 7th. The accommodations for in-patients are limited for the present, but we learn that it is well equipped for work. The incorporators are Dr. Charles H. McIlwayne, Dr. Everett M. Raynor, Mr. Christopher H. Roberts, Mr. J. C. Mackenzie, and Mr. James Dalton. At present Dr. McIlwayne and Dr. Raynor constitute the professional staff.

A Doctor Must Testify as to his Professional Income.—In a suit brought by Dr. M. Pinckney Morrell, of St. Louis, against Dr. Joseph J. Lawrence, of New York City, proprietor of *Medical Brief*, to recover \$16,030 for professional services rendered to the son of Dr. Lawrence, Dr. Morrell was asked by the attorneys for the defendants to state what his income from his profession was. The doctor declined to answer and Judge Franklin Ferris had decided that the question must be answered on the ground that this knowledge is necessary in order to enable the court to arrive at some estimate of the value of the services rendered.

The Bill to Abolish Coroners.—The bill introduced by Senator Elsberg abolishing the office of coroner in New York and creating medical examiners to determine the cause of death was discussed at a hearing before the City's Committee of the New York State Legislature on February 24th. Dr. E. Eliot Harris and several other physicians appeared in favor of the measure which was opposed by Dr. Tuthill, the former coroner, and other speakers. Strong political opposition to the bill has developed, but it has been favorably reported by the Senate Committee, and it is probable that with a few verbal amendments it will become a law.

A Triple Board for Arkansas.—Under an act recently passed in the Arkansas Legislature a triple board of medical examiners is provided for, consisting of one board made up of members recom-

mended by the Arkansas Medical Society, one of members recommended by the State Eclectic Medical Society, and one made up of members recommended by the Homœopathic Medical Society of Arkansas. Each board is to have seven members, one residing in each of the congressional districts of the State. Under the law itinerant vendors professing to cure or treat disease or deformity either by drug, nostrum or manipulation or any other expedient shall be deemed guilty of a violation of the law and punished accordingly.

Research Work Under the Scotch Carnegie Trust.—The executive committee of the Carnegie Trust in Scotland have announced that a number of scholarships and grants will be endowed by the trust to promote postgraduate study and original research. The scholarships are to be of the value of £100 per annum and may be held for two years, the scholar being selected by the trustees on nomination by a professor or lecturer under whose supervision he must work. The fellowships, which have an annual value of £150, exclusive of any special grants for expenses which may be given, are to be awarded for graduates who have shown a capacity for advanced work in science or medicine. In addition the committee will consider applications for grants to professors, lecturers, and assistants in Scotch universities, or to Scotch university graduates residing in Scotland.

Standardizing Antitoxines.—The Sub-Committee of the Committee of Revision of the United States Pharmacopœia, which has to do with biological products, held a meeting in Philadelphia on March 8th to discuss the formulation of a definite standard for serums to be introduced into the new edition of the United States Pharmacopœia which is now in course of preparation. Among those who took part in the deliberations on the subject were Dr. Theobald Smith, of Harvard, who presided; Dr. William H. Park, of New York City; Dr. M. J. Rosenau, Director of the Hygienic Laboratory of the United States Public Health and Marine Hospital Service; Dr. Thomas C. Craig, U. S. N.; Dr. E. M. Houghton, of Detroit; Dr. Robert B. Pease, of the New York State Board of Health, and Dr. Joseph J. Kinyoun, of Philadelphia. The meeting was held at the residence of Professor Joseph P. Remington, chairman of the Committee on Revision. While the conclusions arrived at will not be made public, it is understood that the committee did not deem it practicable to adopt the suggestion that the national government should establish a bureau for testing and certifying to the strength and purity of diphtheria antitoxine.

Health Statistics of Chicago.—The weekly bulletin of the Health Department of the City of Chicago is not the dry statistical compilation of which such reports are ordinarily composed. The commissioner of health accompanies the statement of mortality for each week with a running commentary on the sanitary conditions of the city, and a discussion of the probable causes of the conditions shown in the vital statistics presented. The week ending March 7th shows a decrease in the number

of deaths as compared with the corresponding period of last and also of the previous week of this year, while an increase in the birth rate was shown for the same period. The commissioner, however, urges upon the authorities the necessity for the realization of the fact that the sewerage of the system is wholly inadequate. Smallpox is gaining both in virulence and prevalence.

New York Academy of Medicine.—On Monday evening, March 16th, a meeting of the Section in Ophthalmology will be held which will be devoted to a treatment of Lacrymal Disease. Dr. R. O. Born will present a paper on the Expectant Treatment (by Astringents and Expression); Dr. D. W. Hunter will speak of the Treatment with Probes; and Dr. A. H. Knapp will discuss the Radical Treatment by Extirpation of Sac. On Thursday evening, March 19th, a Symposium on Typhoid Fever in Infants and Children will be presented before the Section in Pædiatrics, the following papers being scheduled: The Occurrence of Fœtal and Infantile Typhoid, by Dr. J. Lovett Morse, Boston, Mass.; The Occurrence of Typhoid in Infants and Children, by Dr. J. P. C. Griffith, Philadelphia, Pa.; The Symptoms and Ætiology of Typhoid Fever in Children, making special reference to the Widal Reaction, by Dr. A. D. Blackader, Montreal, Canada.

An American Congress on Venereal Diseases.—In pursuance of a resolution adopted at the Saratoga meeting of the American Medical Association a joint committee from various interested sections of the American Medical Association has been appointed by the president of the association to consider the subject of the prophylaxis of venereal diseases and to present to the American Medical Association a plan for a national meeting, similar to the International Conference for the Prophylaxis of Venereal Diseases, which meets again this year in Brussels, under the auspices of the Government of Belgium. The Committee on Prophylaxis of Venereal Diseases consists of Dr. Henry D. Holton, chairman, Brattleboro, Vt.; Dr. Ludwig Weiss, secretary, 77 East Ninety-first Street, New York; Dr. George M. Kober, 1600 T Street, Washington, D. C.; Dr. W. H. Sanders, Montgomery, Ala.; Dr. L. Duncan Bulkley, 531 Madison Avenue, New York City; Dr. Frank H. Montgomery, 100 State Street, Chicago, Ill. The peculiar social, racial and political conditions of our country are so different from those obtaining in Europe that they necessitate an expression of solely American ideas on this mooted question, from both a socio-economic and a sanitary point of view. The committee desires the support of the medical profession and solicits expressions of opinion, and would be glad of personal correspondence from those supporting the movement and who will contribute by papers, etc., to make it a success in case the House of Delegates should favor the holding of such a Congress.

Typhoid Fever at Cornell.—By vote of the citizens of Ithaca it has been determined that the city shall acquire the water plant. A statement was given widespread publicity through the daily press

to the effect that Dr. Daniel Lewis, the State health commissioner, had asserted that all the danger from typhoid fever had passed, and that it was safe for students and others to return to Ithaca. This statement is said to be incorrect, as Dr. Lewis said that provided certain steps were taken by the local board of health it would be safe for the residents to return. It seems, however, that these steps have not been taken and the Ithaca board of health has passed resolutions to the effect that they "deem the condition of the Ithaca city water such that it is absolutely essential for residents to secure such board and lodging as will guarantee that no unboiled water from that source will enter the stomach. That we look upon the chance of secondary infection from the numerous cases of typhoid now in the city as a new and serious source of danger."

J. C. Bayles, formerly President of the Board of Health of the City of New York, has contributed to the *New York Times* the results of a careful study of the sanitary conditions in Ithaca and has arrived at the conclusion that it would be inexpedient for the authorities at the university to endeavor to hold a session of the summer school this year, that it would be advisable for the present term to be brought to a close not later than April 15th or May 1st, and that unless radical measures are taken to put the town of Ithaca into better sanitary conditions before July 15th it would not be expedient for the university to open its doors for students in the fall. Mr. Bayles commends highly the sanitary work now being carried out by Dr. George A. Soper and says that if Dr. Soper continues to receive the cordial support, both moral and financial, which he is now being accorded by the city of Ithaca there is reason to hope that the typhoid epidemic will be entirely stamped out during the summer. Present conditions are, however, pictured as being most serious and such as to indicate the need for a complete reconstruction of the sewerage system of the entire valley.

Official News.

Public Health and Marine-Hospital Service Health Reports:

The following cases of smallpox, yellow fever, cholera, and plague were reported to the surgeon-general during the week ending February 28, 1903:

Smallpox—United States.			
Location.	Date.	Cases.	Deaths.
California—Los Angeles	Feb. 7-14	3	
California—Sacramento	Feb. 7-14	2	
California—San Francisco	Feb. 8-15	2	
Florida—Jacksonville	Feb. 14-21	3	
Georgia—Atlanta	Dec. 31-Feb. 18	64	4
Indiana—Elwood	Feb. 15-22	6	
Indiana—Evansville	Feb. 14-21	6	
Indiana—South Bend	Feb. 14-21	2	
Iowa—Des Moines	Jan. 1-31	10	
Kansas—Wichita	Feb. 7-14	1	
Kentucky—Lexington	Feb. 14-21	3	
Maine—Biddeford	Feb. 14-21	4	
Maryland—Baltimore	Feb. 14-21	1	
Massachusetts—Boston	Feb. 14-21	10	
Massachusetts—New Bedford	Feb. 24	1	
Michigan—Detroit	Feb. 14-21	29	
Michigan—Grand Rapids	Feb. 14-21	14	
Michigan—Marquette	Feb. 7-21	10	
Michigan—Menominee	Feb. 7-14	1	
Michigan—Port Huron	Feb. 14-21	8	

Missouri—St. Louis	Feb. 8-22	26
Nebraska—Omaha	Feb. 7-14	3
New Hampshire—Manchester	Feb. 14-21	2
New Jersey—Camden	Feb. 14-21	9
New York—Buffalo	Feb. 14-21	1
New York—New York	Feb. 14-21	3
Ohio—Cincinnati	Feb. 13-20	20
Ohio—Cleveland	Feb. 14-21	6
Ohio—Dayton	Feb. 14-21	7
Pennsylvania—Erie	Feb. 14-21	7
Pennsylvania—Johnstown	Feb. 14-21	1
Pennsylvania—McKeesport	Feb. 14-21	2
Pennsylvania—Philadelphia	Feb. 14-21	25
Pennsylvania—Pittsburg	Feb. 7-14	12
Pennsylvania—Reading	Feb. 16-23	1
South Carolina—Charleston	Feb. 14-21	3
South Carolina—Greenville	Feb. 7-14	2
Tennessee—Memphis	Feb. 14-21	1
Tennessee—Nashville	Feb. 14-21	1
Utah—Salt Lake City	Feb. 7-14	20
Washington—Tacoma	Feb. 9-16	1
Wisconsin—Greenbay	Feb. 15-22	1

Smallpox—Foreign.

Austria—Prague	Jan. 24-31	5
Belgium—Antwerp	Jan. 24-31	8
Belgium—Brussels	Jan. 24-31	1
Germany—Hamburg	Jan. 31-Feb. 7	3
Great Britain—Birmingham	Jan. 24-Feb. 7	14
Great Britain—Dublin	Jan. 31-Feb. 7	2
Great Britain—Leith	Jan. 24-31	2
Great Britain—Liverpool	Jan. 31	176
Great Britain—London	Jan. 31-Feb. 7	4
Great Britain—Manchester	Jan. 31-Feb. 7	36
Great Britain—Nottingham	Jan. 31-Feb. 7	4
Great Britain—Sheffield	Jan. 24-Feb. 7	5
Great Britain—Sunderland	Jan. 17-24	1
India—Bombay	Jan. 20-27	14
India—Calcutta	Jan. 17-24	2
Russia—Odessa	Jan. 11-18	2
Russia—St. Petersburg	Jan. 24-31	88
Russia—Warsaw	Jan. 3-17	7
Russia—Warsaw	Jan. 24-31	2
Spain—Corunna	Jan. 31-Feb. 7	1
Uruguay—Montevideo	Dec. 1-31, 1902	3
Uruguay—Montevideo	Dec. 31-Jan. 7	9

Yellow Fever.

Mexico—Vera Cruz	Feb. 7-14	4
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Plague—Insular.

Hawaii—Honolulu	Feb. 12	1
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Plague—Foreign.

India—Bombay	Jan. 20-27	455
India—Calcutta	Jan. 17-24	76
India—Karachi	Jan. 11-26	54
Mexico—Mazatlan	Jan. 17-24	51

Cholera—Foreign

India—Bombay	Jan. 20-27	1
India—Calcutta	Jan. 17-24	48

The following is the report for the week ending March 7, 1903:

Smallpox—United States.

Location.	Date.	Cases.	Deaths.
California—Berkeley	Feb. 18-25	1	
California—Los Angeles	Feb. 14-21	3	
California—Sacramento	Jan. 25-Feb. 7	4	
California—San Francisco	Feb. 15-22	12	1
Colorado—Denver	Feb. 7-21	30	
District of Columbia—Washington	Feb. 14-28	6	1
Illinois—Chicago	Feb. 21-28	17	1
Indiana—Elwood	Feb. 22-Mar. 1	3	
Indiana—Evansville	Feb. 21-28	4	
Indiana—Indianapolis	Feb. 14-28	57	16
Indiana—Jeffersonville	Jan. 1-31	1	
Indiana—Jeffersonville	Feb. 1-28	5	
Iowa—Davenport	Feb. 21-28	4	
Kansas—Douglas County	Jan. 1-31	2	imported.
Kansas—Wichita	Feb. 21-28	1	
Kentucky—Lexington	Feb. 21-28	1	1
Kentucky—Newport	Feb. 21-28	1	
Louisiana—New Orleans	Feb. 21-28	2	imported.
Maine—Biddeford	Feb. 21-28	3	
Massachusetts—Boston	Feb. 21-28	2	
Massachusetts—New Bedford	Feb. 21-28	1	
Massachusetts—Newton	Feb. 21-28	1	
Michigan—Grand Rapids	Feb. 21-28	14	
Michigan—Marquette	Feb. 21-28	1	
Michigan—Menominee	Feb. 14-21	1	
Michigan—Port Huron	Feb. 21-28	5	
Nebraska—Omaha	Feb. 21-28	3	
New Jersey—Camden	Feb. 21-28	5	
New Jersey—Jersey City	Feb. 22-Mar. 1	3	
New York—Buffalo	Feb. 21-28	1	
New York—New York	Feb. 21-28	4	
New York—Yonkers	Feb. 20-27	1	
Ohio—Cincinnati	Feb. 20-27	1	1
Ohio—Cleveland	Feb. 21-28	7	2
Ohio—Dayton	Feb. 21-28	1	
Ohio—Hamilton	Feb. 21-28	2	
Pennsylvania—Altoona	Feb. 21-28	6	imported.
Pennsylvania—Dunmore	Feb. 21-28	3	
Pennsylvania—Erie	Feb. 21-28	5	

Pennsylvania—Johnstown	Feb. 21-28	3
Pennsylvania—McKeesport	Feb. 21-28	2
Pennsylvania—Morristown	Feb. 21-28	1
Pennsylvania—Philadelphia	Feb. 21-28	37
Pennsylvania—Pittsburg	Feb. 21-28	19
		4 cases imported.
Pennsylvania—Pottsville	Feb. 21-28	4
South Carolina—Charleston	Feb. 21-28	7
Tennessee—Johnson City	Feb. 21-28	7
Tennessee—Memphis	Feb. 21-28	5
Utah—Salt Lake City	Feb. 14-28	39, 1 case imported.
Wisconsin—Greenbay	Feb. 22-Mar. 1	1
Wisconsin—Milwaukee	Feb. 14-28	11

Smallpox—Foreign.

Barbados	Jan. 31-Feb. 13	9	1
Belgium—Antwerp	Jan. 31-Feb. 7	2	
Belgium—Brussels	Jan. 31-Feb. 7		6
Canada—Winnipeg	Feb. 7-14	1	
Canary Islands—Las Palmas	Jan. 24-Feb. 7	69	2
Ecuador—Guayaquil	Jan. 31-Feb. 7		1
France—Marseille	Jan. 1-31	37	
France—Paris	Feb. 7-14		1
Great Britain—Birmingham	Feb. 7-14	16	
Great Britain—Dublin	Feb. 7-14	4	
Great Britain—Glasgow	Feb. 13-20	1	
Great Britain—Leeds	Feb. 7-14	16	1
Great Britain—Leith	Jan. 31-Feb. 7	1	
Great Britain—Liverpool	Feb. 7-14		6
Great Britain—London	Feb. 7-14	1	1
Great Britain—Nottingham	Feb. 7-14	2	
India—Bombay	Jan. 27-Feb. 3		28
India—Calcutta	Jan. 24-31		1
Italy—Palermo	Jan. 31-Feb. 14	11	
Jamaica—Duan Vale	Feb. 1		Present.
Japan—Kagawa Ken	Jan. 29		Present.
Japan—Yamaguchi Ken	Jan. 29		Present.
Mexico—City of Mexico	Feb. 8-15	6	2
Netherlands—Amsterdam	Feb. 7-14	3	
Russia—Moscow	Jan. 24-Feb. 7	9	3
Russia—Odessa	Jan. 18-25	5	
Russia—St. Petersburg	Jan. 31-Feb. 7	29	9
Russia—Warsaw	Jan. 31-Feb. 7	1	1
Turkey—Smyrna	Jan. 25-Feb. 1		1

Yellow Fever.

Colombia—Cartagena	Feb. 9-15		2
Colombia—Panama	Feb. 11-18	2	
Ecuador—Guayaquil	Jan. 31-Feb. 7		21
Cuba—Havana	Feb. 14-21	1	1
		Imported from S.S. Esperanza	
Mexico—Coatzacoalcas	Feb. 7-14	1	1

Cholera.

India—Calcutta	Jan. 24-31	53
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Plague—Foreign.

India—Bombay	Jan. 27-Feb. 3		551
India—Calcutta	Jan. 24-31		97
India—Karachi	Jan. 25-Feb. 1	26	19
Mexico—Mazatlan	Jan. 24-31	46	31
Mexico—Mazatlan	Jan. 31-Feb. 7	43	22

Infectious Diseases in New York:

We are indebted to the Sanitary Bureau of the Health Department for the following statement of cases and deaths reported for the two weeks ending March 7, 1903:

DISEASES.	Week end'g Feb. 28		Week end'g Mar. 7	
	Cases.	Deaths.	Cases.	Deaths.
Typhoid fever	34	12	46	8
Scarlet fever	288	14	226	19
Cerebro-spinal meningitis	0	0	0	0
Measles	226	10	225	6
Diphtheria and Croup	341	42	376	42
Small-pox	4	0	0	0
Tuberculosis	298	187	303	169
Chicken-pox	137	0	147	0

Public Health and Marine-Hospital Service:

Official List of Changes in the Station and Duties of Commissioned and Non-Commissioned Officers of the Public Health and Marine-Hospital Service for the seven days ending March 5, 1903:

CARTER, H. R., Surgeon. To proceed to Morgantown, West Va., for special temporary duty.

GUIERAS, G. M., Surgeon. To report at Washington, D. C., for special temporary duty. To proceed to Eagle Pass, Texas, for special temporary duty.

WERTENBAKER, C. P., Passed Assistant Surgeon. To proceed to El Paso, Texas, for special temporary duty.

ROSENAU, M. J., Passed Assistant Surgeon. Detailed to represent service at meeting of Special Committee on Diphtheria Antitoxine at Philadelphia, Pa.

OAKLEY, J. H., Passed Assistant Surgeon. Granted leave of absence for seven days, from March 1, 1903.

DECKER, C. E., Assistant Surgeon. Granted fourteen days' extension of leave of absence on account of sickness from February 20, 1903, February 28, 1903.

LUMSDEN, L. L., Assistant Surgeon. Relieved from duty at San Francisco Quarantine Station and directed to proceed to Los Angeles, Cal., and Phoenix, Ariz., for special temporary duty.

KERR, J. W., Assistant Surgeon. To proceed to Nogales, Tombstone, Tucson and Phoenix, Ariz., for special temporary duty.

Bureau order of February 27, 1903, directing Assistant Surgeon J. W. KERR to proceed to points in Arizona, suspended, and he is directed to assume temporary command of the service at New Orleans, La.

GIBSON, R. H., Pharmacist. Granted leave of absence for seven days under the provisions of paragraph 190 of the Regulations.

Boards Convened.

Board convened to meet at Washington, D. C., March 2, 1903, for the physical re-examination of Chief Engineer GEORGE MAHER, Revenue Cutter Service. Detail for the board: Assistant Surgeon-General W. J. PETTUS, chairman; Assistant Surgeon-General H. D. GEDDINGS, recorder.

Board convened to meet at Boston, Mass., March 9, 1903, for the physical re-examination of Lieut. B. H. CAMDEN, Revenue Cutter Service. Detail for the board: Surgeon R. M. WOODWARD, chairman; Assistant Surgeon W. C. RUCKER, recorder.

Promotions.

Assistant Surgeon R. H. VON EZDORF commissioned as Passed Assistant Surgeon, to rank as such from March 4, 1903.

Assistant Surgeon J. F. ANDERSON commissioned as Passed Assistant Surgeon, to rank as such from March 18, 1903.

Naval Intelligence:

Official List of Changes in the Medical Corps of the United States Navy for the week ending March 7, 1903:

BIDDLE, C., Surgeon. Detached from the Naval Hospital, Philadelphia, and ordered to the Navy Yard, League Island.

BOGERT, E. S., Surgeon. Detached from the Recruiting Rendezvous, Buffalo, and ordered to the Naval Hospital, Philadelphia.

BYRNES, J. C., Surgeon. Detached from the Navy Yard, New York, ordered home and granted three months' sick leave.

COOK, F. C., Passed Assistant Surgeon. Detached from the Naval Hospital, Newport, R. I., and ordered to the Nevada.

DEAN, F. W. S., Assistant Surgeon. Ordered to the Naval Hospital, New York.

DIEHL, O., Surgeon. Detached from the Navy Yard, League Island, and ordered to the Oregon, sailing from San Francisco, Cal., on March 19th.

FOSTER, T. G., Acting Assistant Surgeon. Ordered to the Michigan.

HOLCOMB, R. C., Passed Assistant Surgeon. Detached from the Naval Hospital, New York, and ordered to the Naval Hospital, Newport, R. I.

MEARS, J. B., Acting Assistant Surgeon. Ordered to the Naval Recruiting Station, Buffalo, N. Y.

ORVIS, R. T., Passed Assistant Surgeon. Detached from the Michigan and ordered to duty with the Marine Detachment at Culebra.

RIGGS, C. E., Assistant Surgeon. Ordered to the Naval Hospital, Philadelphia, Pa.

SUTTON, R. L., Assistant Surgeon. Ordered to the Naval Hospital, Washington, D. C.

Army Intelligence.

Official List of Changes in the Station and Duties of Officers serving in the Medical Department of the United States Army for the week ending March 7, 1903:

CHURCH, JAMES R., First Lieutenant and Assistant Surgeon. Relieved from duty at the United States General Hospital, Washington Barracks, Washington, D. C., and ordered to Fort Trumbull, Conn., for duty.

NEWGARDEN, GEORGE J., Captain and Assistant Surgeon. Relieved from duty at Fort Mason, Cal., and ordered to Fort Harrison, Mont., for duty.

PAGE, HENRY, Captain and Assistant Surgeon. Relieved from duty at Fort Monroe, Va., and ordered to proceed to Fort Mason, Cal., for duty.

RAND, IRVING W., First Lieutenant and Assistant Surgeon. Relieved from duty at Fort Trumbull, Conn., and ordered to Fort Wright, Wash.

YOST, JOHN D., First Lieutenant and Assistant Surgeon. Relieved from treatment in the United States General Hospital, San Francisco, Cal., and assigned to duty in the office of Attending Surgeon and Medical Superintendent of the Army Transport Service.

Promotions.

CLARKE, JOSEPH T., Captain and Assistant Surgeon. To rank as Major and Surgeon from February 13, 1903.

HALL, JOHN D., Lieutenant Colonel and Deputy Surgeon-General. To rank as Colonel and Assistant Surgeon-General from February 13, 1903.

KILBOURNE, HENRY S., Major and Surgeon. To rank as Lieutenant Colonel and Deputy Surgeon-General from February 13, 1903.

Appointments.

BANTA, WILLIAM P. Commissioned First Lieutenant and Assistant Surgeon from February 18, 1903.

CRAIG, CHARLES F. Commissioned First Lieutenant and Assistant Surgeon from February 13, 1903.

Births, Marriages, and Deaths.

Married.

LOWENBURG—BRAUMSTEIN.—In Philadelphia, Pa., on Tuesday, March 3d, Dr. Harry Lowenburg and Miss Anna R. Braumstein, of Millville, N. J.

ROAT—GEIKLER.—In Philadelphia, Pa., on Wednesday, March 4th, Dr. Albert L. Roat and Miss Florence Annetta Geikler.

SATTLER—MITCHELL.—In Cincinnati, Ohio, on Monday, March 2d, Dr. Robert Sattler and Miss Agnes M. Mitchell.

Died.

CASEY.—In Joliet, Illinois, on Sunday, March 1st, Dr. John R. Casey, in the sixty-eighth year of his age.

GETMAN.—In Richfield Springs, N. Y., on Thursday, March 5th, Dr. Norman Getman, in the seventy-second year of his age.

JUDSON.—In Cleveland, Ohio, on Sunday, March 1st, Dr. Horace Judson, in the sixty-first year of his age.

KEMP.—In Nueva Caceres, Philippine Islands, on Monday, February 23d, Dr. Franklin M. Kemp, surgeon in the United States Army.

MATTHEWS.—In Des Moines, Iowa, on Tuesday, February 24th, Dr. W. S. H. Matthews, in the fortieth year of his age.

OHR.—In Cumberland, Maryland, on Tuesday, March 3d, Dr. Charles H. Ohr, in the ninety-third year of his age.

RICHTER.—In Brooklyn, N. Y., on Tuesday, March 3d, Dr. Henry W. Richter, in the sixty-third year of his age.

UNDERHILL.—In La Grange, Ohio, on Thursday, February 26th, Dr. G. C. Underhill, in the eighty-third year of his age.

VIMONT.—In Chicago, Illinois, on Sunday, February 1st, Dr. Charles W. Vimont, in the thirty-eighth year of his age.

WARD.—In Canon City, Colorado, on Tuesday, February 24th, Dr. L. B. Ward, in the thirty-seventh year of his age.

WOODWARD.—In New York City, on Saturday, March 7th, Dr. Corydon A. Woodward, in the sixty-third year of his age.

Pith of Current Literature.

PRACTICE OF MEDICINE.

Disease in Advanced Life. By G. H. Keyworth, M. B. (*British Medical Journal*, January 31st).—Among the points brought out by the author are the following: Many of the ailments of old age are due to more food being taken than can be got rid of by the eliminating organs; a reduction in the amount of food should always be made as maturity glides into senility. Apoplexy is common among elderly people during a sudden spell of cold weather; the cold contracts the cutaneous vessels, thus limiting the vascular area and increasing the pressure in the internal vessels; as a consequence some brittle encephalic artery snaps. A high tension pulse is a danger signal in renal disease, and elderly persons of full habits should keep the skin active and warm, take a sharp purge occasionally, and a spare dietary, avoiding meat and malt liquors. In patients over sixty years of age whose urine contains sugar, if there is a history of gout, if the general health is good, if the thirst is slight, the flow of urine moderate, and its specific gravity not over 1,030, the condition is most likely glycosuria and not diabetes. In old people vomiting is less generally present in disease of the brain, liver, or kidney, than in adults. Pneumonia or empyema may be entirely latent in the aged. Cancer rarely manifests itself for the first time in old age. When present it runs a slow course and sometimes disappears. In the diagnosis between tuberculous and primary cancerous lymph glands in old people, the chief indications of cancer are hardness, close-clustering, deep-seated attachments, and quick increase. As age advances, rest and warmth and nourishing food are more important than any treatment by cod liver oil, iron, iodine, or change of air. The power of repair after injury and disease in old people is often remarkable; fractures often unite as quickly as in the young. Calomel often benefits the old greatly. A good purge is often an efficient remedy in cases of bronchitis with dyspnoea and inefficient expectoration. Diuretics are valuable where the skin is altered in structure with advancing years; they seem to take the place of diaphoretics. Good wine is among the best of tonics for debility accompanying disease in advanced life.

A Case of Meningitis Due to Intestinal Self-intoxication.—Dr. Antonio Stilo (*Gazzetta degli ospedali e delle cliniche*, January 4th) reports a case of meningitis in a child aged fourteen months in which a series of cerebral symptoms were interpreted as signs of meningitis, by another physician, while the author regarded them as due to an intestinal self-intoxication. The child had been suffering from alternating constipation and diarrhoea, with green, foul-smelling stools, and had shown apathy, depression, and prostration. Six days before admission he was taken with fever, chills, pain in the abdomen, and vomiting. His diet consisted principally of milk. In addition to the gastrointestinal symptoms he developed a series of nervous manifestations that alarmed his parents. These consisted of tonic and clonic convulsions of the upper and

lower extremities. The pupils reacted slowly to light and to accommodation, the sign of Trousseau was absent, but that of Kernig was present. The head was held bent backward, and all movements of it were painful. This continued for some days, when the child was seized with persistent vomiting and with diarrhoea with dark foetid stools mixed with blood. The treatment consisted of milk diet (which was changed to water when he vomited), and of the administration of cathartics, calomel, castor oil, and santalin. Tepid baths and cold affusions to the head were given for the nervous symptoms; two leeches were applied to the neck and normal salt solution was used in the form of intestinal irrigations. Under this treatment the child recovered in a few days. This case illustrates the fact that intestinal self-intoxication can produce symptoms simulating meningitis, and it is important to recognize these cases, as their prognosis is much better than in meningitis and their treatment is mainly eliminative.

Mucomembranous Enterocolitis.—From an extended study of this condition C. A. Martinez Cabrera (*Crónica Médica*, Lima, December 1st, 15th, and 31st) has drawn some interesting deductions, though his experience coincides in the main with that of other observers. In his belief, the affection predisposes to appendicitis through extension of inflammation. The frequent association of enterocolitis with uterine affections he accounts for upon the ground of transmission of such disturbances through the intense congestion produced in the region of the abdominal sympathetic. His experience has been that the disease is frequently related to hepatic affections; and intestinal lithiasis as well as the neuroarthritic diathesis is also a prominent ætiological factor.

The Surgical Treatment of Non-Cancerous Affections of the Stomach.—Dr. Giuseppe Moresco, (*Gazzetta degli ospedali e delle cliniche*, January 4th) discusses the technics of gastroenterostomy for non-cancerous affections of the stomach, and reports a case in which he performed this operation according to Haecker's method, with a very gratifying result. The patient was a woman, aged forty-three years, who had been suffering from gastric atony, dilatation of the stomach, and pyloric insufficiency. Anatomically considered the retrocolic operation of Roux was the procedure of choice, but the patient's condition was so poor that a prolonged operation was not advisable, and therefore the transmesocolic posterior gastroenterostomy of Haecker was decided upon. The duodenojejunal fossa and fold having been found, the first portion of the jejunum was easily located. The small intestine was then sutured to the greater curvature of the stomach posteriorly, as near to the vessels as possible, and in suturing, the advice of Hartmann to make the union an extensive one and to sew the intestine transversely and a little obliquely downward to the stomach, was followed. The anastomosis was made nearer the fundus of the organ, as according to Goepel, an anastomosis nearer the pylorus is more apt to be affected by the action of the gastric juice in producing peptic ulceration. The part of the

intestine selected was four cubic centimetres from the fixed portion of the jejunum, a point which seemed to be naturally adapted for anastomosis with the stomach. The material used for suture was sterile silk, and the author used Monari's clamps to hold the edges of the gut and stomach through which these sutures were passed. The patient began taking solids one week after the operation, and was placed on the regular diet of convalescents two weeks afterward. She left the hospital in good condition, having increased in weight, and being able to bear any kind of food. The author believes, with Terrier and Hartmann, that gastroenterostomy sometimes gives very good therapeutic results in cases of gastric atony, dilatation of the stomach, and anachlorhydric gastritis. He recommends Haecker's method as preferable to that of Roux, on account of the shorter time required for the operation.

On Chronic States of the Circulation Simulating Heart and Kidney Disease. Dr. Graham Steell draws attention (*Medical Chronicle*, December) to a class of cases which are by no means very rare, and the leading symptoms of which are often misinterpreted. These patients complain of a shortness of breath or exertion, which, if neglected, is accompanied ultimately by dropsy and venous engorgement of the liver. Female patients shortly after the climacteric often complain of "weak heart" or "fatty heart." Shortness of breath on exertion is noted, but, at examination, there is found at most some strengthening of the aortic second sound, or lack of tone of the first sound in the mitral area, with, perhaps, an apex beat somewhat suggestive of a hypertrophied left ventricle. The pulse is slow and irregular, and the tidal wave is found to be, not only high, but greatly prolonged. Such a heart, though a strong one for the average healthy individual, is, for the patient in question, weak relatively to the burden it has to bear. The departure from health, therefore, is not caused by weakening of the heart, but by increased arterial tension. While we should not, in these cases, attach too much importance to the cessation of menstruation as a factor, we should remember that it is an element to be reckoned with. The author points out, how frequently after a successful operation for piles that have been the cause of habitual hæmorrhages, the vascular tension is greatly increased. He attributes the arterial condition under consideration to faulty metabolism, and he notes the well known tendency to the deposition of fat in the female about the climacteric period. The author believes that there is a close relationship between such a condition of circulation and granular disease of the kidney. There is, however, often great difficulty in the clinical recognition of such a condition of the renal organs. Moreover the albumin may be extremely small, and yet, upon post mortem, the most pronounced granular degeneration of the kidneys may be found.

In the treatment of such patients diet must have an important place. Bread, potatoes, and farinaceous puddings must be checked, and an evening flesh meal should be substituted for the pernicious "tea" meal. Breakfast is the most convenient meal for

bread to be taken with, and fruit after it is often beneficial if there is a tendency to constipation. Weak tea or coffee with cream or boiled milk and, possibly, an egg make up the meal. At mid-day and at evening any kind of flesh may be taken, with well cooked green vegetables, but no bread or starches. The patient need not be afraid of fats. In the afternoon an unsweetened cup of tea with cream may be taken—but nothing else should be eaten. Only a small amount of fluid should be drunk at the mid-day and evening meals. Malt liquors should be forbidden, and wines must be carefully chosen.

In the early stages while yet there is no serious evidence of the heart being overborne, digitalis, and drugs of its class are worse than useless. The murmur of mitral incompetence is *per se* no indication that a heart tonic is required. Strophanthus should be a better drug, but the best treatment is to leave the heart alone as regards direct medication, and to strive only to lighten its burden by careful dieting, by insuring a free state of the bowels, and even by employing an *occasional* pretty sharp purge. Gentle exercise should be encouraged. Potassium iodide exerts a beneficial action. As regards the treatment of the circulatory condition, general tonics are best: strychnine, cinchona, iron, etc. Although unwilling to recommend digitalis in any case in which the heart is not directly implicated, the author believes it to be indicated for the sake of its beneficial effect on the arterioles.

Further Investigations Regarding the Infective Nature and Ætiology of Pernicious Anæmia. 25 Cases.—Syn.: "Idiopathic Anæmia of Addison."—Its Non-Identity with the "Progressive Pernicious Anæmia" of Biermer. By Dr. W. Hunter. (*Lancet*, January 31st and February 7th).—The author first reviews the origin and subsequent development up to the present time, of the ætiology of the condition described by Biermer as "progressive pernicious anæmia," and how the condition described by Addison as "idiopathic anæmic" came to be falsely regarded as one of the group of "pernicious anæmias." The author holds that the two conditions are entirely distinct. Biermer's anæmia is produced by many causes: Addison's anæmia, on the other hand, is a disease of definite infective nature, in which both clinical observations and necropsy reveal definite infective and hæmolytic lesions invariably associated with the disease and in which a very definite number of points can be got out of the history, throwing light both on the mode of origin of the disease and the sources of infection. Septic infection gives to the heterogeneous group of anæmias described by Biermer the resemblances which lead them to be mistaken for Addison's anæmia. The features of severe forms of this anæmia are: (1) Most of the blood changes found in Addison's anæmia, including the existence of poikilocytes, normoblasts, and megaloblasts; (2) hæmorrhages; (3) dirty yellow, anæmic, complexion; (4) the existence of oral, gastric, and intestinal sepsis and symptoms; (5) fever; (6) severe and often fatal course of the disease; (7) nervous effects and symptoms in many cases; and (8) favorable prognosis if the cause is re-

moved in time. In Addison's anæmia the septic factor is a most important antecedent and concomitant, but not the only factor. It precedes the disease, creating conditions of the mucosa in the mouth, stomach, and intestines, which permit the contraction of the specific (hæmolytic) infection underlying the real characteristic features of the disease, marking it off from simple septic anæmia. These are: (1) An intense hæmolysis, accompanied by pigment changes in the liver, kidney, and spleen, which changes are characteristically absent in simple septic anæmia. (2) The occurrence of a glossitis, possessing peculiar clinical features and pathological characters, and associated with a deep-seated infection of the tongue itself. (3) The contraction of this infective glossitis coincides approximately with the onset of the severe anæmia and its accompanying hæmolysis. (4) The source of this hæmolytic and glossitic affection which thus, comparatively speaking, suddenly comes on, is connected in all cases with an exposure to drain poisons. (5) The hæmolytic infection once taken root in the mucosa of the tongue, stomach and intestine, is extraordinarily persistent. In conclusion the author suggests that the title which would best describe the characters of the disease would be "specific infective hæmolytic anæmia."

An Epidemic Caused by the Diplococcus of Fraenkel in a Circumscribed Group of Families.

—Dr. C. Baduel and Dr. C. Gargano (*Gazzetta degli ospedali e delle cliniche*, January 4th) give some clinical and bacteriological notes regarding a series of affections due to the diplococcus of Fraenkel, which occurred in the members of a group of families. Six children of the family, C., were treated in January last in the Medical Institute, at Florence, by the Pasteur method for hydrophobia. They lived with a family, S., in a suburb of the town, but three of them slept with a third family, B. The first child affected had a double purulent otitis media; the second developed a few days later a lobar pneumonia involving the lower lobes, and followed by pleurisy with effusion on one side and an empyema on the other. The third child was taken with a sharp attack of pneumonia of the lower right lobe and was brought into the clinic at the same time as the first. The fourth child developed a diffuse catarrhal bronchitis, and the fifth and sixth showed the same signs as the fourth, except in a milder degree. Almost simultaneously the children of the family S. fell ill; the first, with lobar pneumonia; the second with catarrhal blepharitis and conjunctivitis, and a few days later a child living in an adjoining house was brought in with an ulceration of the gums on the right superior maxilla. A little later, the remaining children of the S. family were brought in, one with parotiditis, the other with catarrhal amygdalitis. The children of the B. family remained immune. This was evidently an epidemic of some kind, and on bacteriological examination it was found that the children were all suffering from infection with the diplococcus of Fraenkel. This illustrates the fact that such an epidemic can occur in a circumscribed group of persons living closely together, and that the same germ may give rise to different clinical manifesta-

tions according to the soil on which it grows. In all the cases here mentioned the diplococcus was found in the blood taken directly from the vein. This shows, according to the authors, that the presence of Fraenkel's germ in the blood in the various diseases caused by this organism is not a sign of a complication or of the greater gravity of the disease, but simply a symptom of the affection resulting from the invasion of this coccus.

The Prognosis of Tuberculous Peritonitis in Children.—Dr. G. A. Sutherland (*Medical Press*, January 28th) gives the results of a study of forty-one cases of tuberculous peritonitis treated in the in-patient department of the Paddington Green Children's Hospital. His paper, which is of much interest, may be summarized as follows: (1) In uncomplicated tuberculous peritonitis the prognosis is good. (2) When tuberculous pleurisy is present the prognosis is still favorable. (3) The prognosis is rendered less favorable in the case of (a) a strong family history of tuberculosis; (b) an infancy passed under bad hygienic and dietetic conditions; (c) a constitution of feeble resisting power; or (d) a history of severe infective illness in early life. (4) The prognosis is rendered less favorable in the presence of one or more of the following symptoms: continuous pyrexia, rapid wasting, persistent diarrhoea, rapid pulse, and recurrent acute exacerbations. (5) The prognosis is rendered less favorable in the presence of one or more of the following local complications: (a) tuberculous ulceration of the bowel; (b) extensive caseation of the mesenteric glands or of tuberculous masses; (c) localized suppuration from infection through glands or the intestine; and (d) obstructive symptoms from bands or matting of the intestine. (6) The prognosis is bad in the case of the following complications: (a) the rupture of a suppurating gland, or the perforation of an intestinal ulcer into the peritoneal cavity; (b) pulmonary tuberculosis; (c) tuberculous meningitis; (d) general miliary tuberculosis. (7) The prognosis is not appreciably affected in tuberculous peritonitis by simple laparotomy.

Two Cases of Carcinoma of the Liver Presenting Several Points of Clinical and Pathological Interest. By Dr. H. R. Vachell, and Dr. W. M. Stevens. (*British Medical Journal*, February 14th).—The chief points of interest in the two cases of cancer of the liver here reported are as follows:

Case I.—(1) The patient was apparently well until eight weeks before his death. This rapid course is characteristic of primary cancer of the liver. (2) There was no marked wasting. (3) The only symptoms were marked jaundice and ascites. The enlargement of the liver was painless, and there were no adhesions. (4) At the necropsy no other primary source of infection could be found outside the liver. (5) The liver was enormous, weighing over seventeen pounds. (6) To the naked eye the liver suggested a cirrhotic condition.

Case II.—This illustrates how small a primary growth may be which nevertheless gives rise to very marked malignant disease of the liver. Here the primary growth was a small, thin, white "plaque" of growth entirely confined to the submucosa of the

pylorus. There was a marked history of alcoholic excess; no jaundice but marked ascites; the liver was enlarged, but not palpable, and there was an absence of both pain and tenderness. So that the condition before death was suggestive of alcoholic cirrhosis.

The Use of Atropine in Intestinal Occlusion.—Dr. Ugo Fabris (*Gazzetta degli ospedali e delle cliniche*, January 4th) reports a case of intestinal obstruction in a man aged fifty years, in which a marked benefit was obtained from the use of atropine. The results of surgical intervention in cases of intestinal obstruction, as statistics show, are not all that could be desired, and in some cases the life of the patient can be saved by medical measures. The reason of the failures of surgery in the treatment of intestinal obstructions is not in a lack of operative means at our command, but in the fact that precious time is often lost before the operation on account of the difficulty of diagnosing the obstruction. The patient whose case is here reported was admitted to the hospital in a grave condition almost approaching collapse, with distended abdomen, which was intensely painful to the touch and tympanitic on percussion. There was constant hiccup and vomiting of stercoraceous material. Under these conditions, a surgical operation did not offer a certainty of improvement, and before resorting to it, the author decided to try Batsch's method, *i. e.* the use of atropine. This remedy is used with the idea that it will reawaken peristaltic movements and thus overcome the obstruction. Small doses of atropine were injected four times at short intervals, after which the patient began to improve. The pains ceased almost immediately after a normal defecation, accompanied by a passage of a great deal of gas. He was discharged cured from the hospital after ten days.

Electric Shocks. By Dr. S. Jellinek. (*Lancet*, February 7th).—Among the interesting points brought out by the author are the following: Susceptibility to an electric shock depends upon the individual, women and children showing less resistance than men. The point of entry is of importance, mucous surfaces being much more dangerous than the skin. All diseases which lower skin resistance—Basedow's disease, diseases of the heart and kidneys—predispose to accident from electric shock. Otherwise dangerous shocks are harmless to sleeping persons; experiments upon sleeping or insensible animals confirm this statement. The "cry" in cases of electric shock is a rapid drawing in of the breath; it does not occur in every case and is due to sudden contraction of the diaphragm. Both alternating and direct currents from 500 to 600 volts are dangerous and currents of tension of 1,000 volts without exception are fatal. With a low tension of from 100 to 200 volts the alternating current is much more disagreeable. The author protests against lowering the head of a person who has sustained a severe electric shock, for the reason that in such cases the capillaries of the central nervous system are often torn and there is slight hæmorrhage, which would be increased by the posture recommended. It is better to perform venesection.

Artificial respiration should be continued for hours; massage of the abdomen and of the region of the heart, placing the patient in a hot bath, subcutaneous injections of camphor, ether, or strychnine, should be carried out.

The Value of Blood Examinations as an Aid to Diagnosis and Prognosis. By Dr. J. H. Bryant. (*Lancet*, February 7th).—In this article the author considers his subject under the following heads: (1) The estimation of the number of red and white corpuscles and the percentage amount of hæmoglobin; (2) an examination of stained blood films in order to determine the relative proportion of different kinds of leucocytes, the form and character of the red blood corpuscles, and the presence or absence of protozoa and microorganisms; (3) the determination of the agglutinating power of the blood on certain bacilli—*e. g.*, in typhoid fever and Malta fever; and (4) the bacteriological points are the following: A Widal reaction is not considered positive unless clumping and immobility of the bacilli occur with a 1 to 200 dilution within half an hour. Examinations made before the eleventh day of the disease with a negative result are of little value. If the clinical evidence is enough to make the diagnosis certain, a negative serum reaction should be looked upon as a warning of the probability of a relapse. In making bacteriological examinations of blood, every precaution must be taken against contamination. The staphylococcus albus, if found, is due to contamination and is not the specific cause of the disease from which the patient is suffering. The microorganism most frequently obtained is the *Streptococcus pyogenes*.

SURGERY AND ANATOMY.

The Treatment of Cicatricial Strictures of the Œsophagus by Means of Electrolysis.—Dr. I. B. Zeldovitch (*Roussky Vrach*, January 4th) says that the subject of electrolysis has been neglected to an extraordinary extent, so that even the latest textbooks on surgery dismiss this form of treatment in connection with strictures of the Œsophagus in a few lines. The fault lies with those who practise this mode of treatment; for they sing its praises too loudly to be believed. The rationale of the action of electrolysis is not fully understood, nor are we sure that the process is a radical one and that no recurrences will appear. The author admits that in his own cases he has observed recurrences of the cicatrices, but after a long time, much later than after mechanical dilatation. The reasons for this are that, in the first place, electrolysis secures a much more complete dilatation than mere mechanical stretching, and secondly, that it destroys so much scar tissue that a great deal has to form in order to cause a reformation of the cicatrix. Therefore, electrolysis is certainly more lasting in its effects than mechanical dilatation. Besides, dilatation is achieved much more rapidly with electrolysis, a few sittings being all that is required to dilate a stricture to from No. 10 to No. 39, while months are needed to get this size, and usually not more than No. 32 or No. 33 is reached, by the mechanical method. When, in addition to this, it is remembered that electrolysis is

neither dangerous nor painful, this mode of treatment appears to be the best and most effective conservative measure in cicatricial stenoses of the cesophagus.

Aneurysm of the Ascending Arch of the Aorta in a Small Boy: A Post-mortem Surprise. By Dr. A. C. Jordan. (*Lancet*, February 21st).—The author reports the case of a boy aged six years suffering from otitis media from babyhood, who was suddenly attacked with what was supposed to be acute rheumatism, the left knee being affected. He improved, but on the twentieth day of his illness, when apparently convalescent, he suddenly died. At the autopsy the heart was found to be enveloped in a thick coat of dark blood clot. On removing this, there was found on the anterior surface of the ascending arch of the aorta, a sacculated, light-red swelling, in the centre of which was a horizontal slit-like opening. Evidently a small opening in the intima had occurred, and blood had leaked through causing a limited bulging of the fibrous coat of the aorta. It is possible that there was a small septic ulcer in the aorta, the base of which had given way. But the valves and interior of the heart and the rest of the aorta were perfectly normal. Again the aneurysm may have originated as a localized septic aortitis, due to a minute pyæmic embolus in one of the vasa vasorum.

An Unusual Number of Gall Stones; Cholecystotomy; Recovery. By Dr. C. A. S. Ridout. (*Lancet*, February 14th).—The author reports the case of a married woman aged forty-three years, who was operated upon for gall stones. The cavity of the gall bladder was found to be full of smooth, small, faceted calculi, averaging about the size of a large pea, of which 449 were removed. The patient bore the operation well, and recovered slowly. Two more calculi were passed through the drainage tube, bringing the total up to 451.

Ligation of the Common Carotid Artery for Gunshot Wound of the Lower Jaw.—Dr. B. S. Miklashevsky (*Roussky Vrach*, January 11th) communicates a case of gunshot wound in the region of the inferior maxilla, in which there was a lacerated wound extending from the angle of the jaw to the chin, and involving the entire submaxillary region of that side. The entire ramus of the jaw was shattered, and the fragments of bone were removed. There was considerable hæmorrhage which was controlled, however, by the application of iodoform gauze tamponing. The wound suppurated and the remainder of the jaw began to necrose, so that it had to be resected. A secondary very abundant hæmorrhage gave occasion to reopen the wound and tampon it more carefully. Several such hæmorrhages occurred, each followed by a new tamponing, until a very severe flow of blood threatened to exsanguinate the patient. The carotid was then compressed, a hypodermic injection of a litre of salt solution was given, and finally the carotid was ligated. In view of the fact that the bifurcation of the carotid was not easily found, owing to the swelling of the parts, and in view of the danger of a possible fresh hæmorrhage, the common carotid was tied

at its middle third, as the easiest place for ligation. The wounded vessel was then looked for after enlarging the wound. The wad of the cartridge was found in this situation, but as both the external and internal carotids were found injured, the ligature was left on the common carotid. The recovery was rapid and uneventful. Several months later a sudden attack of hemiplegia on the side opposite to that on which the common carotid was tied came on, but disappeared after three months. This hemiplegia was due without doubt to the occurrence of hæmorrhage in the brain as the result of the ligation of the common carotid artery. The author believes that serious operations on the neck would be rendered safer if the common carotid was first temporarily ligated, and says that this procedure is without risk to the brain, provided the ligature is taken off before any lesion has time to occur in the cerebral tissues. The point made by Tillaux, that it is easier to find the common carotid when we wish to be sure that we are not injuring the jugular vein, by drawing the larynx and first part of the trachea well to one side with a hook, is an excellent one and of great assistance in ligating the common carotid. Of the 914 cases of ligation of the common carotid reported in literature, there were 337 in which this operation was performed for new growths in the neck, 335 for hæmorrhage, 75 for aneurysm, and 54 for desperate cases of trigeminal neuralgia. The general mortality of the operation is 39 per cent., but in the majority of instances the deaths are due to the primary disease for which the ligation was performed. According to Hueter, the mortality of pure uncomplicated ligations of the common carotid was only 5 per cent.

Unsuccessful Operations for Cancer of the Tongue, and the Early Diagnosis of the Disease. By H. T. Butlin, F. R. C. S. (*British Medical Journal*, February 14th).—The author's article is based upon a series of 129 operations for cancer of the tongue; of these 32 were absolute successes. There is no part of the body in which early operation for cancer is called for so urgently as in the tongue; and nowhere else are early operations followed by better results. The early diagnosis of cancer of the tongue is easily made; and, further, the disease is usually preceded by certain well recognizable precancerous conditions. Among these conditions are leucoplakia or leucoma, glossitis, warty growths and ulcers. All these conditions may be classed under the head of chronic superficial glossitis, and it makes no difference whether the condition is due to past syphilis, to rheumatism or gout, or to excessive use of tobacco or alcohol—any person who has such a condition of the tongue is liable to cancer. Lumps and nodules in the tongue rarely become cancerous—it is only the surface conditions that are dangerous. The author protests against the usual treatment of such cases by physicians—the use of nitrate of silver, lotions, washes, iodides, etc., which does no good and permits the development of cancer. Early and radical operation is called for in every suspicious case. The laity are ignorant of the deadly nature of the disease and are prejudiced against operations on the tongue; the operation itself is generally believed to be very dangerous, and there

is fear of loss of the power to speak. Warty growths should be cut out by means of elliptical incisions, and the edges brought together, when healing will take place in four or five days. Indolent superficial ulcers are often thought to be due to irritation from a tooth; remove the tooth and if the ulcer does not heal, cut it out. If white patches or plaques become thicker, remove them at once. The author even goes so far as to remove portions of the tongue in cases of obstinate superficial glossitis.

OBSTETRICS AND DISEASES OF WOMEN.

Inclination of the Gravid Uterus to the Right.—The knowledge of this deviation is of much practical value, as in Cæsarean section; and is a potent reason for the preference of the left lateral position in delivery, writes M. Zúñiga. (*Gaceta Médica de Costa Rica*, January). Statistics are at variance as to the frequency with which the inclination to the right occurs, but the author has seen it in eighty-eight cases out of a hundred. Of the numerous influences which have been cited in explanation of this preference for the right, the principal are said to be: (1) The right ovary, which weighs thirty grains more than the left. (2) The insertion of the placenta toward the right. (3) The presence of the sigmoid flexure with its faecal contents upon the left. (4) The habit of sleeping upon the right side. (5) The habitual use of the right arm. (6) The relative shortness of the right round ligament. The author believes that the explanation of the phenomenon is really to be found in embryological development; that is in the inclination of the Müllerian ducts toward the right.

A Note on Bossi's Dilator in Eclampsia. By Dr. J. W. Ballantyne. (*British Medical Journal*, February 21st).—The rapid dilatation of the cervix uteri with Bossi's four-bladed dilator, and the rapid termination of the labor by forceps or naturally, is the newest method of management of cases of eclampsia in labor. The author reports three such cases in which he adopted this method; in all, the mothers recovered, but the child was dead in two. In all the cases the patient was in labor when first seen, and there was no opportunity of dealing with the condition by prophylaxis.

A Series of Cases of "Non-septic Puerperal Pyrexia." J. Lamond Lackie, M. D., F. R. C. P. Ed., while advising (*Edinburgh Medical Journal*, February) that in the first instance one should regard all rises of temperature after labor with grave suspicion, and that, when in doubt as to the cause, we should treat these energetically as real cases of puerperal septic fever, still points out that ordinary septic organisms are not the only causes of puerperal fever, and gives some illustrative cases. The first case of puerperal fever he records can be regarded as purely neurotic. There was absolutely no indication of sepsis, and the rapid disappearance of the high temperature when none but moral treatment was adopted, could not have occurred except in a nervous condition. Throughout the illness there was a striking discrepancy between the temperature

and the pulse rate, the latter being often nearly normal, while the former was very high; and this fact helped one in diagnosis. The condition of the pulse is always a more important indication of the gravity of a case than the exact degree of fever. The patient was not suffering from mania. She had a fixed notion that she could not possibly survive labor, and during her puerperium she was so nervous and so expectant of death that the high temperature resulted. A second case illustrates the course, and some of the anomalies of puerperal scarlet fever. One of the anomalies would seem to be that, in puerperal scarlet fever, the incubation period may be very much prolonged. A third case was of puerperal influenza. In connection with a fourth case the author notes the occurrence of a rigor and high temperature after an intrauterine douche, and he asserts that he has always noticed that such a rigor occurred in cases in which the result of the douche proved that there was no retention of septic material. In cases where there has been urgent need for an intrauterine douche, the result has been no rigor but a rapid fall in the temperature, at all events, for a time.

The author refers also to those frequent puerperal cases in which fever results from acute constipation, from chill, from emotion, from congested mammae, from sore nipples, and from reflex irritation. A puerperal patient may be attacked by any acute disease, but it is a good rule to suspect and treat all such cases as of puerperal origin.

A New Method of Uterine Fixation in the Treatment of Posterior Deviations and Prolapses.—Dr. G. Foschini (*Riforma medica*, February 4th) describes the following method of attaching the uterus, which he has found to give satisfactory results. The patient is placed in the Trendelenburg posture and an incision is made in the median line, 3 centimetres over the pubes and from 8 to 10 centimetres long. The edges of the peritonæum are attached to the margins of the incision by means of two silk sutures. The uterus is now liberated from adhesions and is brought into the wound by means of Museux forceps, and is held in this position by an assistant. The intestines being protected by means of gauze sponges, the necessary operation can be performed upon the appendages. A button-hole is now made through all the layers of the abdominal wall, except the skin, by means of blunt dissection using an ordinary Péan's forceps, three or four fingers' width over the pubes, and from 3 to 4 centimetres externally to the internal border of the rectus muscle. The left hand holds the abdominal wall while the right perforates the muscles and fasciæ. The jaws of the forceps are then slightly opened in this buttonhole, and the round ligament of the same side is introduced between them. The jaws of the forceps are then closed over the ligament and the latter is introduced through the buttonhole. The same procedure is followed on the other side. The Museux forceps are then removed, and the muscles and fasciæ are sutured. The artery forceps are left on the ends of the round ligaments holding them at the external surface of the muscular layers after they have passed through the buttonhole. Both round ligaments are then drawn forward and up-

ward, and sewn by means of silk sutures to the borders of the buttonhole. The portion of ligament which remains over the aponeurotic plane is scarified to facilitate adhesions of the serous surface and is sutured with a few stitches to the underlying muscles. Finally, the incision is sewn at the median line.

DISEASES OF CHILDREN.

Suture of the Brachial Plexus in Birth Paralysis of the Upper Extremity. By Dr. R. Kennedy. (*British Medical Journal*, February 7th).—The author holds that the only rational way to treat cases of birth paralysis is to deal with them just as injuries to the peripheral nerves in general are treated. As there is the possibility that the lesion is a slight one which may be spontaneously recovered from, it is right to delay operation until the lapse of a certain time to see if the developing electrical reactions will indicate an approaching recovery of the muscles. This period is about two months, after which time, if there is no improvement, the seat of injury must be exposed and the nerve lesion dealt with on general principles. The author reports three cases in which he performed suture of the brachial plexus (first excising cicatrices); in one the improvement was most marked, complete power of movement being restored. In the two others there was no recovery of voluntary motion.

MATERIA MEDICA, PHARMACY, AND THERAPEUTICS.

Potassium Permanganate as a Specific Antidote in Morphine and Opium Poisoning. By Dr. S. A. Finkelstein.—The article under this heading on p. 434 of our issue for March 7th, was abstracted from *Roussky Vrach*, January 4th.

Method of Finding Tubercle Bacilli in the Blood.—M. F. Bezançon, M. V. Griffon and M. Philibert (*Presse médicale*, January 14th) describe their method. Five cubic centimetres of blood are caught in a vessel (blood and serum), to which are added five cubic centimetres of distilled water and five drops of soda lye. This mixture is then ground until the clot dissolves in the liquid. In this mass twenty cubic centimetres of water is added and it is boiled in a porcelain dish for ten minutes. The liquid is then separated into two tubes and rapidly centrifugated for ten minutes. The deposit is then removed and stained by Ziehl's method. By this method, the authors have succeeded in obtaining tubercle bacilli from the blood of animals experimentally inoculated and from human beings. They say that by this simple and rapid method, if it is systematically and thoroughly carried out, tubercle bacilli will surely be found if the patient has tuberculosis, and that it may serve as an early means of diagnosis of the disease.

A Note on Some Further Uses for Picric Acid. By F. V. Milward, F. R. C. S. (*British Medical Journal*, February 21st).—The lesions in which picric acid is particularly helpful are those in which the loss of superficial epithelium has produced a raw and painful sore, discharging serum and sero-

pus. This "weeping" surface is best seen in acute eczematous conditions, but it is also common after traumatic abrasions. Picric acid, which is a coagulant and an analgetic, is a simple and effective remedy and promotes rapid healing. It is best used as a saturated solution, 1 in 95, in distilled water. The rationale of the treatment seems to be the formation of a pellicle of coagulated albumin over the wound, and so the protection of the ruptured superficial lymph spaces and exposed nerve endings. But should active inflammation be present, the microorganisms may be confined beneath the protective coating and give rise to further trouble. In cases of perionychia, ingrowing toenail, and intertrigo, for example, picric acid acts exceedingly well. The acid must be applied very thoroughly, and renewed frequently until the coagulated lymph completely covers the sore. Its only drawback is the deep staining it produces, but it appears to cause no irritation to the tissues.

A Case of Hæmatophilia Illustrating the Value of Calcium Chloride as a Local Styptic. By T. W. Parry, M. B. (*Lancet*, February 21st).—The author reports a case of hæmatophilia, occurring in a boy aged seven years: The bleeding came from the mouth, the blood welling up between the left lower first permanent molar and the temporary molar in front of it. The bleeding lasted for four days, during which time the interdental fissure was plugged as efficiently as possible with minute pledgets of wool soaked in various styptics—alum, tannic acid, turpentine, perchloride of iron, and suprarenal extract. But the bleeding was not checked until calcium chloride was employed, in the form of a thirty grains to the ounce solution; it then ceased at once and did not return. Calcium chloride is cleanly, and further does not harm if swallowed, but on the contrary is the very drug one would prescribe in cases of hæmatophilia.

PHYSIOLOGY AND PATHOLOGY.

Preliminary Note on the Parasites of Smallpox and Chickenpox. By Dr. R. S. Thomson and Dr. J. Brownlee. (*British Medical Journal*, January 31st).—The authors formulate the following tentative conclusions: (1) There are present in the blood of persons suffering from hæmorrhagic smallpox, small, highly refractive, spherical bodies simulating globules of fat. They do not stain, however, with osmic acid or with acid or basic stains. Similar bodies are found in confluent smallpox from the fourth to the seventh day, and abundantly in the prodromal stages of smallpox and chickenpox. (2) In sections of the skin containing hæmorrhages similar bodies are found among the extravasated red corpuscles, but here they stain faintly with acid and basic stains. (3) In the lymph spaces and smaller blood vessels are found groups of small spherical bodies, larger than staphylococci, and staining with difficulty. (4) These assume a peculiar purplish hue when Ehrlich's triacid stain is used. (5) In skin sections where the eruption is moderately advanced, similar bodies are present in large numbers in the epithelial layers. Where the cell nuclei are disintegrating they are

difficult to distinguish. (6) In smears from vesicles, similar bodies are also found, and in the papular stage of the eruption they are present in the lymph exuded among the epithelial cells. (7) In smears from the pocks in the later stages of the eruption, within certain of the cells small clear bodies may be seen, staining faintly with ordinary reagents. These bodies increase in size as the disease progresses, until finally they are found in a free state. (8) The absence of pyogenic micro-organisms, both from smears and skin sections, is very striking in the hemorrhagic cases. (9) Toward the end of the vesicular, and in the postular, stages, pyogenic organisms are frequently found. (10) Appearances similar to those described in variola occur in varicella. In hæmorrhagic smallpox pyogenic organisms are frequently found in the blood, but they are probably the result of accidental contaminations.

Teratoma.—Dr. L. Pick (*Berliner klinische Wochenschrift*, December 22nd) reports a case of a hydatid growth in a dermoid cyst of the ovary, with histological examination. He concludes that chorio-epitheliomatous or hydatid products can originate as a part of a teratoma, or can be present alone as a morbid growth, in entire independence of pregnancy in any part of the male or female organism. Between new growths of this character and the usual chorioepithelioma and vesicular mole of the female, the following difference exists, although the anatomical structure and the histogenesis are identical: the ordinary growths stand in relation to the affected individual as descendants, the former in the relation of consanguinity. Pick believes the origin of these growths still unsolved.

Multilocular Congenital Cysts of the Kidneys.—M. Edouard Boinet and M. A. Raybaud (*Revue de médecine*, January 10th) conclude from their study that there probably exist several types of congenital polycystic kidneys, the form depending upon their ætiology, their pathogeny, and the period of their embryonal formation. It is also probable that the small cystic kidneys, congenitally atrophied and retracted, are of syphilitic origin and quite different from the large polycystic organs which coincide with a variety of malformations of the urinary apparatus. At the present time, however, these congenital malformations have been studied in such a variety of ways that a definite opinion can not yet be stated and much further research is necessary before the origin of the condition can be scientifically pronounced.

A Résumé of Some Recent Researches Relating to Cytolysis and Immunity. By T. Mitchell Prudden, M. D. (*Medical Record*, February 14th).—Dr. Prudden's paper will be of great interest to all who, while taking an interest in the progress of modern scientific medicine, find it difficult to keep abreast with recent medical research work by looking up the original records that are so widely scattered through the German, French, and English technical periodicals. The paper reviews briefly the earlier theories of immunity, both natural and acquired, and illustrates the various ways by which

the latter may be induced. The discovery of diphtheria antitoxine, some ten years ago, compelled pathologists to modify greatly some of their most cherished theories, but it was not till after Pfeiffer's epoch-making discovery (the so called "Pfeiffer phenomenon") that the efforts of bacteriologists were turned in the present direction which seems so full of promise. The subject matter of the paper is such an intricate one, and it has been so obscured by a complicated and cumbersome nomenclature, that we shall only attempt to indicate very briefly the various phases of the subject as they have been reviewed by Dr. Prudden.

The "side-chain" hypothesis of Ehrlich.—Without this hypothesis we are to-day still practically at sea in our views of the nature of antitoxic immunity. It is essential, therefore, that this theory be well understood. Dr. Prudden gives a very clear exposition of the theory, and by means of a diagram makes misunderstanding impossible. He then shows how this theory serves to account, not only for the formation, protective action, and specificity of antitoxine, but also why active immunity is less immediate but more prolonged than passive immunity.

Cytolysis.—This is the next question considered. It is to Bordet that the credit must belong of having stated a new line of investigation which bears on bacteriolytic immunity. So far this line of research is in its infancy, but it is being pursued with such vigor that the future is most promising. Other important questions, such as phagocytosis, the "agglutinative substances," and the "precipitating substances" are elucidated by the author. A review of Welch's recent hypothesis, as announced in the Huxley Lecture for 1902, and a table showing various forms of adaptation products, with their relationships and synonyms, concludes the paper.

Laboratory Aids in the Diagnosis of Typhoid Fever. By E. E. Smith, M. D., Ph. D. (*Medical News*, February 14th).—Laboratory tests devised for the purpose of aiding the diagnosis of typhoid fever have in view one of the three following objects: (1) The detection of characteristic morbid products of the disease. (2) The isolation and identification of the infecting organism. (3) The detection of certain cell products induced by the presence of the infecting organism. (1) The detection of morbid products. Practically the unidentified product which gives the diazo-reaction is the only substance of the class that can be tested for. As to the value of the diazo-reaction, opinion differs greatly. The author believes that on the whole the test is of considerable value, but that its absence does not exclude typhoid, and that when it is present other diseased conditions that are capable of giving the diazo-reaction must be excluded. (2) Isolation and identification of the bacillus may be attempted by examination of (a) the rose spots, (b) the blood, (c) the urine, and (d) the feces. The first two methods are usually practicable only in hospital practice. The last two while generally available are not infrequently negative. (3) The agglutination test is now generally recognized as of great value. Misleading results are due to faulty technics, and a positive Widal reaction in

the hands of a competent observer must now be given the greatest weight. It must always be remembered, however, that at times the Widal reaction does not appear until late in the disease. In addition to the agglutination test with cultures of the typhoid bacillus, similar test should be made with cultures of the two species of paratyphoid bacilli that have been described by Buxton. "In conclusion, while the laboratory does not offer any one aid in diagnosis that is certain at all times in all cases, it does, materially, aid the clinician by the means mentioned, ..."

An Improved Hypobromite Process for the Estimation of Urea. By H. J. Pechell, M. B. (*British Medical Journal*, January 24th).—It is well known that, while normal urine does not give up all its urea nitrogen when tested by the hypobromite process for urea, yet diabetic urine yields practically all that it should. The author therefore recommends that every specimen of urine to be examined for urea should first be converted into an artificial "diabetic" urine, by the addition of 2 cubic centimetres of a 25 per cent. solution of glucose to each 5 cubic centimetres of urine. No explanation is given of the increased output of nitrogen in glucose urines.

Steps of the Inflammatory Process in the Bryocytic* Maladies.—M. F. J. Bosc, (*Presse médicale*, January 14th) places in one group the dissimilar diseases, cancer, syphilis, variola, aphthous fever and sheep pox (*clavelée*), as well as vaccinia. He calls them bryocytic diseases. They represent different rings in the same chain, sheep pox at one end and cancer at the other, all being inflammatory and virulent. The neoplasm, whether of syphilis, of smallpox, of sheep pox, or of cancer, must not be considered as a malignant growth in itself, for the malignancy consists in the contained virus, but these should be regarded as the representation of an active process of defence of the organism, as a persistent effort of the cells—sometimes successful, sometimes not—to immure the parasite at the seat of its multiplication. A study of these forms of disease shows them to be, in the succession of virulent microbic or mycotic proliferative diseases, a high and specialized form of inflammatory reaction, of which cancer is the last expression.

The author speaks of his efforts with anti-sheep-pox serum as efficient, and has applied the same remedy empirically in smallpox and syphilis, and has obtained appreciable results in cases of cancer.

Note on a New Method of Producing Hæmolysins. By Dr. M. A. Ruffer and Dr. M. Crendiropoulo. (*British Medical Journal*, January 24th).—The authors find that if urine of a healthy man is injected two or three times subcutaneously into a rabbit, the serum of this rabbit acquires a marked hæmolytic action on human red blood corpuscles. Heating the serum to 56° C. does not destroy its hæmolytic properties. It is not altogether specific for human red blood corpuscles; it has, for instance, some action on the red blood corpuscles of guinea pigs.

* From βρῖεν, to proliferate.

Anaerobic Microbes in Urinary Infections.—M. J. Albarran and M. J. Cottet (*Presse médicale*, January 21st) conclude that the anaerobic bacteria play a very important and hitherto unsuspected rôle in infections of the genitourinary tract. This fact explains the differing results obtained by examination of the bacteria on slides and after culture in the ordinary media. The pus often showed polymicrobism while cultures remained sterile or showed a few colonies, because the anaerobes could not develop, but when placed in proper media, developed abundantly. These facts show that the statement, often made, that pus from an abscess was sterile, must be taken with reserve. Practically, these observations are important, since the gonococcic infections may be simulated by the diplococcus reniformis. In every case of genitourinary infection, the anaerobes must be studied as strictly as the aerobic bacteria.

Perforation of the Œsophagus by Tuberculous Glands. By Dr. C. Riviere. (*British Medical Journal*, January 24th).—The author reports three instances of tuberculous glands opening into the Œsophagus, all occurring in children two years old or under, the condition being discovered at autopsy. In each case it was the gland or glands situated below the bifurcation of the trachea which caused the trouble. The amount of abdominal tuberculosis present in these cases was a marked feature. In one there were tuberculous ulcers of the stomach, a very rare condition; in all three there was intestinal tuberculous ulceration and caseous mesenteric glands; and in two, the retroperitoneal glands were also caseous. In two of the cases the gland was completely emptied of its caseous contents, and its cavity was smooth walled and appeared to possess a mucous lining. In children the bifurcation gland is often, or even generally, the first visible seat of tubercle in the body, and in some cases the disease goes no further. The author is inclined to think that many cases of Œsophageal diverticulum occurring in this situation are due to this cause. Beyond the causation of a far-spreading abdominal tuberculosis, perforation of the Œsophagus by a caseous gland seems to give rise to no symptoms and its presence cannot be diagnosed during life.

Ætiology of Arthropathic Changes.—Dr. W. Berent. (*Berliner klinische Wochenschrift*, January 26th) calls attention to the neuritic influences which have recently been ascribed as ætiological factors in joint changes. In a case described by him, an aneurysm of the left subclavian artery through pressure on the brachial plexus evoked an interstitial neuritis with secondary degeneration of the nerves in the course of the distribution of the plexus, a thickening and sensitiveness of the palpable nerve branches—all leading to typical trigger fingers with considerable swelling of the lower arm. The Röntgen rays showed the picture of osseous atrophy. The neuritis alone can be regarded as the ætiological element in this case, although the nature of the process is not understood.

Proceedings of Societies.

SOUTHERN SURGICAL AND GYNÆCOLOGICAL ASSOCIATION.

Fifteenth Annual Meeting held in Cincinnati, November 11, 12, and 13, 1902.

The President, Dr. W. E. B. DAVIS, of Birmingham, Alabama, in the chair.

Hypertrophy of the Prostate.—A paper on this subject was read by Dr. N. P. DANDRIDGE, of Cincinnati. A case reported by the author showed that complete perineal prostatectomy enabled the surgeon to deal with a class of most distressing cases in a more satisfactory manner than ever before. The author did not decry the merits of any of the newer operations upon the prostate. He urged strongly the necessity of not being carried away by operative furor, which might lead to the same excess that a few years ago characterized the surgery of the ovary, an excess which was now followed by a marked recoil. The experience of Murphy was worthy of special notice, namely, the ready manner in which stone in the bladder could be dealt with after a perineal prostatectomy. The necessary opening of the urethra afforded an opportunity for the extraction of stone.

Conservative Operations upon the Ovary.—Dr. L. H. DUNNING, of Indianapolis, reported his experience in dealing with more than a hundred cases. He employed the method of incising small single cysts, removing the lining membrane, trimming away the redundant portion of the outer wall of the cyst, and joining the edges of the incision by a running stitch of fine catgut. Single hæmatomata were treated in a similar manner. In a few instances he had used the thermocautery to check hæmorrhage, and in other instances he had punctured several small cysts and dropped the ovary. He reported gratifying results in eighty per cent. of the cases. After a few trials he had rejected conservative methods in purulent cases, and in cases in which there were numerous small cysts in all parts of the ovary. He found conservative work unsatisfactory in sterile married women and in interval appendicitis operations in which there was a markedly cystic right ovary. In his series there were known to be six cases of pregnancy in which the patients were happy mothers, and there was a group of ten cases in girls and young women from whom he had extirpated an ovarian tumor from one side and had done a conservative operation upon the other ovary with a large measure of success.

The Surgical Treatment of Pancreatic Cysts.—Dr. A. M. CARTLEDGE, of Louisville, said that cysts of the pancreas, while rarely encountered, were still the most common pathological condition of this organ that surgeons were called upon to treat. There was little doubt that the field of surgery as applied to the pancreas should be extended, and some of the more recent contributions to the subject would attract the attention of surgeons to this almost unexplored region of the abdomen.

A comparison of the results shown by statistics

indicated that incision and drainage should be practised as a routine procedure in pancreatic cysts; and yet, a closer study of the clinical form which the cyst might present, together with a careful study of the convalescence of the drained subjects, might cause surgeons to attempt extirpation of the sac more frequently and with better results.

The author's experience with the treatment of pancreatic cysts was limited to two cases, one treated by incision and drainage and the other by enucleation of the cyst. Both patients recovered.

Dr. C. H. MAYO mentioned three cases of pancreatic cyst that had come under his observation, in one of which fat necrosis was especially noticeable.

Dr. L. H. DUNNING had encountered but one case, and this was associated with stone in the ampulla of Vater.

Dr. RICHARD DOUGLAS stated that the recent work of Mayo Robson, and others, had shown the relation between gall stones and pancreatic disease, and it was possible that in this connection we might have a true solution of the pathology.

Dr. ALEXANDER HUGH FERGUSON mentioned three cases, one of them being a hydatid cyst of the pancreas.

The Curse of Gonorrhœa.—Dr. JOSEPH TABER JOHNSON, of Washington, followed with a paper on this subject, of which an extensive abstract was published in our issue for December 27, 1902, p. 1138.

Chronic Appendicitis and Movable Right Kidney.—In a paper on this subject, Dr. WALTER P. MANTON, of Detroit, called renewed attention to movable right kidney as an ætiological factor in producing chronic appendicitis. In the writer's experience, movable kidney was the most frequent cause of chronic appendicular disease. In two hundred consecutive cases from his notebooks, he found that the right kidney showed an abnormal mobility in 36½ per cent., and in 65½ per cent., nearly, of these cases a diagnosis of chronic appendicitis was also made. In 22½ per cent. the diagnosis was confirmed by operation. Among the other cases, some were of too mild a type to demand immediate surgical intervention; the patients refused operation, or were now waiting for this to be performed.

He laid special stress on two points—first, that in obscure abdominal conditions a diagnosis should not be attempted until movable kidney and chronic appendicitis could be excluded by careful abdominal palpation; second, that when nephroptosis and appendicitis were present, operations upon the uterus and annexa would not be followed by a cure unless one or both of these conditions was also removed.

Operation for Complete Laceration of the Perinæum.—Dr. GEORGE H. NOBLE, of Atlanta, described a new operation for the relief of this condition, which consisted in splitting the rectovaginal sæptum, dissecting the lower end of the rectum from the vagina, and drawing the anterior rectal wall down through and external to the anus, converting a complete tear of the perinæum into an incomplete laceration. He detailed the various steps of the operation.

Pregnancy and Labor Following Complete Nephroureterectomy.—A paper with this title was read by Dr. J. WESLEY BOVÉE, of Washington. He reported a case of complete nephroureterectomy, the operation having been performed March 18, 1901, for pyonephrosis, renal calculi, and miliary abscesses in the ureter. On April 15, 1902, after a normal labor of six hours, the patient was delivered of a male child weighing 10½ pounds. On the third day after delivery she complained of intense pain diffused over the abdomen, which on the following day became localized along the course of the left ureter. There was tenderness for several days after cessation of the pain in this region. The urine was carefully watched for calculi, but none were found. Since the birth of her child, she had nursed it and had remained in fine health.

In the essayist's case the condition of the remaining kidney did not seem to be worse than before pregnancy. There was little doubt that pregnancy and labor following nephrectomy seriously jeopardized the life of the patient; that the renal complications must necessarily be greatly increased, and therefore induction of premature labor and other forms of treatment of these complications were more frequently necessitated. In these cases the evidence of permanent impairment of the remaining kidney, as a result of pregnancy and labor, was by no means convincing, but the writer's individual opinion was that as records were made of such cases such effects would be apparent.

Personal Experience with McGraw's Method of Gastroenterostomy.—This was the title of a paper contributed by Dr. SAMUEL LLOYD, of New York, who, after quoting from the articles of Dr. McGraw, reported seven cases, all of them for cancer except one. All the patients recovered from the operation. One of them was still alive. This was a case of stricture of the stomach due to adhesions which drew the pyloric end out into a long tube and caused it to bend on itself. Of the others, all except two had died from exhaustion from progress of the growth after several months, and without signs of obstruction. One was lost sight of and the other died from an involvement of the anastomotic opening in the cancerous growth and consequent secondary closure of the new opening.

The essayist stated that his experience showed that the method was admirable; that it was efficacious and rapid in execution. He advocated in operating for pyloric obstruction that from eight to ten ounces of peptonized milk and one ounce of whiskey be introduced through a needle into the intestine below the point of the anastomosis during the operation. Its possible regurgitation during the operative manipulations could be prevented by pressing it well down along the intestine or by the application of an intestinal clamp.

The President's Address.—The PRESIDENT spoke first of the early history of the association and of the events immediately preceding its formation. He advised the members to establish a memorial to the association in Birmingham, the birthplace of the organization. He insisted upon what he had asked for last year for the American Medical Association in his presidential address before

the American Association of Obstetricians and Gynecologists. He said the national special societies had wielded a wonderful influence in the medical profession, and that medical literature had been enhanced in every way by them, and as individual societies they should be encouraged, but their union into a national congress was not conducive to the best interests of the medical profession. With the adoption of the new plan of organization, providing for a House of Delegates to take charge of all business matters in the American Medical Association, more time would be provided for scientific work. The special societies were under obligation to the American profession to assist in the better organization of these sections. Many of the members of these special societies were officers and active working members of the sections of the American Medical Association, and could accomplish this result. There should be one class of membership for the section that could be held only by those who were recognized as teachers and leaders to make membership very desirable and sought after. He would suggest that this class be known as fellows, and that they pay in addition to the annual dues of the association \$5.00 annually for section dues, which fund would be expended in the publication of the proceedings of the section. The officers and authors of papers should come from the fellows. All members should have the opportunity or privilege of taking part in the discussions.

Dr. Davis paid a tribute to the medical profession of the South, and spoke of McDowell, Sims, and Battey as epoch-makers in surgery. He also referred in glowing terms to the work of other eminent Southern surgeons.

The Surgery of the Lower Ureter.—Dr. HUGH H. YOUNG, of Baltimore, read a paper on this subject, which was accompanied by numerous illustrations.

Indications for Extirpation of the Gall Bladder.—A paper with this title was read by Dr. MAURICE H. RICHARDSON, of Boston, in which the author drew the following conclusions:

"1. Certain lesions in themselves demand removal of the gall bladder whenever possible. Such are new growths and gangrene.

"2. Certain other lesions of the gall bladder are better treated by extirpation. These are the contracted and inflamed gall bladders, with thickened walls. All gall bladders which do not permit of easy and efficient drainage should be extirpated, for in such gall bladders the risks of drainage are quite as great as the risks of extirpation; and the one great advantage of retention is impossible—retention of the biliary reservoir to fulfill the functions of that reservoir and to permit, if necessary, renewed drainage for future years.

"3. Drainage is preferable in the dilated and infected gall bladder, which, however, is neither gangrenous nor to any great extent changed—the slightly thickened gall bladder containing gall stones and infected bile. This gall bladder will, after drainage, become normal and therefore capable of fulfilling the functions of the gall bladder. Through it the biliary passages will become effect-

ually drained, after subsidence of the temporary swelling about the cystic duct.

"4. As a rule, drainage rather than extirpation is demanded in acute cholecystitis with severe constitutional symptoms, when the bladder is dilated or at least not contracted.

"5. In chronic infections of the gall bladder, with dilatation and thickening, and especially when a stone is impacted in the cystic duct, extirpation is the preferable operation, unless the stone can be dislodged backward into the gall bladder, in which case drainage is, if not preferable, quite as advantageous as extirpation.

"6. In simple gall stones, without visible evidence of infection or of chronic changes incompatible with complete restoration of function, simple drainage of the gall bladder is indicated.

"7. In chronic pancreatitis, associated with gall stones or not, drainage through the gall bladder is indicated."

(To be concluded.)

Letters to the Editor.

THE UNDERGRADUATE SPECIALIST.

537 FERRY STREET,

NEWARK, N. J., February 27, 1903.

To the Editor of the NEW YORK MEDICAL JOURNAL:

Sir: A short time ago I received from Dr. H. J. Whitacre, of Cincinnati, Ohio, a letter requesting answers to the following questions:

1. At what medical college did you graduate?
2. Did you feel that during your college course you were required to take work which you did not need or want? If so, what?
3. Did you spend more time (*i. e.*, outside of regular hours), in any one branch of medicine than another? If so, which one?
4. Did you decide on a so called specialty before you graduated?
5. If so, during which year did you decide?
6. Did you subsequently follow this early decision? If not, why did you change?
7. Did your more mature experience in the practice of medicine lead you to believe that it would have been better for you had you been given an opportunity of electing either gynæcology, children's diseases, eye and ear, nose and throat, orthopædic surgery, genitourinary, or other specialty; and been allowed to spend the major part of your time during the fourth year on such subject to the exclusion of the other specialties?

Coming at a time when the proposal of President Butler to cut down the course for the A. B. degree to two years has excited so much discussion, this is interesting. It seems that there is a "movement" to reduce the time of study for the M. D. degree. For that is what the "elective system of study during the last one or two years" amounts to. It has the same odor as the offer of a Baltimore college to abolish the fee for the fourth year. We are to have undergraduate specialists as well as post-graduate specialists. This may be but a natural reaction after the recent lengthening of the time

of study to four years. It may, however, be a sign of the increasing commercialism of medicine which has been so widely noted. The movement for the shortening of the A. B. course is due, I believe, to the feeling that too much time has in the past been given to the study of ancient languages and literatures, and that some of that time could be devoted to the sciences without sacrificing mental training and with better practical results. The classics are pretty much as they ever were, but the horizon of science flies constantly before us. In this light the shortening of the classical course seems reasonable. But is it not a corollary that the scientific course should, at least, not be shortened? That eclecticism in the M. D. course would be a virtual shortening is evident. That it would nullify any advantages due to the shortening of the A. B. course is also evident.

Specialism is inevitable. To specialism we owe great and rapid advances along many lines. But, like many good things, it is not untinctured with evil. The greatest evil of specialism is the narrow-mindedness to which it tends. This is the accompaniment of specialism, whether of the workshop or of the university. Eclecticism in the college is all very well. The object of the college is a general training of the mind and manners. It gives a frictional education by contact with good books and good men in an elevating environment. It does not matter what one studies so long as one learns how to study. With the scientific schools the case is different. Here there is a body of ascertained facts which must be learned, which must form the basis of any future structure. Relations and relations of relations are so manifold, yet so close, that these facts must be studied together, with more and ever more regard to these connections. Facts of Nature are not isolated, but connected. Every new discovery emphasizes the interdependence of all phenomena. This is true if the "persistence of force is true."

Medical science is more bound to this proposition than any other science, for the object of its study is the most delicate and most highly organized product of evolution. One may specialize in any other profession with less danger to individual culture and less fear of harmful errors. This is particularly true of law, for there is no science of law. Law, in the sense of the jurist, varies to the mile, sometimes to the inch. What is good law here is bad law next door. Even the so called courts of equity have rules and precedents which admit and reject evidence. Imagine a scientist rejecting any evidence of the remotest bearing. Law is but the expression of the vagaries of custom and prejudice, of privilege and policy, and, being so, cannot be granted place among the sciences. The test of science is demonstrable verity. The only place for law is under a subhead of sociology, an evidence of the activity of man and as varied as his garments. It would seem, then, that early specialization is not to be desired, much less to be encouraged. The student should not specialize until he has, according to his ability, woven a web of thought corresponding to the web of fact in nature. It appears to me that this "movement" is essentially a commercial one. The only aim in life is to make money.

It is observed that the specialists are the only ones who are making money. Therefore a demand arises for a rapid and cheap process for the making of specialists. This "movement" is evidence of the willingness of some persons to supply that demand. If it succeeds, we shall have a flood of specialists. Even now many a young man, as soon as he has grasped his diploma, buys a shining pump or other hypnotizing instrument, and proceeds to exploit the world as a "specialist." We have often suffered from him, and we are tired of doing his jobs over again to find that he has got off with all the money. But, from the specialist "brought up by hand," Lord deliver us!

CHARLES V. BURKE, M. D.

THE SPITTING NUISANCE.

1252 JEFFERSON STREET,

BUFFALO, N. Y., March 2, 1903.

To the Editor of the NEW YORK MEDICAL JOURNAL:

Sir: I read with interest the letter of Dr. Willard P. Millspaugh, in your issue of February 28th, regarding the dangerous and disgusting habit of spitting upon the floors of public conveyances, public places, etc., and his suggestion as to how to stop this nuisance. As a former resident and practitioner of New York city, I have observed how ineffective is the "mere warning" of "punishment by a fine of \$500, or imprisonment for one year, or both," as it is published in every New York car, to stop this revolting habit. During the last two months the police of Buffalo have carried into practice the very suggestion which Dr. Millspaugh makes in the *Journal*: plain clothes men were detailed to ride on the cars in varying parts of this city, which resulted at once in several arrests and small fines, with newspaper publicity for the offenders. *It was effective*—for at once everybody knew that the usual warning in the cars was not there by "force of habit," but to "forcefully stop a habit"—and it did.

The doctor's suggestion is a good one and its practical applicability has been proved in Buffalo.

A. E. SOHMER, M. D.

Book Notices.

Bacteriologische Diagnostik. Zum Gebrauche in den bakteriologischen Laboratorien und zum Selbstunterrichte. Für Aerzte, Tierärzte und Botaniker. Von TEISI MATZUSCHITA, Dr. med. et phil. Mit 17 Abbildungen. Jena: Gustav Fischer, 1902. Pp. xvii-692.

This book is virtually an extensive tabular presentation of such characteristics of bacteria as will serve for their ready identification. The microorganisms thus treated of are 1,325 in number, pathogenic and non-pathogenic, including those that are of interest to the veterinarian or the botanist as well as the physician. In the body of the work, the tabular portion, the organisms are classified with reference to their behavior toward nutrient media, their relation to air, their morphology, their

motility, etc. Respect being had for this classification, the individual bacteria are arranged in alphabetical order. On each left-hand page the data regarding motility, sporulation, the relation to air, reaction to staining agents, liquefying properties, coagulant qualities, the evolution of gas, etc., are briefly indicated, and on the right-hand page the peculiarities of growth are stated, also the facts as to pathogenic power. Consequently, as the book lies open at the proper place, not a leaf need be turned for the examiner to find all that he requires to enable him to identify any microorganism without loss of time.

The facility with which the book may be consulted is remarkable. One does not need to bear the author's classification in mind, for there is an alphabetical index. Better still—for often the investigator may have but a vague notion of what organism he should look for—there are alphabetical lists arranged according to the media in or upon which certain organisms are commonly found. For example, if he is to examine a specimen of nasal secretion, he will find a list of the organisms found in that medium, referring him to the page for each one of them.

We cannot imagine a book more useful than this one to anybody engaged in bacteriological examinations; indeed, we should think it as indispensable to him as the *Nautical Almanac* is to a navigator.

Manuel de technique chirurgicale des opérations courantes. Par G. MARION, Professeur agrégé à la Faculté de médecine de Paris, etc. Avec 448 figures dans le texte. Paris: A. Maloine, 1903. Pp. vii-541.

This work was not written for surgeons, but was intended only for those of meagre training in the art, as a guide to the performance of minor operations and of such major operations as emergency may thrust upon them. Nor does the volume deal with any other branch of surgical knowledge than operative technics. The preliminary chapters are devoted to a description of surgical tools in general use and the methods for their sterilization, to some important considerations in the administration of anæsthetics, and, very briefly, to the steps preparatory for an operation.

While it is in only a very limited sense a book on operative surgery, still this manual covers a wide range of major, and, more especially, of minor operations. In the selection of major operations for description, the author has been governed as much by the capacity of the occasional surgeon as by a consideration of the urgency of the condition. Thus, operations for appendicular disease, empyema of the gall bladder, etc., receive no mention, for the author thinks that patients suffering with these conditions, however threatening, have better chances without any operation than with one conducted by an operator not thoroughly trained. If we grant this point, then it is difficult to see why the technics of breast amputation should be considered in this manual.

Only one method is given for each operation, and this is presented very concisely and simply, but

clearly. The text is elucidated by 448 illustrations. Most of these are line cuts drawn by the author, and they are altogether excellent.

Book on the Physician Himself and Things that Concern his Reputation and Success. By D. W. CATHELL, M. D. The Twentieth Century Edition. Being the Eleventh Edition Revised and Enlarged by the Author and his Son, WILLIAM T. CATHELL, A. M., M. D., Baltimore. Philadelphia: F. A. Davis Company, 1902. Pp. 411. (Price, \$2.50.)

The eleventh edition of this popular work has been rewritten and considerably enlarged. There is little new that can be said of it that has not been said many times before. It is, above all, a book for the young physician, for him who has not yet encountered "the slings and arrows of outrageous fortune" as exemplified in the anxieties and perplexities of the practice of medicine. The advice given is in all respects worthy of being followed, and he who adheres to it strictly will make an ideal practitioner. There is nothing of the mercenary in the counsel given, but there is very much that is practical and wholesome. Throughout, ethical conduct and the external things which make for success are insisted upon, but not to the exclusion of the mental and moral endowment of the physician.

Here and there are little passages which might be questioned, both on the score of accuracy and on that of good taste. For instance, the description of midwifery as "but little superior to the sink cleaner's in filth" (p. 145) may well be questioned. And the occasional little flings at specialists are quite unnecessary. But these are trifles compared with the general wholesomeness and wisdom of the author's thoughts and counsel.

BOOKS, ETC., RECEIVED.

Diseases of Women. A Clinical Guide to their Diagnosis and Treatment. By George Ernest Herman, M. B. Lond., F. R. C. P., Obstetric Physician to and Lecturer on Midwifery at the London Hospital, etc. With 250 Illustrations. Revised Edition. New York: William Wood & Company, 1903. Pp. xvi-884. (Price, \$5.)

The Diagnosis and Modern Treatment of Pulmonary Consumption. With Special Reference to the Early Recognition and the Permanent Arrest of the Disease. By Arthur Latham, M. A., M. D. Oxon., M. A. Cantab., Assistant Physician and Lecturer on Practical Medicine at St. George's Hospital, etc. New York: William Wood & Company, 1903. Pp. 215. (Price, \$1.50.)

The Diseases of Warm Countries. A Handbook for Medical Men. By Dr. B. Scheube, State Physician and Sanitary Adviser, Greiz, etc. Translated from the German by Pauline Falcke. With Addenda on Yellow Fever by James Cantlie, M. B., F. R. C. S.; and on Malaria by C. W. Daniels, M. B., M. R. C. S. Edited by James Cantlie, M. A., M. B., F. R. C. S., D. P. H., Lecturer at the London School of Tropical Medicine, etc. With all the Original Colored Maps, Charts, Illustrations, etc., together with many Additional Plates from the *Journal of Tropical Medicine*. Second Revised Edition. Philadelphia: P. Blakiston's Son & Company, 1903. Pp. x-3 to 594. (Price, \$8.)

Diseases of the Skin: Their Description, Pathology, Diagnosis, and Treatment. With Special Reference to the Skin Eruptions of Children, and an Analysis of Fifteen Thousand Cases of Skin Disease. By H. Radcliffe-Crocker, M. D. Lond., F. R. C. P., Physician for Diseases of the Skin in University College Hospital, etc. Third Edition, Revised and Enlarged. With Four Plates and One Hundred and Twelve Illustrations. Philadelphia: P. Blakiston's Son & Company, 1903. Pp. 5 to 1466. (Price, \$5.)

Miscellany.

Ancient Roman Army Surgeons.—Dr. Henry Barnes (Cumberland and Westmoreland Antiquarian and Archæological Society's *Transactions*, vol. xvi) in an article on Roman Medicine and Roman Medical Practitioners, says: "The question of the provision made for the medical and surgical treatment of the Roman soldiers during their period of service in foreign countries did not receive much attention from archæologists until a comparatively recent period. There is no distinct reference to the subject in the Roman classics. The late Sir James Y. Simpson is well known as the discoverer of the anæsthetic properties of chloroform, and as one who, in addition to his eminence as a physician, was also eminent as an antiquary and archæologist. To him we are indebted for the first elaborate inquiry into this subject, and the result of his investigations was to establish the fact that there was not only a *medicus cohortis*, but there was also a *medicus legionis*, a kind of superior medical officer. One of the most interesting bits of evidence which he brought forward was a monumental tablet, five feet by two feet six inches, found at Borcovicus, and now in the Newcastle Museum. The inscription shows that it was erected by the first cohort of the Tungrians to the memory of their *medicus ordinarius*. This cohort distinguished itself under Agricola, and was afterwards engaged in the erection of the more northern wall of Antoninus. At a later period, probably in the reign of Marcus Aurelius, it became stationed at Castlesteads in this country. The translation of the inscription, according to the learned historian of the Roman wall, Dr. Bruce, is as follows: 'Sacred to the Gods of the Shades below. To Anicius Ingenuus, physician in ordinary of the first cohort of the Tungrians. He lived xxv years.' The monument is elaborately carved, and this is held to be suggestive of the great esteem and respect in which he was held by his comrades. It is said to be more elaborately carved than many of the altars raised by this and other cohorts to their deities. The figure at the head of the stone is either a rabbit or a hare, probably the former; and as the rabbit is the badge of Spain, it has been suggested that Anicius Ingenuus may have been a native of that country. . . . The distinctive term 'ordinarius' is interesting. It is generally supposed that a cohort consisted of 500 or 600 men, and each cohort seems to have been provided with one medical officer at least. Several monumental and votive tablets found in other parts of the world refer to army medical officers. In Gruter's *Inscriptiones Romanæ* there are three in which physicians of cohorts are mentioned, and it is a singular coincidence that one had the same *nomen gentile* as the physician of the Tungrian cohort just mentioned. This tablet was found at Rome, and the inscription is as follows: 'M. JVLIVS INGENVVS MED COHIIVIG.' In the *Syntagma Inscriptionum* there is a description of a tablet erected by Titus Claudius Julianus, clinical physician to the fourth Prætorian cohort, to himself, to his wife Tullia Epigone, and to their freedmen and freedwomen." Dr. Barnes gives an

illustration of the tablet to Anicius, and of several other interesting medical relics of classical Roman times. [The part taken by the Tungrian cohorts in the battle of Mons Grampius, Scotland, under Agricola, will be found in the *Agricola* of Tacitus, cap. xxxvi. Some interest, perhaps, attaches to them in consequence of this testimony of their good will to their deceased medical officer.]

The True Value of the Academic Influence.—

The *British Medical Journal* for January 17th, in commenting editorially on Professor Clifford Allbutt's Boyle lecture on the Rise of the Experimental Method in Oxford, makes the following pregnant remarks: "Moreover, they [the thoughts suggested by Professor Allbutt's address] raise a most interesting topic—the influence of the sister universities on modern sciences. Happily both Oxford and Cambridge are rapidly growing out of the narrow spirit of pedantry which regards their schools of experimental science as a mere excrescence on their academical lore, with no higher destiny than that of a possible encumbrance, and, still more fortunately, the scientist, too, is ceasing to despise the knowledge not born of the laboratory as speculative dreaming or literary verbiage. It is now admitted as a scientific truism that the direct influence of mind on mind is powerful and subtle; and this is true, not only of the interaction between individual minds, but also of the influence exerted upon the individual by the collective intellect of his university. It is to the richness of their heritage of learning that Oxford and Cambridge owe their unique position. Secure in their continuity as the parent source of our national intellect, self-gathered in the knowledge of their power and the consciousness that their destiny knows no end, they exert an influence not communicable by words or to be stored in books; it must be directly inhaled by living in the atmosphere of the place, for the influence of mind on mind is an inspiration, and not the imposition of a dogma. We know well enough what university life has done to mould men of letters, lawyers, and statesmen, and we are accustomed to recognize their achievements as springing from a common parentage on the banks of the Cam or Isis. May we not hope that this same influence will be extended more and more into the domain of experimental science, and, in particular, will make itself felt with ever-increasing insistence in that science which, though still in its infancy, is paramount in importance, the science of the human body in health and disease?"

Pathological Changes Due to X Ray Burns.

—Dr. A. G. Ellis (*Proceedings of the Pathological Society* of Philadelphia, December) reports an investigation of four cases, and summarizes his study of them by stating that there was found: (1) Necrosis of cells and trabeculæ of varying degree. In Case I there was also marked fatty degeneration. (2) Increase of elastic tissue in the three cases examined both before and after exposure. (3) Fewer areas of lymphocytic infiltration in one case after exposure, about equal numbers in others. (4) A tendency to occlusion of vessels by deposits on their

inner surfaces. This was marked in some instances, not so prominent in others. (5) Practically entire absence of infiltration of polymorphonuclear leucocytes.

Conclusions, he says, are hardly warranted by the results of these examinations, especially as further studies are being made with reference to nerve changes in irradiated tissue. Investigations regarding blood changes in persons undergoing this treatment and the tissue changes in normal rabbits that have been x rayed are also under way. A few thoughts, however, suggest themselves.

1. Beck and others lay great stress on blood vessel changes as the cause of necrosis. While endarteritis is probably induced by the x ray, the accompanying tissue necrosis seems out of proportion to the vessel changes, suggesting the possibility of these being *pari passu* results of the same influence instead of cause and effect.

2. The presence of immense numbers of cocci and bacilli in the tissues of Case III, after twenty exposures to the x ray, would argue against the possession by that agent of bactericidal power; it should be said that the pathogenicity of these organisms was not proved.

3. The unsatisfactory clinical results, as well as the slight microscopical changes in Case III, can probably be safely attributed to the presence of the exceedingly numerous keratinized areas or "pearls." This emphasizes the importance of curetting or cutting away diseased tissue, whenever feasible, before instituting treatment by the x ray.

Ocimum Viride, Willd, as a Prophylactic Against Mosquitoes.—The *British Medical Journal* for January 31st, refers to a letter in *Nature* for January 1st, by Mr. A. E. Shipley, concerning a plant brought home from the West Coast of Africa by Major Burdon, which has been identified by the Kew experts as *Ocimum viride, Willd.* It is a member of the N. O. *Labiatae*. Captain Larymore, resident of the Kabba province of Northern Nigeria, who gave the plant to Major Burdon, being told by the natives that the reason they kept the plant in pots in their houses was because it kept away the mosquitoes, made trial of it in his own house, which was particularly infested by the pests, and "found that the presence of one of these plants in a room undoubtedly drove the mosquitoes out, and that by placing three or four around his bed at night he was able to sleep unmolested without using a mosquito net." The plant is described in the fifth volume of Sir W. T. Thistleton-Dyer's *Flora of Tropical Africa*, and also on plate 753 of the ninth volume of the *Botanical Register*, 1823, under the name of *Ocimum febrifugum*, or the "Sierra Leone fever plant." The juice of an allied species, the *Ocimum basilicum*, Linn., is used mixed with ginger and black pepper, in India, in the cold stage of intermittent fever. The plant is said to be very easily cultivated, so that it should not be difficult to put its virtues to a practical test in this country. Anything that gives promise of prophylaxis against mosquitoes, and incidentally against malaria, should be given a chance to make good its claims.

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Lectures and Addresses.

THE DEVELOPMENT AND ULTIMATE RESULT OF MEDICAL SCIENCE.*

By ANDREW F. CURRIER, M. D.,
NEW YORK,

RETIRING PRESIDENT OF THE MOUNT VERNON MEDICAL SOCIETY.

The process by which the science and art of medicine have been built up is one of the most interesting and splendid illustrations of the possibilities of human endeavor.

We sometimes speak with admiration of the building of a coral reef, and wonder at the gradual emergence from the ocean's depths of a compact structure built from the bodies of living beings, their life work being limited to the construction of their tomb, magnificent though it is, and designed to offer an impregnable barrier to storm and wave. But this result is simply the fulfilment of an inflexible law which compels each insect to weave about him his stony shroud, reproducing incidentally his successor, who carries out a similar destiny, myriads upon myriads following the same unvarying routine until the accumulated product of so many generations and individuals reaches the new and foreign element, air, and the task of the ages is forever accomplished. Different in many respects is the structure which countless generations of men have been building, the stately and majestic fabric which includes medical science and art. Many lives are enclosed within it and encompassed by it, but instead of uniformity of action, there has been endless variety, varying degrees of excellence, varying degrees of devotion, aspirations sometimes achieved and sometimes doomed to failure, but all forming an essential part of the mighty whole, and all useful, because all human experience has a meaning and teaches a lesson.

The comparison fails also in the fact that this structure, grand though it is, is still incomplete; there are stones yet to be added, there are gaps to be filled before the work will be finished.

I have thought that it would be pleasant, and perhaps profitable, to glance hastily at the development of this structure, from its beginning to the

present time, and to call your attention to some of the work which remains unfinished. We may properly regard medical history as beginning with Hippocrates (460-370 B. C.); in fact he is piously remembered as the father of medicine. The Egyptians, the Chinese, and the Hindus had more or less knowledge of materials which were used for the relief of disease, more or less technical skill in at least attempting to give assistance to those who had been injured. This we know from the interpretations, ancient and modern, of their records. It is probable that all the ancient nations who had sufficient intelligence to record their mental operations had also sufficient intelligence to observe that there was more or less variety in disease from which the deduction was simple, that there must be more than one substance or method which could be utilized in endeavors to cure it or to drive it away. If we accept the hypothesis that man is evolved from the lower animals, and go back to the status of intelligence which we observe in many animals at the present time, we realize that he must have had a number of very useful ideas as his capital when he began his upward career.

The foundation of all assistance to those who are in pain or suffering is connected with parturition, an act which is universal to all animals, and it required some cerebral development and activity to observe that the umbilical cord was not a necessary attachment of the new-born individual, and that it must therefore be removed. Again, take the unerring inclination for rest when the animal is sick. It matters not how urgent the need of food for himself or his offspring, the sick animal discontinues his ordinary activity, seeks quiet and seclusion, lies down, takes no food, and remains thus inactive until his physical forces are recuperated or until death relieves and releases him. Yet again, take the inclination which sick animals have for certain herbs and vegetables; they select them with more or less precision, and because they do it repeatedly, generation after generation, the inference is obvious that a more or less beneficial effect is produced by their use. Animals which are injured seek rest, they lick the injured part, cleansing it and arresting the hæmorrhage, or if they move about, the injured part is favored or protected in various ways.

We can, therefore, conclude that there are certain natural or inherent ideas concerning sickness or

* The retiring President's Valedictory Address, delivered January 31, 1903.

injury, with which men started in the struggle that has resulted in the accumulation of the existing fund of medical knowledge, which we may call collectively *natural medicine*.

Upon this basis, with its important fundamental principles, the existing structure of medical science has been built and the process has been going on continuously like the upbuilding of the coral reef.

No nation or tribe of men which has had sufficient intelligence to express its thoughts in language, and still more no nation or tribe which has recorded its experiences, whether upon stone, clay, wax, parchment, papyrus, or paper, has been without the religious impulse, a more or less definite idea of a spiritual nature, distinct from the material or physical, a more or less vague idea of the continuance and indestructibility of that portion of the individual which distinguishes him from every other individual. It is not at all strange that this idea of the existence of a spiritual portion of the individual should be associated, at least in the twilight of intellectual development, with that of the care and consideration for the material portion, and in fact we find that among primitive men, whether ancient or modern, those who devote themselves to the cultivation of the spiritual and religious affairs are also, in many instances, the ones who care for the physical ailments and ills to which men in all ages have been subject. Priest and physician have often been associated in the one individual who performs now the functions relating to religion and now those which pertain to the care of the sick. This is true, not only among the ancients, but even in our own times among savages and barbarians. Such a combination was neither permanent nor advantageous, except for the fact that for a long time there was nothing better available. Certainly it is the testimony of history that it did not result in any development of importance in the medical art.

The priest, under the mental and social conditions in which this combination has usually been observed, relied upon his incantations, his charms, his magic rites and formulas, and appealed solely to the credulity, the superstition, and the ignorance of the sufferer. Should he discard such means, his influence upon the sufferer, whether good or bad is immaterial, would vanish. These are not the weapons with which most diseases are successfully treated. Knowledge and reason and logic are essentials to him who essays to heal the sick, though it is a fact that faith and credulity in the sufferer are often important aids in accomplishing the end which is designed and desired. Hence it was inevitable that, as intelligence increased, the

function of the priest should be divorced from that of the physician.

This separation of medicine from priestcraft has not occurred as a chronological sequence, but as a logical and evolutionary one. The association still subsists among savages and it is possible that we might still find the combination of priest and medicine-man among some of our American Indians.

As a matter of fair statement, it must not be overlooked that priest-physicians have not invariably been ignorant, unskilful, or fraudulent. Some of the most distinguished physicians of the middle ages were also priests. I need only mention the distinguished Guy de Chauliac, of the fourteenth century, student of Montpellier and Bologna, priest, writer of a work on surgery which was classical for two centuries, skilful operator in the surgery which had been advocated by the Arabs, inventor of new instruments, and introducer of the operation upon the crystalline lens for the relief of cataract. Precisely at what period priestcraft and superstition and magic were discarded in the treatment of disease cannot be stated. In a general way the separation is attributed to Hippocrates. Certainly medicine was subordinated to religion in Egypt and India, and in the remote period of her history, in Greece also.

In the Homeric poems there is evidence of a knowledge of the practical application of medicine and surgery, Machaon and Podalirius, sons of Æsculapius, being mentioned as participants in this work. Temples of Æsculapius there were and priests to preside at their functions, but they were not physicians nor had the worship of Æsculapius any connection with the development of medicine.

That medical history at its beginning (fifth century, B. C.) should have so many elements of completeness, seems most remarkable at first sight, for the work which has been handed down under the name of Hippocrates remained the standard for teaching and practice for two thousand years, and its important bearing has not yet been exhausted and probably never will be. The best that can be said of many of the brilliant names which have adorned medical history since the time of the wise man of Cos, is that they were his followers, and have edited or commented upon his writings, possibly adding a few original observations. But the period of Hippocrates, which included no fewer than ninety years, was within the age of Pericles, the golden age of the intellect, the ripest period of a nation which has forever illumined the pages of history with its accomplishments, and hence it is not so remarkable, after all, that we should find this man, like Socrates, Aristotle, Plato, and others of his era, peculiarly endowed with great store of

knowledge, as well as acute and versatile in his mental operations. Not only did he observe facts, but he and his followers liberated the medical art from mysticism. He studied the laws of disease, enunciated high conceptions of the duties of the physician, of his relations to his patients, and at a time when there was little knowledge of anatomy, physiology, or pathology, made many acute observations in connection with the clinical history of disease. He gave to the world a pharmacopœia of two hundred and sixty-five drugs, which were to be used at the proper moment in order that the humors of the body, the blood, phlegm, yellow and black bile might be restored to their proper equilibrium. Rules as to diet and exercise also formed an essential part of his therapeutic system.

Such was the foundation for scientific medicine which, like the coral reef, was to progress upward by means of the work of many generations during many centuries. With the foundation of the great school at Alexandria, knowledge of the human body became more exact, because at this school dissections were now systematically made, and the names of Herophilus and Erasistratus signify advance in anatomy, observation of the phenomena of inflammation, and the employment of many new drugs for the relief of disease.

The first century of the Christian era witnessed the life and work of Galen, who, next to Hippocrates, was the greatest of the ancient fathers in medicine. His knowledge was encyclopædic. Besides reducing to Latin the works of Hippocrates, he studied deeply in anatomy and physiology, introduced a new theory of disease, the theory of the distempers, hot and cold, wet and dry, with the appropriate remedies for relieving them. For the first thousand years of the Christian era he was the acknowledged head and master of all who practised the healing art.

In the second century an important work on the diseases of women was written by Soranus, of Ephesus.

In the seventh century important contributions to surgery and obstetrics were made by Paulus, of Ægineta.

In the eighth century the famous medical school at Salerno was founded, and this school controlled medical thought until it was displaced by the Arabian physicians, from the tenth to the twelfth centuries. These Arabs collected and edited the medical writings of Greece and India and they were the first to establish the sale of drugs in shops.

In the twelfth century the school of Montpellier was founded, and this was soon followed by those of Bologna, Padua, and Paris. Many surgeons and physicians of eminence and usefulness flour-

ished between the thirteenth and sixteenth centuries. One of the most distinguished of these was Ambroise Paré, the barber surgeon, who, in spite of humble origin and the envy and hostility of the learned physicians and surgeons of Paris, became surgeon to the king and to many others of rank and importance, lived a most useful and fruitful life, and among many achievements gave to the world the use of ligatures for the arrest of hæmorrhage, in the place of boiling oil and the actual cautery.

In the sixteenth century, Montanus, of Padua, introduced clinical instruction into the hospitals and made systematic post mortem examinations. This was also the era of the great Italian anatomists, who completed the discovery and classification of a very large portion of the anatomy of the human body.

The seventeenth century witnessed the great discovery of the circulation of the blood, by Harvey; also many discoveries in anatomy and physiology. Chemistry and physics were investigated in their relations to medicine, and, in Holland, clinical instruction was extended. In England, Sydenham taught the important truth that close observation of clinical facts was far more important than adherence to any of the theories of medicine which the past centuries had produced so abundantly. In this century, also, new diseases were studied and described, the great epidemics which prevailed over a large portion of the world were minutely investigated, and many new remedies were discovered and used.

The eighteenth century was conspicuous for the speculative character of medical studies on the one hand, while, on the other, there was a futile attempt to reduce disease to the exact conditions of the mathematical sciences. In this century were promulgated the systems of Hoffmann and Stahl and Cullen and Brown, each of which certainly contained some truth; but its importance was greatly exaggerated, and students of the present day are scarcely familiar with even the names of these men or of the systems which they introduced. This century also witnessed the work of Boerhaave, the great clinical teacher of Holland, and of Haller, who added to the knowledge of chemistry, botany, and anatomy, established the modern science of physiology, and taught the inestimable value of knowledge which is based upon experiment. Morgagni added greatly to the knowledge of morbid anatomy through his extensive investigations upon the cadaver.

Avenbrugger introduced the practice of percussion for the purpose of diagnosis, and laid the foundation for that great school of internal medicine

at Vienna, which has produced such a profound impression upon medical thought and education.

John and William Hunter, in England, made their great contributions to surgery, anatomy, and obstetrics.

In this century, also, was made the immortal discovery of vaccination by Jenner, one of the greatest boons the human race has ever received; it also witnessed the invention or the rediscovery of the obstetric forceps.

The nineteenth century astonishes us with the wealth of its product. By this time the accumulation of knowledge has become so vast that it can no longer be encompassed within a single brain. Anatomy and physiology are now almost perfected through the efforts of Bichat, Claude Bernard, and many others, physical diagnosis is systematized by Laennec, Louis, Corvisart, and others, the wonderful discoveries of the microscope in histology, and pathological anatomy at Berlin, Vienna, and other famous schools, draw students from all parts of the world to the laboratories of Virchow, Cohnheim, Rokitsansky, and a host of others. Clinical instruction has arrived at perfection. Based upon broad knowledge of anatomy, gross and minute, normal and morbid, and upon physiology and physiological chemistry, the practical divisions of the medical art—therapeutics, surgery, and obstetrics—make the greatest advances, and in course of time subdivide into special branches, as is always the case during periods of great intellectual activity.

It would seem improbable that any considerable advancement of a technical or mechanical nature could be made beyond that which has already been accomplished. Does this mean that perfection and completion have been reached and that henceforth, like the Chinese, we shall rest content with the achievements of our ancestors? By no means. The developments of bacteriology, latest born of the medical sciences, have shown what vast fields of research are still open for investigation. It is not impossible that a new era in medicine is about to dawn, in which the far-reaching influence of serums and extracts may displace methods which we now consider more or less effective. It is a great thing that chemistry and physics have been able to penetrate to the source of many diseases, to identify absolutely their ultimate cause, and with sure clew to proceed, as has been done in many instances, to a successful issue. The wonderful results which have attended certain manifestations of light and electricity, when applied for therapeutic purposes, also admonish us that medical science may be in a nascent state, as the chemists say, and just about to crystallize. Certain it is that something more far-reaching than surgery must be devised for some of the seri-

ous morbid conditions. Again and again it has become apparent that, however extensively the tissues may be removed, however much of the glandular apparatus taken away, the disease itself may not be prevented from recurring, either in the wound or in some other portion of the body; in other words we have removed the visible phenomena which accompany the disease, but we have not removed the tendency which causes its occurrence and its recurrence. This question must be met by the medical science of the near future, and I have no doubt that it will be met successfully.

What are some of the conditions which are thus to be met?

Foremost among them is the dread disease which is commonly known as cancer, which may be taken as the type of the malignant diseases. They say it is becoming more frequent and this seems probable and reasonable. In the lower animals and in the primitive races of man it occurs but seldom, not because privation and hunger and suffering and excesses of various kinds are wanting; these may exist as causes, but because the complex relations of our modern society and life add other causative elements which intensify any preexisting tendency to such disease, and call for the most persistent study and experimentation, not only to remove the apparent phenomena, but also to remove the inherent tendency. I doubt if it is hazarding too much to prophesy that this end will be reached, not by surgery, but by some form of internal medication. The great subject of tuberculosis, that scourge which affects so large a portion of the human race, is near its solution. We know its cause with absolute certainty, and we also know that, in a large portion of the cases, not only may it be cured, but the tendency to its recurrence may be brought under control.

A very important class of affections which are peculiar to our modern ways of living are those which involve the digestive apparatus. There are those who assert that these troubles are at the bottom of all sorts and varieties of disease. Certainly it would seem as if such ills were remediable, but the remedy must include the most radical reforms in our ways of living, regulation of diet and occupation, suitable exercise, and a more careful study of the use of remedies than anything we have yet undertaken.

The treatment of the diseases which have been known in the past as malarial diseases, will also require the finishing thought of the future. It is true we have learned that they are frequently transmitted by insects, that they will yield in the majority of instances to treatment with quinine, and that suitable hygienic and sanitary precautions will

remove the tendency to acquire them. But there are still many parts of the world where men must go which probably will not be relieved of their unsanitary physical conditions for many years, and for such areas, it is desirable to find the means of establishing an acquired immunity to the attacks of these diseases, which will enable men to live there and perform the duties which may be incumbent upon them.

The great epidemics that formerly ravaged the world and consumed their hosts of victims, until there scarcely remained any victims to be consumed, are either obliterated or limited to those communities in which there is unwillingness or inability to make use of those means that medical science has found potent for their destruction. Cholera, yellow fever, smallpox, plague, certain infectious diseases in animals certainly exist, but we have abundant evidence that they are controllable, and that it is quite possible to exterminate them forever.

The department of medicine which is, perhaps, doing more than all others to extinguish disease is that which is known as preventive medicine. It is probably the most important branch of human knowledge. When it has succeeded in teaching men to live rationally, to construct suitable dwellings, and stores, and schools, and ships, to drain the land, to consume decomposing materials, to keep the body and all its surroundings clean, and to observe rational methods in diet, exercise, work, sleep, and amusement, we may look for the completion of the temple of medicine which we have imagined, and then, like the coral insect with its work completed, there will no longer be a field for the physician as he is now required; he will withdraw and give place to one whose functions will mainly be like those of the schoolmaster. This day may be very far distant, for with our civilization which is ever becoming more complex, it is hard to imagine the disappearance of disease and injury and abnormality, but such will be the ultimate goal, for progress is ever onward to perfection and completion, and we who may not behold it with mortal eyes may yet be permitted to witness it from the land where the shadows have become substance, and to rejoice at the beautiful consummation of the toil and suffering of the ages.

130 EAST THIRTY-SIXTH STREET.

Crystallized Wisdom: Christian Science.—Sophocles (*Ajax*, vv. 581 and 582) with prescient inspiration says:

οὐ πρὸς ἰατροῦ σοφοῦ
θρηνεῖν ἐπὶ δὲ πρὸς τομῶντι πῆματι.

No practiser of healing who is wise

Will treat with charms a hurt he should incise.

K. W. M.

Original Communications.

THE TREATMENT OF FELON.

By EDWARD WALLACE LEE, M. D.,
NEW YORK.

Felon, paronychia, usually means any phlegmonous tumor of the fingers or toes, and especially of the last phalanges. Four kinds of paronychia are commonly observed: First, that seated between the epidermis and the skin, called vulgarly in this country "run-round"; second, that seated in the subcutaneous areolar tissue; third, that occupying the sheath of a tendon; and, fourth, and most severe, that seated between the periosteum and the bone. The last three are only different degrees of the same disease, constituting what is generally called *whitlow*.

The first form, run-round, is generally produced by an infection arising from what is commonly called "hang nail." Here the inflammation is generally confined between the epidermis and the skin. The other varieties are caused by an acute infection due to rapid spreading of streptococci, induced by slight trauma. Slight trauma is emphasized, because if the trauma is sufficient to produce a solution of continuity in the tissues, free drainage is established, which prevents the absorption and spreading of the streptococci.

The treatment often adopted in these cases is not only not surgical, but cruel. A stab with a lance and improper dressings too often constitute all the treatment received. This is a disease that often receives unscientific domestic treatment before the surgeon is appealed to. Such treatment as with hot flaxseed poultices, painting with iodine, applications of chlorinated lime, concentrated lye, and many other severe domestic remedies have been resorted to for the relief of this painful condition.

The disease generally starts, as has been before observed, from a slight trauma on the end of the finger, causing a slight destruction of the epidermis, therefore permitting pathological germs to enter the deeper structures, so as to cause great destruction of integument, cellular tissue, tendons, blood vessels, periosteum, and bone. Through the lymphatics this morbid process may spread backward along the lines of least resistance, affecting the hand and arm; and not infrequently this simple disease has caused abscess in the neck, lungs, or liver, producing general septicæmia and death. Therefore it demands careful attention, not only because of the serious general condition it may cause, but because its local affect is often very damaging. A deformed and useless finger or hand should be prevented if possible.

Unfortunately the surgeon seldom sees a felon

until it has advanced to quite a destructive stage. A swollen, throbbing, painful, boggy, necrotic mass of the tissues of a terminal phalanx is the condition that generally presents itself in an individual worn out with pain, loss of sleep, and general constitutional disturbance. If the pathology of this disease is taken into consideration, a more radical and scientific treatment is at once indicated. The mode of treatment of course depends upon the extent of the pathological condition. In the simple run-round it is only necessary, after making the parts as aseptic as possible, to incise gently the superficial abscess, evacuating its contents, pack it lightly with antiseptic gauze, and apply a protective dressing.

The more severe form of paronychia, generally called whitlow, deserves a treatment commensurate with its pathological importance. Before any operation is begun, and even before the examination, the patient should be placed in a recumbent position. A general anæsthetic in most cases is indicated, for the reason that the patient is generally worn out with pain and in a high state of nervous excitement. A general anæsthetic having been administered, the hand and forearm should be washed with soap and water; in fact, placed as near as possible in an aseptic condition. The hand and arm should be elevated to relieve the congested condition of the parts, and before the Esmarch bandage is applied, slight digital pressure should be made over the brachial artery, which will thoroughly bleach the parts before the bandage is applied. This procedure is quite necessary to control the slight hæmorrhage which would otherwise embarrass the operation. The hand is now placed on an aseptic towel over a hard substance and an incision made from a few lines back of the inflamed area to the tip of the finger, down, if necessary, to the bone. As all hæmorrhage and oozing have been prevented by the application of the Esmarch, the extent of the disease can be clearly defined. All pus and sloughing débris should be cleaned out with peroxide of hydrogen, and the wound cavity washed with a 1 to 1,000 bichloride of mercury solution. With knife, scissors, and curette all diseased tissue should be removed: integument, cellular tissue, tendon, periosteum, and bone. Not a vestige of diseased tissue should be left, for it may be the cause of further infection. The wound should again be cleaned out with peroxide and washed with bichloride. The whole cavity should then be swabbed with pure carbolic acid, immediately followed by a washing with alcohol, which will prevent over-action of the carbolic acid. The wound is again washed with a 1 to 1,000 bichloride of mercury solution.

The wound can now be closed and held in this position with a snug, moist, bichloride gauze com-

press over which a dry gauze bandage is applied, over this rubber tissue, and over all, including the whole hand, cotton gauze and a bandage, the arm and hand being placed on a splint and elevated. In four or five days the dressing can be removed, and if the work has been thoroughly done, the wound will be found closed, free from discharge, and on the rapid road to recovery without further loss of tissue or constitutional disturbances. A similar dressing should now be applied. Four days more will find the parts united, and then the wound only needs a protective dressing until new epidermis and skin have formed.

I have gone somewhat into detail regarding this treatment, but the results obtained justify it, compared to results obtained through the ordinary courses of treatment.

71 CENTRAL PARK WEST.

REPORT OF A CASE OF EPIDEMIC PAROTIDITIS, WITH FATAL TERMINATION.

By W. J. S. STEWART, B. A., M. D.,
CONTRACT SURGEON, U. S. ARMY.

As fatal terminations to cases of epidemic parotiditis are sufficiently rare to be objects of interest to those connected with the medical profession, I have thought that it might be of some moment to give a short history of such a case, which has come under my observation as transport surgeon of the U. S. Army Transport *Logan*.

CASE.—A. A., aged twenty-seven years: color, white; nativity, United States, a member of the crew of the transport *Logan*, was admitted to the isolation ward of the ship's hospital at 8 a. m., of December 12, 1902, with a diagnosis of suspected parotiditis.

He signed for the round trip to Manila, P. I., in San Francisco, Cal., on October 31, 1902, having successfully passed the physical examination required before being enrolled as a member of the ship's crew. This examination is conducted chiefly with a view to ascertaining if the candidates are suffering from venereal diseases, skin parasites, any severe valvular heart lesion, hernia, or permanent disease of the lungs. No record was made in his case except that he came up to the physical requirements.

He was at first assigned to the steward's department, but, later on, was transferred to the engineer's department, where he was employed in the capacity of a coal passer. He was ashore in Manila, P. I., during our stay in that port—we left there on December 11, 1902—and it is probable that the disease was contracted there, as there had been no cases of parotiditis on board the transport since the trip ended in San Francisco, Cal., July 8, 1902. I first saw the patient in his bunk in the room he occupied—he did not sleep in the fore-castle—at 8 a. m.

on December 14, 1902. His temperature was then 105° F., and he complained of pain and soreness on the right side of the face and neck, headache, and general malaise. A slight swelling was noticeable on the right side of the face, in front of and below the lobe of the right ear. Parotiditis being suspected, he was at once placed in the isolation ward of the ship's hospital, and a special nurse assigned to him.

The progress of the case was that of a very severe attack, the high temperature continuing on the 14th, 15th, and 16th, ranging from 101° F. to 103.5° F.

The characteristic increasing growth in the size of the swelling continued, and up to the night of the 16th, nothing suggesting a fatal termination had shown itself. The enlargement of the gland and the swelling consequent thereto were not so great as in many cases that have come under my observation. On the afternoon of the 16th, it became evident that the left parotid gland had become infected, and considerable pain was present on that side of the patient's face. All the usual symptoms of parotiditis were present, and no special treatment was instituted, treatment being purely symptomatic. The bowels were, of course, unloaded, and a mild sedative administered at night when necessary. Deglutition was extremely difficult, and but little quantities of liquid food could be given at a time.

During the night of the 16th, the temperature reached as high a point as 103.5° F. (oral), and there was much restlessness, and at times slight delirium. The patient seemed to be extremely anxious to get out of bed, and he rested very poorly. He appeared to be able to obtain his breath only with great difficulty, the character of his respiration much resembling that present in chronic cases of asthma.

At 8 a. m., on the 17th, his temperature in the axilla was 101° F., and his pulse 110, fairly full and strong; certainly it showed at this hour no evidences of approaching heart failure.

Respiration at this time was accomplished with considerable difficulty, this difficulty being much more marked at some moments than at others. The extremities were cool—not cold—and there was a faint trace of blueness beneath the finger nails. His face was pale, anxious in expression, and wet with perspiration, although the weather was cool. Having been propped up in bed with pillows and a back rest, he seemed to become more comfortable, and his respiration was apparently accomplished with somewhat less effort. At this time he complained of difficulty in obtaining his breath, and of sharp pain in the region of his heart, holding his left hand over his left breast the greater part of the time I saw him.

I was with him again at 9.45 a. m., and I could perceive then no change in his condition. At this visit I examined his mouth, opening it as far as I could, and had no difficulty in observing the condition of the pharynx. The pharynx and both tonsils were much swollen and congested, especially on the right side; still, so far as I could judge, there appeared to be a quite sufficient passage in the throat for all purposes of respiration.

It occurred to me at this visit that it might be-

come necessary at a later hour in the day, to perform a tracheotomy, should the difficulty in respiration increase. It certainly did *not* appear necessary or indicated at this visit.

My presence at the daily sanitary inspection of the transport being required at 10 a. m., and there being in my opinion at that time no indication of impending death, I left him in the charge of the ship's acting hospital steward—a capable man—and went to inspection.

Twenty minutes later, as I was inspecting one of the troop decks, this steward met me with the information that the patient had given one prolonged gasp and had fallen back on the pillows dead.

Here is a case where death occurred on the fifth day of the disease, and before the inflammation of the second infected gland had reached its height. There can be no doubt that the infection in this case was exceptionally severe, as evidenced by the continued high temperature and delirium.

There are but few medical works to which I have access at this moment, but no such case as this is recorded in any that I have been able to consult, nor do I remember having ever read of a death from asphyxiation during an attack of parotiditis. Dr. Osler does not mention the possibility of such a complication.

It seems to me probable that in this case the fatal termination was due to sudden failure of the heart, caused by the excessive strain to which that organ had been subjected by reason of the difficulty of respiration from which the patient had been suffering for eight or nine hours previous to his demise. Furthermore, there is no doubt in my mind that had a tracheotomy been performed, when I saw the patient at 9.45 a. m., on the day of death, his life would, in all probability, have been saved. In self defense, however, I can say that there did not appear to me to be at that hour sufficient interference with respiration to warrant its performance.

I am certain, that, as he passed the required physical examination on October 31, 1902, before signing the ship's articles, he had at that date no marked organic heart lesion, but of what changes may have occurred since that date, owing to hard work in the engine room of the transport, in a high temperature, and in a tropical climate for most of the time, I am, of course, unaware.

It was impracticable to perform a necropsy in this case, as the ship's embalmer said he was unable properly to do his work, if the continuity of the heart and large vessels was destroyed. I firmly believe, however, that a post mortem would have revealed nothing beyond the pathological changes seen in cases of death where partial asphyxiation has been present.

That complete asphyxiation was not present and was not the immediate cause of death was shown by

the fact that during the moments immediately preceding death, the respiration was no more difficult than that during the preceding few hours; also by the character of the occurrence of death and the suddenness of its onset, this to me plainly indicating heart failure.

I should be very glad to hear of the existence of reports of any similar cases of sudden death during an attack of epidemic parotiditis.

A STUDY OF TUBERCULOUS INFECTION.

SPECIAL SUSCEPTIBILITY OF CHILDHOOD —CAUSES AND METHODS OF INFEC- TION—FACTORS OF DEVELOP- MENT OF THE DISEASE.*

By F. M. POTTENGER, PH. M., M. D.,

LOS ANGELES, CAL.

Tuberculosis of Childhood. Why so Prevalent?

In our endeavor to find methods to prevent tuberculosis, we must give the period of childhood much more attention than it has been wont to receive; for it is not only possible, but probable, that the seeds which ripen into full fledged cases of tuberculosis in later life were in very many cases implanted in the tissues during the period of childhood, remaining there until a favorable time appeared for their activity. Bollinger¹ states that he has shown tubercle bacilli to be still virulent although encased in glands for twenty years.

That form of the disease which is most common in childhood, is tuberculosis of the lymph glands, although it is not uncommon to find the lungs and meninges affected. Why the lymph glands are so prone to infection and why the disease does not make advancement at this time into the lungs or other parts of the body more often than it does, are questions that have never been answered entirely satisfactorily. Since the answers to these questions will throw much light upon the subject before us, we will now inquire into them at some length.

Cornet² says that by several hundred animal experiments he has been able to arrive at the conclusion that the mucous membrane can be penetrated by bacilli, though intact, and that, in young animals, owing to the membranes being more easily penetrated and the lymph spaces being larger than in adults, the bacilli are more easily taken up: hence the lymph glands are more easily affected. In adults, on the other hand, bacilli penetrate less easily and are more likely to cause a local process at the point

of entrance. Orth³, Klebs⁴, Baumgarten⁵ and others have carried out similar experiments, arriving at the same conclusions.

Jacob and Pannwitz⁶ say: "That glandular tuberculosis is more common than that of the lungs (in childhood) is due to the anatomical and physiological arrangements of the parts."

Ponfick⁷ says that the lymphatic vessels are disproportionately small compared with the amount of lymph to be carried off; so the least irritation causing an increase of lymph is accompanied by stasis, and a tendency to suppuration if continued long. All such irritations predispose to infection. He also says: "The existence of this universal susceptibility (to scrofula) rests in certain peculiarities of the structure and mutual relation between the organs, which, it is generally admitted, the childish organism possesses; and which normally presupposes a high morbidity. This peculiarity is founded, on the one hand, on the greater power of absorption of the tissues as well for bacteriological intruders as for certain excretive products, and, on the other hand, on the local development of a pathological condition favorable to their spread and growth."

Virchow speaks of a weakness or imperfect arrangement of the lymphatics in certain individuals as a cause of scrofula.

Whatever the cause of this manifestation in early childhood may be, we know that there is a tendency in a certain not inconsiderable proportion of children to inflammation and enlargement of the lymphatic glands. And we further know that many of these pathological processes are, sooner or later, found to be tuberculous in their nature.

The cause of this frequent lymphatic involvement, I believe, must be sought, not only in the anatomical and physiological arrangement of the lymphatic system, but also in the reduced vitality from which these little ones often suffer. To the natural weakened condition incident to infancy and childhood, which makes them an easy prey to infection, we must add the peculiar weaknesses that come through heredity and the lowered resistance that comes through living in insanitary and unhygienic surroundings as well as from errors in feeding and the various diseases from which they suffer; then, we can better understand why they are prone to infection by the tubercle bacillus. We can not change the normal anatomical and physiological processes,

³ Orth: Experimentelle Untersuchungen über Fütterungstuberculose, Virchow's Archiv, Bd. lxxvi, p. 217.

⁴ Klebs. Allgemeine Pathologie, p. 236.

⁵ Baumgarten. Ueber die Uebertragbarkeit der Tuberculose durch die Nahrung, Centralblatt für klinische Medizin, 1884, p. 225.

⁶ Jacob und Pannwitz. Entstehung und Bekämpfung der Lungen-tuberculose, p. 221.

⁷ Ponfick. Allgemeine medizinische Central-Zeitung, December 29, 1900.

* Read before the Los Angeles County Medical Society, Los Angeles, Cal., February 20, 1903.

¹ Bollinger. British Medical Journal, Oct. 17, 1896, p. 64.

² Cornet. Die Tuberculose, p. 288.

nor can we blot out the inherited tendencies, but we can change the environment in which these little ones live, so as to make these inborn weaknesses less noticeable and these downward tendencies less operable.

If the accepted belief, that a lowered resistance is necessary to infection, is true, then we can hope for much by bettering the sanitary and hygienic conditions and improving the nutrition of individuals. From what precedes, we can see that this prophylaxis should begin as soon as the child is born; for the evil influences which lower vitality are thrown around children from the very beginning of life.

Children are, with few exceptions, born free from tuberculosis; and statistics show that the danger of infection increases toward the end of the first year, is maintained during the second year, and then gradually declines as childhood advances.

In this connection the following statistics are of interest:

The total number of deaths in the city of New York during the years 1890-92 inclusive, was 128,136. Of these, 32,916, or 26 per cent., died during the first year; 43,463, or 34 per cent., before the end of the second; and 46 per cent. before the fifteenth.⁸

When we consider the appalling morbidity which must accompany such a high mortality, we see that the conditions which lower vitality and predispose to tuberculosis are active from birth. The great majority of children are ill and suffer from lowered vitality during the first years of their lives, thus rendering infection easy.

There is a marked coincidence between this great general morbidity and the infection and mortality from tuberculosis, as the following statistics will show:

Heubner⁹ observed 844 children under three months of age without discovering a single case of tuberculosis; 218 between three months and six months, with 8 cases, or 3.6 per cent.; 93 between six and nine months, with 11 cases, or 11.8 per cent.; 75 from nine to twelve months, with 20 cases, or 26.6 per cent.; 45 from one to two years, with 14.2 per cent.; and 367 from two to three years, with 13.4 per cent.

In 36 sections made by Neuman¹⁰ in children from birth to five months of age, tuberculosis was not found; in 33 cases from six to twelve months it was present 7 times, or in 21 per cent.; in 28 cases from one to two years it was present 10 times, or in 35.7 per cent. of the cases.

Cornet¹¹ analyzed the post mortem records of the Berlin Pathological Institute from 1876-1891, as to the relative number of deaths from tuberculosis, with the following results:

In 486 cases from birth to the end of the first month, tuberculosis was not present; in 33 cases from two to three months, it was present twice, or in 6 per cent. of the cases; in 76 cases from three to six months, 8 times, or 10.5 per cent.; in 88 cases from six to nine months, 14 times, or 17 per cent.; in 65 cases from nine to twelve months, 18 times, or 27.7 per cent.; in 311 cases from one to two years, 83 times, or 26.7 per cent.; in 189 cases from two to three years, 56 times, or 29.6 per cent.; in 160 cases from three to four years, 15 times, or 31.8 per cent., and in 134 cases from four to five years, 30 times, or in 22.4 per cent.

Still¹² reports 769 post mortems upon children under twelve years of age with tuberculosis present 269 times, or in 35 per cent. of the cases.

Hand¹³ reported to the Philadelphia Pathological Society statistics of post mortems at the Children's Hospital, for the past ten years. Of 332 autopsies made, 115, or 34.3 per cent., showed tuberculosis. The location of the oldest lesion was: bronchial glands, 65 per cent.; mesenteric, 8.7 per cent.; undetermined (lesion general), 23 per cent.; undetermined (lesion distinct), 1.7 per cent.; tonsils, 0.8 per cent. Tubercles were present in the heart muscle in 8 per cent. of the cases showing tuberculosis.

Too little attention has been paid to the mode of infection and the time that it takes place. When the theory of heredity, as a general cause of tuberculosis, was disproved, it seems strange that science did not bend her energies to discover when infection does take place; but, owing to the interest that centred in other phases of the subject, this has not received the attention that it deserves.

These statistics show us that tuberculosis begins to assume prominence in the last quarter of the first year and that it causes quite a proportion of deaths during the early years of life. While they show the frequency with which tuberculosis either causes death or is present at the time of death, they do not tell us how frequently tuberculous processes are present in those who are living. Such information can not be attained so easily. Attempts have been made, however, to gain this important information; and, while the results are not absolutely reliable, they are sufficiently so to give us an important link in the chain of evidence which favors the lymphatic route of infection.

Krueckman¹⁴ has shown, and in this he is cor-

⁸ Holt. *Infancy and Childhood*, p. 40.

⁹ Heubner. *Zur Verhütung der Tuberculose in Kindesalter*, Berlin Congress, 1899.

¹⁰ Jacob und Pannwitz, *Entstehung und Bekämpfung der Lungen-tuberculose*, p. 198.

¹¹ *Ibid.*

¹² Still. *British Medical Journal*, August 19, 1899.

¹³ Hand. *Medical News*, November 22, 1902, p. 994.

¹⁴ Krueckman. *Virchow's Archiv*, No. 138, Heft 3, s. 534.

roborated by others, that the lymphatic glands in children are usually infected before the lungs.

We have now seen how frequently tuberculosis occurs in infancy and early childhood. The next point that we wish to call attention to, is that the glands, especially the bronchial and tracheal, and, in a less measure, the mesenteric and retroperitoneal, are nearly always infected when tuberculosis is present; and, since the foci which are farthest advanced are usually situated in some of them, it would suggest them as the original points of infection.

Henoch¹⁵ says: "When tubercles or cheesy processes are found anywhere in the body, one can count it for almost certain that the bronchial and tracheal glands are likewise affected. In the many sections that I have made I have noted very few exceptions to this rule."

Steffen¹⁶ shows the tracheal and bronchial glands to be affected in 54 of 62 cases of tuberculosis; and the mesenteric and retroperitoneal 35 times.

Bulius¹⁷ reports post mortems on 27 nurslings with tuberculosis in whom he found the bronchial glands affected every time and showing the furthest advanced lesions.

Cornet¹⁸ cites the following:

Steiner and Neureuter found the lymph glands affected 299 times in 302 post mortems—the bronchial glands being involved 286 times.

Rilliet and Barthez found lymphatic glands involved 248 times in 312 cases.

Northrup reports glandular involvement every time in 125 cases.

Thus, pathological evidence shows that the glandular system is involved in practically all cases of tuberculosis in children; and not only involved, but the first to show the disease in a large majority of the cases, if this can be inferred from the fact that the glands show the most advanced processes.

While nearly all cases of tuberculosis in childhood show tuberculosis of the glands, this does not say that all cases of tuberculosis of the glands show tuberculosis elsewhere; nor does it allow the inference that all cases of enlarged lymph glands are tuberculous.

The work of Volland¹⁹ is most important in its bearing upon this point. He examined 2,506 school children with reference to the frequency of enlargement of the cervical lymphatic glands, obtaining the following results:

Of 628 from seven to nine years of age, there were 607, or 96.6 per cent., positive.

Of 724 from ten to twelve years, 664, or 91.6 per cent., positive.

Of 722 from thirteen to fifteen years, 607, or 84 per cent., positive.

Of 334 from sixteen to eighteen years, 233, or 69.7 per cent., positive.

Of 98 from nineteen to twenty-four years, 68.3 per cent., positive.

By clinical examination Berutti²⁰ found the glands of the neck involved in 88.2 per cent. of cases.

Balman in 81 per cent.

Wohlgemuth in 430 cases, 93 per cent.

These statistics show us that the lymph glands are almost universally enlarged in childhood, and, while we do not suppose that they are always tuberculous, nevertheless, we know that they frequently are; and, if not already so, the inflammatory condition present is the surest preparation for infection by the bacillus tuberculosis. In this connection I quote Steffen²¹: "Healthy lymph glands are not attacked by tuberculosis. They are predisposed thereto when they are swollen, succulent and infiltrated, and in a condition of hyperplasia."

Osler²² says: "A special predisposing factor in lymphatic tuberculosis is a catarrhal inflammation of the mucous membranes, which in itself excites a slight adenitis."

That a very large per cent. of these enlarged glands are tuberculous is shown by the experiments of Otis²³ and Heubner.²⁴ The former tested 29 children with tuberculin, being all who presented themselves at the clinic during the investigation. Of these, 18 reacted positively, and 2 doubtfully, making from 62 to 69 per cent. of the number. Of the 11 who did not react, in 6, the enlargement had existed only from one to two weeks. The majority of the reactions occurred where the enlargements had existed for six months or more. I quote his conclusions: "If then the tuberculin test is to be relied upon, our experience would indicate that at least 62 per cent. and probably a larger proportion of enlarged glands of the neck are tubercular." In another series, he tested 56 cases and found 33 that reacted well, 6 slightly and 2 doubtfully, making 58.8 per cent. without doubtful ones, and 73.2 per cent. with them.

Heubner tested 17 scrofulous children and found positive reactions in all but one.

Moore²⁵ reports 28 cases of enlarged glands,

¹⁵ Henoch. *Kinderkrankheiten*, 1893, p. 413.

¹⁶ Steffen. *Zur pathologischen Anatomie des kindlichen Alters*, p. 143.

¹⁷ Bulius. *Jahrbuch für Kinderheilkunde*. Bd. 49, 1899, p. 304.

¹⁸ Cornet. *Die Tuberculose*, p. 178-9.

¹⁹ Volland. *Zeitschrift für klinische Medizin*, No. 23, 1893.

²⁰ Cornet. *Ibid.*

²¹ Steffen. *Zur pathologischen Anatomie des kindlichen Alters*, p. 159.

²² Osler. *Practice of Medicine*, 1892, p. 205.

²³ Otis. *Transactions of the American Climatological Association*, 1899, and *Medical News*, July 1, 1898.

²⁴ Heubner. Quoted in Jacob und Pannwitz, p. 223.

²⁵ Moore. *Lancet*, September 17, 1898, p. 734.

mostly of the neck, which had to be operated on for various reasons. Of these 73 per cent. were tuberculous.

Osler²⁶ quotes the experiments of Eve as showing that scrofulous material invariably produces tuberculosis in guinea pigs, and often in rabbits.

The contribution of Blos²⁷ to this subject is most important. He reports 328 cases of tuberculous lymphoma occurring in Czerny's clinic, in Heidelberg, during the years 1886 to 1895. Of this number he followed the subsequent histories for a period varying from three to twelve years and found that 40 per cent. of them developed tuberculosis in that time. He has likewise collected the records of 2,300 cases studied in the same manner, and arrives at the conclusion that the enlarged glands in childhood are the primary foci from which the disease develops in later life in a very large proportion of cases. While Osler²⁸ does not go so far as Blos, yet he says: "It is safe to say that in three fourths of the instances of acute tuberculosis the infection is derived from this source," meaning an unhealed focus of tuberculous adenitis. On this point I also quote Steffen²⁹: "The lymph glands offer in a great number, perhaps in the majority, of cases of tuberculosis of individual organs, the primary seat of tubercle formation."

While these statistics do not admit of any conclusion in the nature of a mathematical certainty, nevertheless, when we consider them as a whole, we have some very important data from which we can draw inferences, if not positive conclusions. We are at least justified in saying that:

1. Tuberculosis is common in childhood, causing about 25 per cent. of the deaths occurring during the last quarter of the first year, and quite a large proportion of those during the second and third years.

2. Nearly all cases of tuberculosis show involvement of the lymph glands; and if the fact that the process is furthest advanced is an indication, they are in a large percentage of cases to be considered the primary foci.

3. Nearly all children show enlarged glands during the period of infancy and early childhood, of which investigation seems to show from 60 to 70 per cent. to be tuberculous; and, of those chronically enlarged, even a larger per cent. are so affected.

4. A large per cent. of those who have enlarged glands during childhood develop tuberculosis in later life; and it is probable that the gland was

frequently the primary focus whence came the spread of infection.

It now remains to show what becomes of the bacilli and tubercles which are found in these lymph glands in childhood.

Why the bacilli, in these children with lowered vitality, do not produce a general tuberculosis at once has not been satisfactorily explained. We must remember that the lymphatic elements have a defensive function; and, may it not be probable that the bacilli meet such opposition in these structures that they are unable to make further headway at the time; but, after a time, the bacilli become accustomed to and adapt themselves to their new environment. Experiments show that the bacilli that come from these glands are less virulent than those that come from other foci, as the lungs. Whether this is due to the absorption of germs of less virulence, and the absence of a general infection is due to this; or whether the lessened virulence is due to the action of the various lymphatic elements upon them; or, whether it is to be accounted for by saying that the rapidity of the process depends upon the number of the bacilli which cause the infection, we are not able to say. Perhaps all of these are to be considered. It must be remembered, as shown above, that the bacilli, when thrown out of the system, are almost always cast into an environment unfavorable to them. The temperature is either too low or too high; or the atmosphere is too dry; or they are exposed to the light or the direct rays of the sun. Consequently, the only bacilli that are taken into the system in a highly virulent state are those that are taken directly from the infected person or from bacillus-bearing material which has been freshly cast off, or from a case in which the bacilli are specially virulent. Such an infection can come through kisses, by the use of the same table ware, or by any very intimate association.

If this theory of infection by germs of lowered resistance together with the defensive action of the lymph elements, is to account, either in part or wholly, for the localization of the tuberculous process that is noted so often in childhood, then we should expect to find that those children who live in intimate association with tuberculous patients, if they develop the disease, are most apt to take on extension to other parts of the organism at once. On this point it would be well to gather statistics, to see if they do undergo a more virulent course than those who receive their infection from a less intimate connection. The statistics which I have at hand indicate this; but they do not cover enough cases to warrant a positive conclusion.

When the bacilli find their way into a lymph

²⁶ Osler. *Practice of Medicine*, 1895, p. 225.

²⁷ Blos. *Mittheil. aus d. Grenzgebieten der Medizin und Chirurgie*, 1890, No. iv.

²⁸ Osler. *Practice of Medicine*, 1892, p. 206.

²⁹ Steffen. *Zur pathologischen Anatomie des Kindesalters*, p. 159.

gland, if they are not destroyed three courses are open to them. They may cause a local degenerative process in the lymph gland, or they may be carried on into the distant parts of the organism, as the lungs, through the lymph or blood channels; or, they may become encased in the glands to remain quiescent forever unless they are carried out into the lymph or blood stream at some future time, when the gland involved is irritated and swollen from some cause, as is the case in the acute infectious diseases.

That this extension from the lymph glands into the blood vessels, and thence into the lungs or other parts of the body, can take place, has been demonstrated by Aufrecht,³⁰ who has removed the lungs and heart *in toto* from cadavers; then, laying open the arteries and veins, he cut out the portions containing lymph nodes which were firmly adherent to the blood vessels. After hardening and making sections, he arrived at the following result: "Each section passed through both lymph node and vascular wall. Proceeding thus he (the assistant) was able to supply clear proof that the bacilli from the lymph node had passed into the substance of the vascular wall without injury to the latter. Both arterial and venous twigs were thus studded with bacilli as far as the inner surface. One preparation showed a bacillus in an endothelial cell."

From our study thus far, we are compelled to assign an important place to childhood as the time in life when the tubercle bacillus gains entrance to the tissues. The tissues at this time are succulent, easily penetrated, and possessed of feeble resistance. The bacilli are taken in, either with currents of air, with food, or along with other things that the child puts into his mouth; or, it may be, through wounds of the surface. No matter in what way they gain entrance, they pass readily into the lymph spaces and on into the lymph glands.

A discussion of this subject would not be complete without mentioning the part played by tonsillar tissue in infection. That this is a port of entry for the bacillus, can not be denied. Numerous experiments have been made showing tubercle bacilli present in tonsils and adenoids when the disease was not to be detected elsewhere in the body. Lermoyez,³¹ by inoculating guinea pigs, secured positive results in 13 per cent. of the trials with tonsils and 20 per cent. where adenoids were used. Positive results have also been obtained by Dieulafoy, Brindle, Gottstein and others.

The writer,³² in discussing this subject in a for-

mer paper, said: "Whether or not tubercle bacilli are found in tonsillar and adenoid tissue at all times in sufficient numbers to infect guinea pigs is not the question. Experiments do show that they are found in individuals who are apparently free from tuberculosis; which fact leads at least to the inference that tonsils and adenoids may be ports of entry whence the germs pass on into the lymph stream."

We will now pass on to the second part of our subject and inquire why infection is so prevalent in childhood? This has already been answered in part, but we will now inquire more particularly into the predisposing causes which are incident to childhood.

The first thing that strikes us is the widespread morbidity present at this time. The statement of Holt, quoted above, that 26 per cent. of all children born in New York in the years 1890-92 inclusive, died before the end of the first year, and 34 per cent. before the end of the second year is startling. Such a mortality must of necessity represent a much greater morbidity. The great majority of children are ill, more or less, during the first and second years of their lives. At this period, when they are least able to resist bacterial invaders, owing to the natural immaturity of their tissues, they have superimposed upon this natural weakness a vitality much reduced by disease. It would seem that it were more than coincidence that at the very time when these little ones are most prone to other disorders, the greatest number of them should succumb to tuberculosis. The most prevalent trouble at this time is connected with the digestive tract, which results in an inflammatory condition with abrasions of the surface. Owing to poor ventilation and bad hygiene and general mismanagement of the child at this time, it is apt to suffer, more or less, from catarrhal conditions of the upper air passages with abrasions of these surfaces as well. So we find those conditions present in both the respiratory and digestive tracts which make infection easy and certain.

The nature and habits of the child also make it prone to infection by bringing it in frequent contact with the bacillus. Being helpless it is carried about and fondled by its nurse and attendants without regard to whether they are tuberculous or not. Everything that comes within reach of the child is put into the mouth. The hands are constantly going from floor and furniture to the mouth, carrying with them dirt and dust laden with bacilli.

In this connection the experiments of Preisich and Schuetz³³ are very important in showing how

³⁰ Aufrecht. *Berliner klinische Wochenschrift*, October 21 and 28, 1901. Translated in *Journal of Tuberculosis*, Vol. iv, p. 167.

³¹ Lermoyez. Quoted by Wright, in *New York Medical Journal*, September 21, 1895.

³² Pottenger. *The Rhinologist an Important Factor in the Prevention of Tuberculosis*, *The Laryngoscope*, June, 1902.

³³ Preisich und Schuetz. *Infectiosität des Nagelschmutzes bei Kindern in Bezug auf Tuberculosis*. *Berliner klinische Wochenschrift*, May 19, 1902.

great this danger is. These experimenters examined the dirt under the finger nails of sixty-six children whose ages ranged from six months to two years. These children were taken at random from the ambulatory clinic of the Stefanie Children's Hospital. The examinations were positive in fourteen instances, 21.2 per cent. Considering all these things is it any wonder that living tubercle bacilli are found in the lymph glands of so large a proportion of children?

Tuberculosis in Adolescence and Adult Life.

I do not wish to be understood as denying the occurrence of infection in adult life, for we see many cases in which it is unquestionable; but, I do believe that we have been too prone to accept the time when the disease became manifest to the patient or attending physician as the time when infection occurred. On the contrary, in many of these cases, infection must have occurred a long time before. For example, many of the cases of tuberculosis which so commonly follow the acute infectious diseases, such as influenza, measles, and whooping cough, we know must have been due to the lighting up of some previously quiet focus; for, there could not have been time for the invasion to have taken place with the formation of tubercles and the production of such advanced lesions in so short a time; and, too, in many of these cases, there has been no intimate association with tuberculous patients nor has there been any discoverable exposure to infection while suffering from the acute illness; so we should find it much more difficult to account for the infection as taking place at the time of the acute illness than to suppose the disease to be due to a previously quiet focus.

Until we have further proof, we shall be compelled to recognize the possibility of infection taking place through direct inhalation of bacilli into the lungs; but we must also recognize that, in order for this to take place, there are difficulties to be overcome which are almost insurmountable.

It is very important, in the study of the prevention of tuberculosis, to know when infection takes place; for then we can know where to direct our preventive measures. Of course, the primary place to direct such measures is toward the destruction of sputa and the bacillus-bearing discharges of whatever nature. Aside from this, however, we must look carefully after the individual, and this care must be bestowed at that time when infection is most likely to take place. If, as is shown above, the great majority of children have enlarged glands, and these are tuberculous in a very large per cent. of those that are chronically enlarged, then the period of childhood must receive our most

scrupulous attention. While these bacilli may remain inactive in the glands throughout life, yet they are a constant menace to the individual. They are found in the glands of persons dying of violence and acute diseases in a surprisingly large number of cases, their presence never having been suspected during life. Pizzinni³⁴ states that he has found virulent tubercle bacilli in 42 per cent. of such cases; while Spengler and Kossel also report positive findings in a large per cent. of their cases.

Briault and Frenkel³⁵ examined carefully 83 bodies in the hospital at Lyons, dead of diseases other than tuberculosis, and found 67 or 80 per cent. to have concealed tuberculous foci.

Bollinger³⁶ found one third of the bodies, dead of other diseases, to contain healed tuberculous foci.

Birch-Hirschfeld³⁷ made autopsies on 196 cases of accidental death during the years 1896-98, in the Pathological Institute at Leipsic. In none of these was tuberculosis suspected during life, yet lung lesions were found in 42 instances, 21.4 per cent. of the cases. Of these 29 cases were healed and 13 latent.

It will be interesting and profitable to study the manner in which the bacilli find their way into the lung from one of these lymph glands. This has been admirably summed up by Jacob and Pannwitz³⁸ in a manner which secures every step as taken. Given affected lymph glands they proceed to account for the infection of the lungs upon the authority of the great teachers.

Cornet says: "Through whatever influence the resisting power of an individual is lowered, conditions can come about under which the bacilli slumbering in the glands become mobilized, break through their capsule, and by way of the lymph stream reach the blood to be carried to the lungs."

The accepted theory of Virchow makes this the more plausible, for he says: "An irritation of the lymph glands comes with every inflammatory disease, which (irritation) is caused by the gland being called upon for an increased cell production. Its follicles are enlarged. They contain more cells than previously, which are washed out into the blood. So a condition of leucocytosis accompanies every disease which brings with it an irritation of the glands."

Metchnikoff has proved, and this has been accepted, that in all infectious disease the white cor-

³⁴ Pizzinni. Quoted in Jacob und Pannwitz, p. 226.

³⁵ Quoted by Heubner. *Die Verhütung der Tuberkulose im Kindersalter.* Report of Berlin Tuberculosis Congress, p. 287.

³⁶ Quoted by Curschmann. *Report of Berlin Tuberculosis Congress*, p. 359.

³⁷ Birch-Hirschfeld. *Report of Berlin Tuberculosis Congress*, p. 213.

³⁸ Jacob und Pannwitz. *Entstehung und Bekämpfung der Lungentuberculose*, p. 227.

puscles are to be looked upon as bearers of the infecting germs.

Goldscheider and Jacob have shown that when an increase of wandering leucocytes occurs in the body, no matter what the cause may be, they are heaped up in the capillaries of the lung in such a manner as to cause a thrombus.

Weigert, in discussing the cases of tuberculosis which are so prone to follow measles, says that when a portion of the lung is in a condition of inflammation in an individual whose glands contain virulent tubercle bacilli and who is suffering at the time with such a disease as measles, numerous bacilli are carried from the glands by the white corpuscles and deposited in the inflamed lung. Whether or not a tuberculosis develops at once at the point of deposit depends upon the virulence of the germs, the grade of injury to the lung, and the general resistance of the patient.

Thus, we have a rational basis upon which we may account for many otherwise inexplicable cases of tuberculosis, such as follow immediately upon acute infectious diseases and injuries. In these cases, if the disease manifests itself at once while the acute illness is still on, the probabilities are that it is the awakening of some previous infection; if it manifests itself later, it may be the result of either a new invasion from the lymph gland into the lung or the lighting up of a slumbering focus, or a new infection from without.

The glands once affected or the lungs once the seat of tubercle, though quiescent, there are abundant opportunities during the struggle which is incident to human life for the starting up of an acute process. Adolescence is the period when tuberculosis is most prone to become active. At this time there is a special strain upon people. They are oftentimes depressed. The sexual changes are taking place and many are addicted to indiscretions. Social functions are taxing both physical and mental powers. Studies at this time are hard for them, or, if they are not in school, they are most likely doing work too difficult for their strength. So we find this to be a second period in life when vitality is low; and, like the one in early childhood, it is a period marked by the great number of cases of tuberculosis present. In later life, the earning of a livelihood, business worries, family troubles, various diseases and vicious habits depress the individual, lower his resisting power, and make the soil ready for either new infection or activity in old regions.

From this investigation, I would draw the following conclusions:

1. Tuberculous infection is very common in early childhood.

2. A large proportion of those patients who, although infected, do not show acute symptoms during childhood, develop active tuberculosis in later life.

3. In seeking the cause of this frequent infection, aside from the habits of the child and the carelessness of the parent bringing it in frequent contact with the bacillus, all those things which lower vitality at this time must be considered; and, I would call special attention to the fact that there is a connection which seems more than coincidence in the time that tuberculous infection takes place and the time that the child is most apt to suffer from catarrhal conditions of the stomach and bowels.

4. More attention should be given to the care and feeding of children, so that their systems may be resistant to infection.

5. All tuberculous children, whether they have lesions in the glands, bones, lungs, or any other part of the body, should be treated for their disease.

BRADBURY BLOCK.

THE INTRAVENOUS INJECTION OF FORMALDEHYDE.*

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Considerable public interest has recently been manifested in the report, by Dr. C. C. Barrows, of a case of septicæmia at Bellevue Hospital, in which recovery followed quite promptly upon the intravenous injection of a weak aqueous solution of formaldehyde. Through the daily press the procedure has received wide publicity, and the editor of one of the great newspapers, taking this case as a text, accuses our profession of continually scolding about the medical articles which appear from time to time in the lay press. He takes the ground that in the present instance many lives will probably be saved through the publicity given to this new remedy.

Of course the simple fact is that, if there is to be any progress in medicine, many new procedures must necessarily be tried, but certainly the premature publication of preliminary experiments and the lauding of them as wonderful therapeutic discoveries, works an injustice to the experimenter and on the average holds out false hopes to the suffering sick and their friends. It is not at all intended in the above remarks to reflect in any way upon the merits of Dr. Barrows's experiment, but simply to recall the fact that the total number of therapeutic experiments is very great, and the num-

* Read before the Society of the Alumni of the City (Charity) Hospital, February 11, 1903.

ber of specifics so far discovered is very few, and that there is such a thing as a law of averages.

At the present time, not enough clinical evidence has been collected concerning this use of formaldehyde to warrant an absolute verdict, but it may not be amiss to recall the known facts and to consider the probabilities. The history of intravenous medication has recently been cleverly summarized in the *Lancet* by J. M. Fortescue-Brickdale, A. M., M. B., whose laboratory work in this direction will also be referred to later. He says of the intravenous method: "The idea that drugs might advantageously be administered by direct injection into the circulation was first started by an English mathematician and architect, and has had its latest exponent in an Italian cabinet minister. Sir Christopher Wren, in 1656, was the first to carry out the 'noble anatomical experiment,' and the medical profession has coquetted with the method ever since—exaggerated enthusiasm for it alternating with absolute neglect."

With the advent of modern bacteriology and antiseptics—especially with the demonstration of the various bacterial invasions of the blood—the subject acquired fresh interest. Unfortunately, the powerful bactericides were all known to have a more or less destructive effect upon the delicate tissues of the blood, so that, while some experimenting was done, no real advance was made. The experiments of Baccelli in the treatment of syphilis were interesting, but did not actually prove to mark a therapeutic advance.

In spite of the extraordinary antiseptic powers of formaldehyde gas, it was known to be so intensely irritating that physicians were naturally conservative about injecting it into the veins of their patients. Some experiments were, however, made with it, both in this country and in England. The most noteworthy experiments were those of Dr. Robert Maguire, of London, Physician to the Brompton Hospital. Dr. Maguire's interest in this subject related to the treatment of pulmonary tuberculosis. In the *British Medical Journal* for December 15, 1900, he published a preliminary report of his method, with description of the apparatus. He had at that time found it practicable to inject intravenously 50 cubic centimetres of a 1 to 2,000 solution of the pure gas. In Dr. Maguire's second communication, which was made to the British Congress of Tuberculosis, in 1901, he stated that he had been able to inject a solution as strong as 1 to 500 into the vein of the human being, and as strong as 1 to 200 into that of the rabbit. Normal saline solution was used in preparing these injections, and they were given by simple puncture of the vein with a large hypodermic needle. Dr. Maguire stated in

this second communication that he had treated by this method about two hundred cases of pulmonary tuberculosis in all stages, and apparently with most gratifying results.

This paper naturally attracted wide attention—so much so, that last year Dr. Maguire felt called upon to appear with a third communication on the subject which was characterized by much less optimism. This was the state of affairs when Dr. Barrows, who was not then familiar with Dr. Maguire's work, adopted this method of treatment in the case of septicæmia in Bellevue Hospital. While Dr. Maguire's idea had been to flood the pulmonary circulation of phthisical patients with an antiseptic solution in the hope of destroying the tubercle bacilli in the lung tissue, Dr. Barrows's idea was to destroy bacteria which had already invaded the blood. A brief résumé of Dr. Barrows's case is as follows: A negress aged twenty-six years, with fever and a foetid and bloody vaginal discharge, was delivered of a dead and macerated foetus of about six months, and given a bichloride douche. An hour later, fever had increased, and by the next morning it was 108° F. Intrauterine irrigation of hydrogen peroxide was now given, and was followed by one of normal saline solution. Later, she was curetted, and decomposed membranes and bits of placental tissue were removed. She still remained septic, and on December 30th, a blood culture showed the presence of streptococci. Dr. Barrows now gave the intravenous injection of 500 cubic centimetres of a 1 to 5,000 aqueous solution of formalin. An amelioration of all symptoms at once took place, the temperature falling eventually to 95° F.; but it rose again, and a second injection of 750 cubic centimetres of the same solution was given. In twelve hours the temperature was normal and has remained so, the patient being now convalescent.

This case was reported by Dr. Barrows at the January meeting of the New York County Medical Association. At this meeting two other cases were reported. Dr. Edward Waitzfelder gave the history of a case occurring at Gouverneur Hospital, and the writer gave the history of a case at St. Vincent's Hospital. Dr. Waitzfelder's case was also one of puerperal sepsis, and had also been curetted. The blood showed the presence of streptococci. Her temperature, averaging about 105.5° F., had three separate times fallen below normal following a hypodermoclysis of normal saline solution, but within twenty-four to thirty-six hours in each instance, had risen as high as ever. It was then decided to try the intravenous injection of formalin, and the patient received 750 cubic centimetres of the 1 to 5,000 solution. The temperature again fell below normal, but in twenty-four

hours had again regained its former height. A second injection was ordered, but this time the solution was by mistake made double strength; that is 1 to 2,500, and the patient became rapidly cyanotic, so that the formalin had to be stopped. A saline infusion was given in its place. The result was the same as from the first formalin injection. Forty-eight hours later her temperature was 101° F., pulse 120, and respirations, 48. Of this case Dr. Waitzfelder said that, in view of the similar effect of the previous saline hypodermoclyses, he felt convinced that the fall of temperature had not been due to the germicidal action of the formalin, but to the entrance of a quantity of watery fluid into the circulation. In spite of this statement, Dr. Waitzfelder's case has been widely quoted, by both the lay and medical press, as corroborative of the specific action of formaldehyde.

The third case, reported by the writer, was that of a woman of forty-two years of age, who entered the service of Dr. H. M. Biggs, at St. Vincent's Hospital, on December 12, 1902. She had received a scalp wound from a blow on the head with a spittoon, which was broken in the process. On admission she was suffering from cough and fever and was found to have a bronchopneumonia. The white blood count was 11,600. The symptoms referable to the lungs gradually improved, but the patient's general condition did not, and, on January 3, 1903, twenty-two days after admission, she had a chill, after which the fever was hectic in type, fluctuating daily between normal and 104° F. to 105° F. On January 6th streptococci in great numbers and pure culture were found in the blood. The positive nature of this bacterial invasion will be appreciated when it is stated that the plate cultures averaged about eighteen colonies to the Petri plate. From this time the leucocyte count averaged about 17,000, the highest being 22,000. On January 16th, 250 cubic centimetres of 1 to 5,000 formalin was given intravenously. The following day the patient seemed a little better, but on the second day (January 18th) she was worse, and a second injection was given—this time 750 cubic centimetres. The temperature at this time was 102° F., but in one hour it was 106° F. Five hours later it was 101.5° F., pulse 150. On January 19th, the temperature was from 103° F. to 104° F., pulse 180, and the patient's condition hopeless. On January 21st, the patient died and the autopsy was made by Dr. Theodore Janeway, assistant pathologist to the hospital. Some areas of bronchopneumonia were found in both lungs, but otherwise the organs were normal. No valvular lesions of the heart were found. Cultures from the blood of the heart cavity were made separately by Dr. Janeway and by Dr.

Arthur Mandel, who is in charge of the hospital laboratory, and in both series of cultures a prolific and pure growth of streptococci was found.

This case, then, was one of pure streptococcus bacteriæmia, and the areas of bronchopneumonia did not enter into the clinical picture during the last three weeks of the patient's life. As a case of sepsis this case was comparable to those of ulcerative endocarditis which follow the septic, rather than the cardiac, type. Moreover, there was no putrefying intrauterine condition to suggest that some, and perhaps most, of the symptoms were due to a saprophytic toxæmia. It was, in fact, a case peculiarly fitted for treatment with a remedy aiming to destroy streptococci or other bacteria in the blood.

The optimism of the press toward the formalin treatment is shown by the fact that the newspapers, and even some medical journals, have declared the St. Vincent's case unsuitable "because the patient had double pneumonia and other complications." Dr. Barrows also took this ground in the discussion before the Obstetrical Society. Of course, the suitability of any given case for the trial of a new therapeutic measure may be subject to criticism. For instance, in the Bellevue case itself the blood cultures, if I am correctly informed, did not indicate a severe bacteriæmia, as a majority of the culture tubes did not show any growth. Also the combination of the very high temperature (108° F.) and the putrefying discharge from the vagina are suggestive of sapræmia. This shows how easy it is to criticize the suitability of a test case—and it is easier yet when the event is unfavorable.

From our knowledge of the blood conditions in ulcerative endocarditis it would seem that no fairer test of the formaldehyde treatment could be found. A trial in this disease has been made in Yonkers by Dr. William H. Sherman, who has kindly permitted me to quote his case. The patient was suffering from the characteristic symptoms and physical signs of septic endocarditis, and the blood cultures—made by Dr. R. J. Wilson, assistant bacteriologist of the health department of New York city—showed streptococci in great numbers and pure culture. An intravenous injection of 675 cubic centimetres of 1 to 5,000 formalin was given. A second injection was given, fifty-two hours later, of 600 cubic centimetres of 1 to 3,000 solution. No beneficial result was noticed clinically, and further blood cultures showed no decrease in the number of microorganisms.

This remedy is now being experimented with all over the country, and according to the daily papers with various results. No direct and reliable information is as yet available through medical channels concerning these cases.

We come now to the laboratory work which has been done. By one of those curious freaks of chance, while Dr. Barrows was reading his paper the mail bags in mid-ocean contained copies of the London *Lancet* with the article by J. M. Fortescue-Brickdale, previously quoted. In this paper the author describes a series of experiments made in the bacteriological department of the Jenner Institute of Preventive Medicine. The first experiments consisted of inoculating rabbits with an emulsion of *Bacillus anthracis*, and then administering intravenously one or other of several antiseptics—among them formaldehyde. This drug was tried in various doses, but in no case did the rabbits so treated live longer than the untreated control rabbits, and, as a rule, they died sooner. A second series of experiments was then made with the pneumococcus with identical results. He then draws these deductions from the experiments: "1. Rabbits injected with non-toxic doses are not thereby protected. 2. The larger doses depress the infected rabbits so that they die sooner than an untreated animal."

In closing his paper Dr. Brickdale says: "In view of the results described in this paper and those obtained by former investigators, it seems useless to continue trying to apply clinically a method which is by no means free from special dangers and difficulties, and is at present unsupported by any experimental evidence either as to its present advantages or future prospects."

Since Dr. Barrows's communication on this subject certain laboratory experiments have also been made here, in New York, under the direction of Dr. W. H. Park. In these experiments rabbits were inoculated with pneumococcus and streptococcus, and the results corroborate those obtained at the Jenner Institute. The formalin rabbit invariably dies of sepsis before the control rabbit.

From the available facts, then, it seems improbable that formaldehyde used intravenously has a specific value in septicæmia. There is one thought, however, which is suggested by the behavior of the cases so treated, which is that we are perhaps too often forgetful of the intravenous route in cases of intense toxæmia, and rely too much upon the hypodermoclysis and the rectal enema for that dilution of the toxins which gives the poisoned tissues a breathing spell, as it were, and enables them to keep up the battle. The intravenous injection of antiseptics probably does not kill the bacteria in the blood in septic cases, but does dilute the toxins. The normal saline by the same route will do this equally well, and with less probability of injuring the delicate structures of the blood.

72 WEST FORTY-FIFTH STREET.

THE HÆMORRHAGIC DIATHESIS AS A FACTOR IN THE PRODUCTION OF HÆMORRHAGE FOLLOWING REMOVAL OF TONSILS AND ADENOIDS.

By FRANK H. WASHBURN, M. D.,
JEFFERSON, MASS.

Hæmorrhage of moderate severity during amygdalotomy, whether the operation be of the faucial or pharyngeal region, is not of uncommon occurrence, nor is secondary hæmorrhage after removal of the faucial tonsil; but I think dangerous bleeding occurring some hours after removing of adenoids of the post-nasal space is sufficiently rare to warrant one in reporting such an accident.

CASE.—On May 27, 1902, I operated on R. G., at Portland, Me., a boy eight years of age, for hypertrophied faucial tonsils and adenoid vegetation of the pharynx. Family history not important, except that one sister had suffered from the same affection and had been operated upon by myself about a year previously. The patient's previous history was negative, except for the symptoms caused by the growths. For some time before my seeing him he had been restless at night. Enlarged glands in the neck had been noticed by his parents. The most prominent subjective symptom, however, had been severe epistaxis, occurring frequently. Examination showed extreme hypertrophy of both tonsils, especially the left. The adenoid growth covered a large area but did not protrude a great distance from the nasopharyngeal surface. The boy was of slender build and had, to a moderate degree, the characteristic "adenoid expression," though no particularly apparent anæmia was present.

Ether was used for producing anæsthesia, and was administered by Dr. Charles S. Knight, of Portland. The faucial tonsils were removed by means of the Mathieu instrument. Profuse bleeding followed the removal of the left tonsil, which was completely controlled by bimanual pressure. The pharyngeal growth was removed by means of the curette and finger, and the removal was also followed by very annoying hæmorrhage, which, however, subsided after a second introduction of the curette.

On the next day the patient was apparently doing well, but on the morning of the 29th, nearly two days after the operation, I was hastily summoned and, on arrival, was told that the child had, two hours previously, vomited nearly a pint of fluid and clotted blood, and had passed some dark blood-stained fæces. On examination I could find no evidence of bleeding present. The pulse was 108; there was slight pallor.

I returned that day to Massachusetts, leaving the patient in charge of Dr. Knight, to whom I am indebted for the history of the case during my absence.

May 30th.—Some rattling in throat during the night, but patient was not disturbed for examina-

tion. During the day, he vomited a little dark blood.

May 31st.—He expectorated small amounts of blood from 5 a. m. until 9.30 a. m., when he vomited a pint and a half of blood and bloody fluid in the presence of Dr. Knight. This was followed by jactitation, faintness, extreme pallor, rapid pulse, which was difficult to count, but later averaged 150 per minute during the afternoon. At this time Dr. Knight examined the throat and found that the blood issued from the vault of the pharynx and was being swallowed. The tonsils were perfectly dry.

I was called by telephone and reached Portland at 11 p. m. on the same day, and found the patient extremely pale, temperature 102° F., pulse varying from 130 to 140. No bleeding was present at this time and none occurred after this, though I remained with the patient throughout the night, in readiness to pack the nasopharynx, if further hæmorrhage should demand it. Recovery from this time was progressive, though the temperature remained high for several days. Some cough and expectoration were also present, which, I think, may have been an aspiration effect. In this case the final cessation of the hæmorrhage occurred early on the fifth day following operation. The treatment consisted in the application of astringents, cold, etc.; normal salt solution per rectum; opium, liquid diet; and later a chalybeate tonic. During convalescence the child was sent into the country. The last local application used was a solution of antipyrine, after which there was no further bleeding. The boy rapidly gained in weight, though it was not until after some weeks that the anæmia disappeared, and he has since been in perfect general health. One thing in his subsequent history is of interest. On December 26, 1902, he had a tooth extracted, which was followed by bleeding which was not permanently arrested until three days later. This was accompanied by dizziness and pallor. He has had no nose bleed since the operation.

The principal ætiological factor in the production of hæmorrhage in the above case, it seems to me, was a hæmorrhagic diathesis, though there was nothing in the previous history of the patient, or in the family history, to forewarn us. How often serious hæmorrhage occurs after adenoid operations, it is difficult to estimate, for probably many cases are unreported, but without doubt the condition is rare as compared with the enormous number operated on. A few fatal cases have occurred. Butts, in speaking of adenoid extirpation, in an interesting article, in the *Medical Record* for January 17, 1903, says: "Unfortunately there have been reported in medical literature a number of cases, perhaps a dozen, of fatal hæmorrhage following this operation. On investigation, afterward, nearly all of these cases were found to be hæmophiles." It is probable that severe secondary hæmorrhage is more common after faucial amygdalotomy than that of the pharynx, but I believe this diathesis enters into its cause oftener than is generally

thought. In hospital work the previous history is necessarily incomplete, and after operation the patient is often lost sight of. Griffin¹ reports four nose and throat operations, followed by severe hæmorrhage, where this cause was present. Injury to the internal carotid artery as a cause of hæmorrhage in amygdalotomy is so improbable that it should not as a rule, be seriously considered. St. Clair Thompson² states that hæmorrhage following this operation has never been shown to have been due to injury of the internal carotid, though one of Broca's two fatal cases is said to have been due to an anomaly of this vessel. Anæmia is no doubt a causative factor in bleeding after throat operations, as may also be incomplete removal of adenoids, the wounding of the faucial pillars, reaction after cocaine anæsthesia, etc. I recently met with moderate postoperative hæmorrhage after the removal of enormously hypertrophied tonsils, in a boy aged fourteen years who had an anomalous growth behind the right tonsil, resembling a supernumerary tonsil. Impaired health and the effects of general anæsthesia greatly enhance the danger in this accident, as suggested by a case recently reported by Getchell.³ I believe, however, the evil of operating without anæsthesia, subjecting the patient to the possibilities of incomplete and bungling work, greater than the added danger from the use of a general anæsthetic.

Modern Polypharmacy.—*Janus* for January says that having on occasion criticized severely the polypharmacy, not only of the middle ages, but even of our medical grandfathers and fathers, it must still be admitted that, even in this "alkaloidophile" age, simplicity in prescribing is by no means so general as could be wished. In witness whereof it cites the following prescription from the *Agenda médical*, vaunted as a notable diuretic at the Charité:

R	Rad. Asclepiæ	15
	Rad. Angelicæ	15
	Squiltæ (<i>sic</i>) siccat	15
	Cortic cinchonæ (huanaco)	60
	Cortic aurantior (<i>sic</i>)	60
	Cortic gualtheriæ	60
	Fol. absynth.	30
	Melissæ	30
	Bacc. juniper	15
	Macis	15
	Alcohol, 60%	200
	Vini albi	4,000
	Macera p. 10 dies et filtra. D. uncias III, IX d. dj.	

¹ *Medical Record*, vol. lx, No. 23.

² *The Practitioner*, January, 1902.

³ *Journal of the American Medical Association*, October 5, 1901.

Our Subscribers' Discussions.

A SERIES OF MONTHLY PRIZE ESSAYS.

[Questions for discussion in this department are announced once a month. So far as they have been decided upon, the further questions are as follows:

XXII.—How do you manage occipitoposterior positions of the presenting head? (Answers due not later than March 10, 1903.)

XXIII.—How do you treat ingrowing toenail? (Answers due not later than April 10, 1903.)

XXIV.—How do you treat delirium tremens? (Answers due not later than May 11, 1903.)

XXV.—How do you treat the summer diarrhœa of children? (Answers due not later than June 10, 1903.)

Whoever among our subscribers (with the limitations mentioned below) answers one of these questions in the manner most satisfactory to the editor and his advisers will receive a prize of \$25. No importance whatever will be attached to literary style, but the award will be based solely on the value of the substance of the answer. It is requested (but NOT REQUIRED) that the answers be short, if practicable, no one answer to contain more than six hundred words. So far as our space will allow, we shall publish the substance of such of the answers as seem to us most likely to prove interesting to our readers, and we reserve the right to publish any of the answers in any department of the JOURNAL.

Only subscribers to the NEW YORK MEDICAL JOURNAL (including regular and volunteer officers of the medical corps of the United States Army, Navy, and Marine-Hospital Service, commissioned or under contract) will be entitled to compete, and all persons known to be engaged in medical journalism are disqualified. This prize will not be awarded to any one person more than once within one year. Every answer must be accompanied by the writer's full name and address, both of which we must be at liberty to publish.]

The prize of \$25 for the best essay submitted in February has been awarded to Dr. Adah McMahan, of La Fayette, Ind., whose paper appears on p. 461.

PRIZE QUESTION NO. XXI.

(Concluded from p. 464.)

THE TREATMENT OF INFANTILE CONVULSIONS.

Dr. Adolph Goldhammer, of New York, writes:

The most frequent cause of infantile convulsions is reflex irritation from some disturbance in the gastrointestinal canal. Fevers, meningitis, otitis, pneumonia, and the acute eruptive diseases may be ushered in by a convulsion. A convulsion may also be caused by nephritis, rickets, or phimosis. Frequently a convulsion will occur without any discoverable cause.

The first indication is to stop the muscular spasm. For this purpose we apply a hot mustard bath or a mustard pack to the lower extremities and cold to the head, either an ice bag or cloths wrung out in cold water. Inject three grains of chloral hydrate in starch water, per rectum, in a child one year old. Inhalations of chloroform will shorten the attack and should not be deferred too long if the other procedures fail to effect relief.

The bowels should be irrigated with water or with soap and water to which castor oil has been added or turpentine. A purgative should be administered, either calomel in small, frequently repeated, doses, or castor oil. An antifermentative,

such as resorcin or salol, may be combined with the calomel if required. Where fever is high, an antipyretic should be promptly administered, and the surface of the body frequently subjected to cool sponging with water or alcohol and water.

In convulsions from kidney disease free sweating should be induced by hot packs, and the administration of pilocarpine combined with alcoholic stimulants to counteract its depressing effects.

If phimosis is present it should be corrected, and rickets calls for treatment with the usual remedies. As soon as the immediate indications have been met, try to ascertain the true cause and remove it if possible.

When it is difficult to attribute the convulsion to an exact cause, I administer the following medicine to quiet the child and prevent a recurrence of the convulsion:

R Sodium bromide.....	48 grains;
Tincture of hyoscyamus.....	} each, 90 minims;
Camphorated tincture of opium.....	
Syrup of bilberry.....	½ ounce;
Water, enough to make.....	2 ounces.

M. S. A teaspoonful every two hours, for a child a year old.

Dr. O. C. Tarbox, of Princeton, Minnesota, writes:

To successfully treat a case of infantile convulsions, the physician should have a clear idea of the ætiology of the same, for the treatment varies with the cause. He should remember, first of all, that the same causes that produce chills in an adult tend to produce convulsions in an infant or young child; that in infancy the various infectious diseases and the exanthemata are often ushered in with a convulsion; or, on the other hand, convulsions may signify a nephritis, occurring as a complication or sequela to the same; also that there are many so called reflex causes, such as indigestible food, dentition (delayed or difficult) phimosis, intestinal worms, etc. Rhachitis, among the poorly nourished and foreign born population, especially of our large cities, is frequently accompanied by this symptom, as is also poisoning by drugs. Convulsions often mark the onset, or occur in the course, of meningitis, encephalitis, hydrocephalus, or other disease of the central nervous system.

Keeping these facts in mind, he will more clearly understand that the convulsions he is called to treat may be of relatively small importance and easily cured, or they may indicate the presence of one of the most fatal diseases to which the economy is liable. On being called to attend an infant in convulsions, the physician should respond promptly, for time is golden. He will usually find the room

full of sympathizing friends, who are doing everything but the right thing for the little sufferer. These should be gently but firmly put aside, the physician assume full control of the case, and absolute rest and quiet be enforced (preferably in a darkened room). The cause of the convulsions should be diligently sought for, and, if possible, removed. Obviously, it is difficult to ascertain the cause, at first, in all cases. Where there is a history of indigestible food having been taken, a full dose of castor oil should be given. Be sure the baby swallows the same, holding the tongue well down, and introducing the oil into the back of the throat. If dentition is at fault, the gums should be lanced freely, and any other reflex cause found should receive appropriate treatment. Next, order ice to the head, by an ice bag or ice water coil, not cold cloths, as used by the laity, which are of no therapeutic value whatever. The warm bath, if not already used prior to the physician's arrival, may be tried, though it is of doubtful efficacy. A better way is, in connection with the cold applied as above mentioned, to give the baby a warm mustard foot bath, with mustard plasters applied to the legs and thighs. This keeps the nurse and mother busy and is of some therapeutic value as a derivative measure. Following this, the physician should give an enema of soap and water, to remove all irritating matter and to prepare the way for subsequent treatment if necessary.

Bromide of sodium should next be given, in doses of 2 to 5 grains by the mouth, and repeated every fifteen or twenty minutes as may be necessary, the same care being taken as with the oil to see that it is swallowed.

If the convulsions do not yield to this treatment, chloral hydrate should be given by the rectum, in doses of 3 to 5 grains, dissolved in water, and the dose repeated every half hour or hour, as indications may warrant. The foregoing comprises that which, in the writer's opinion, is the safest and best treatment of an ordinary case of convulsions. If, however, the convulsions recur despite this treatment, it is probable that a cerebral or cerebrospinal inflammation is imminent, and here bromides and chloral in full doses are the safest drugs. The use of morphine hypodermically and of chloroform by inhalation should be avoided as positively dangerous. Occasionally, in those rapidly recurring eclamptic seizures of meningitis or other central nervous disease, where all other treatment has proved unavailing, chloroform may be tried, but its routine use cannot be too strongly condemned. The same may be said of morphine, the temptation to use this drug being strong, but only to be repented of afterward.

Lumbar puncture may be tried in these cases, allowing a small amount of cerebrospinal fluid to escape by a needle. While the writer has had no personal experience with this treatment, he would not hesitate to give it a trial where all other methods proved unsuccessful.

It need only be added that in cases of poisoning by drugs the proper antidotes should be administered, and that in the convulsions of nephritis additional measures should be taken to hasten the elimination of urea as speedily as possible by attention to the functions of the skin, kidneys, and bowels.

Dr. Edmund Newell Huff, of Englewood, New Jersey, writes:

Our first thought should be, the convulsion is not a disease in itself, but a single, though most prominent, symptom of a disease. Too often this is overlooked and in treating the symptom as a disease *per se*, some more important though less prominent sign is overlooked and perhaps a life lost.

By personal observation, or the observation of someone to be relied upon, we should ascertain most accurately the starting point of the convulsion, its progress, duration, severity, and frequency, also the number of paroxysms, as not only the treatment, but the diagnosis and prognosis depend altogether upon such facts.

We must consider, first, the normal predisposition to convulsions from any irritation, due to instability, in early years, of the nervous system, whether such irritation is *direct*, as in cerebral meningitis, tumor, etc., *reflex*, as from undigested food in the gastroenteric tract, or *toxæmic*, as in scarlet fever and other exanthemata.

Convulsions are in most cases due to some peripheral irritation, the most important of which is undigested food, due to unsuitable quantity or quality, which must be corrected. But care must be exercised in diagnosis. In a weakly child we are led to think of some direct cause, such as some cerebral lesion or irritation; while a sudden convulsion in an otherwise healthy child must direct our thoughts to scarlatina, pneumonia, and the exanthematous diseases.

Coming to the treatment of convulsions, let us first consider the indirect treatment, or that of the underlying conditions. Hygiene and diet should be most carefully inquired into and advice given as regards the same, as in many cases parents are most ignorant of the laws of life. Every child, of course, should have all the fresh air obtainable. Diet suitable to the child should be ordered and care taken to direct parents in regard to the same. Then, of course, the cause, if possible, must be removed. An emetic to clear the stomach, an enema for the

bowels, and the use of calomel in one to three grain doses are of greatest importance in relieving peripheral irritation due to the most prominent and frequent cause, undigested food. In all cases it is important to make a careful diagnosis and treat the cause, whether cerebral, such as meningitis; toxic, such as scarlet fever; or peripheral irritation, such as teething, and upon such treatment convulsions will disappear, if the cause is removable.

But in most cases the physician is called upon to treat the convulsion itself, and we must consider the relief of the symptom as well as the primary disease.

It is well, first, to obtain quiet and a darkened room, as noise and light may cause a continuation of convulsive seizures.

Loosen, or, even better, remove the clothing of the patient. In primary seizures or cases of doubtful origin it is always well to begin treatment with a bath. Strip the child, place it in a bath of the temperature of 90° F. to 95° F., with a cold cloth to the head (if the head is hot), apply gentle friction while the child is in the bath, remove it in ten minutes, and wrap it up well in bed. Mustard may be added, with advantage in many cases, or we may use the mustard pack, prepared as follows: Take of dry mustard, 1 drachm; rub well into 1 ounce of water; add water, one quart. Take a bath towel, dip it in the mixture, wring it out, and wrap the child in it, surrounded by other coverings as needed. This treatment in many cases is sufficient, but if relief is not soon obtained, the following procedure is followed: A cleansing enema is given in every case, followed by an enema containing 6 grains of chloral hydrate and an ounce of warm milk, for a child one year of age. Inject through a catheter and retain by compression of the buttocks.

While waiting for the effects of this treatment, the judicious use of chloroform, a few drops upon a handkerchief held to the nose, affords much relief to the family as well as the child, and is most useful.

After relief and when the child is able to swallow, it is well to prescribe a dose of calomel, 1 to 3 grains, or of castor oil, for further cleansing of the gastrointestinal tract.

Morphine, $\frac{1}{40}$ of a grain for a child a year old, may be used, if this treatment is unsuccessful, but is very seldom necessary.

Of course, all cases are not curable or relievable, as a convulsion may be a symptom of approaching death, at which time whiskey, strychnine, and customary stimulants should be given.

The after-treatment in all cases should, as before stated, consist in treatment of the primary cause, regulation of the hygiene and diet, care of

the gastroenteric tract, especially watchful of constipation and correction of the same, and above all an abundance of fresh air and sunshine.

Therapeutical Notes.

For Acute Lichen Planus.—The following treatment is employed by Professor Gaucher, at the Hôpital Saint-Louis, according to the *Journal des praticiens* for January 31st. In acute cases the sole local treatment consists of sedative applications, either permanent humid dressings, or powders, such as the following:

- R Powdered camphor.....1 part;
Powdered and sifted talc.....100 parts.

M.

Internally, preference is given to the bromides or preparations of valerian, especially the extract:

- R Fluid extract of valerian
(American).....40 grammes (10 drachms);
Syrup of mint..... } of each 15 grammes
Tincture of valerian } (½ an ounce);
Syrup.....30 grammes (1 ounce).

M. ft. mist. A teaspoonful of this mixture to be taken morning and evening.

Treatment of Nephritic Colic.—A. Robin (*Journal de médecine de Paris; Revue médicale*, January 28th) gives the following principles: (1) To relieve pain. The best method is the hypodermic injection of a centigramme ($\frac{1}{6}$ of a grain) of morphine, of a milligramme ($\frac{1}{65}$ of a grain) of heroine, or of a centigramme of dionine, which may be repeated if necessary. But every patient subject to accesses of nephritic colic should have in his own possession a means of immediate relief from his sufferings before the arrival of the physician. Robin, for this purpose uses the following mixture, which the patient can keep by him for an indefinite time without its undergoing any alteration:

- R Potassium bromide.....6 grammes (90 grains);
Cherry laurel water.....10 grammes (150 minims);
Syrup of ether.....30 grammes (1 ounce);
Morphine hydrochloride.....0.05 gramme ($\frac{3}{4}$ of a grain);
Valerian water.....120 grammes (4 ounces).

M. ft. mist. A tablespoonful of this mixture to be taken every half hour until the pain disappears, but not to exceed four or five tablespoonfuls in all.

(2) To facilitate elimination of the concretions diuretics should be given. The author uses preferably indigenous plants, such as *ulmaria ulmaria* (meadowsweet) or *menyanthes trifoliata* (buckbean); an infusion of two grammes of the flowers of either in 150 grammes of water every hour, from the beginning of the attack. Mulberry leaves may also be recommended; they are a powerful diuretic. An infusion of $7\frac{1}{2}$ grammes (2 drachms) in 500 grammes (17 ounces) of hot water may be taken in the course of three or four hours.

This treatment sometimes, it is true, increases temporarily the pain by its activity in effecting the expulsion of the calculus, but it answers to the ideal treatment of "removing the cause."

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THE ITHACA LESSON.

It is greatly to our discredit as a people that we have thus far—with exceptions so rare that they prove the rule—shirked the duty of providing ourselves with drinking water of assured freedom from the germs of disease. In this matter we have lamentably failed to show forth the practical qualities on which we plume ourselves and for which the world in general gives us credit. It is not many months since one of the most noted physicians living in the United States arraigned us in the most caustic style for our criminal remissness. But we have turned a deaf ear to him and to everybody else who has sounded the alarm. We have been content to go on in the old way of impounding the washings of hillsides and the infusions of submerged barn yards and privies, trusting to nothing better in the way of purification than sedimentation in reservoirs and in the mains, the sediment to be constantly stirred up by the blasting operations that have become almost invariable incidents of our daily lives.

We have often paid the penalty, but the lesson has not been learned. So far are we from having learned it that even now, when the Ithaca epidemic of typhoid fever is the subject of such general thought, when we stand aghast that a university town should be poisoning the flower of our young men, proposed legislation forbidding the cutting of ice for domestic use at any point between Waterford and Coxsackie on the Hudson River or within 3,000 feet below any town of more than 10,000 inhabitants on the river, though supported by testimony to the effect that ice polluted by eighty sewers is sold for domestic purposes in New York, an honorable senator and a delegation of ice dealers oppose the bill

on the ground that it would deprive 10,000 men of a means of livelihood!

Could the accursed yearning for gold and the miserable business of grubbing for votes be brought squarer into conflict with the innate rights of every human being? Does the legislature of the State of New York suppose that the people of the metropolis are willing to be poisoned in order that the ice dealers may make more money? Perhaps it would be justified in such a supposition in view of the docility with which we have heretofore borne the tyranny of the extortioner. Nobody supposes, of course, that the ice dealers care in the least for the 10,000 men about whose livelihood the honorable senator is so solicitous, but it doubtless serves their present purpose to cooperate with him in his willingness to subordinate the health of New York to his greed for popularity.

The people of Ithaca are represented as having at last been aroused to the necessity of providing themselves with pure water; but will the lesson of their experience have any adequate effect upon the rest of the country? We can only hope that it will.

THE LAY PRESS AND MEDICAL MATTERS.

In our issue for March 14th we referred, as we have repeatedly felt compelled to do before, to the indecent manner in which the lay press helps to prostitute the dignity of the medical profession by its sensational accounts of various matters of a medical character, and especially of clinics. Writing of the highly improper circus methods with which the scientific demonstrations of a great and dignified surgeon like Professor Lorenz were recently blazoned abroad, the *Post-graduate* for January says that an attempt was made to exclude reporters from the operating room of the Post-graduate clinic, and was not insisted on only in consequence of the fact that reporters had been admitted to all the other hospital demonstrations. It then continues: "The *Post-graduate* has made up its mind for itself, whatever other hospitals may do, that hereafter reporters shall get their news not by actual presence, but by what is told them by the directors or others in a part of the building away from the operating room. The only remedy the lay journals will have is to see that the reporters they send are members of the

medical profession, else they will not be admitted. There will be no objection to *their* presence, but there always is a weighty objection to any but doctors and nurses being present at the performance of surgical operations. In such cases it ceases to be a clinic but becomes a medical show." The *Post-graduate* has, we think, hit upon a possible solution of the real difficulty that exists in the adjustment of the respective claims of the public desire for news on matters of a medical character and of the medical profession for the protection of its dignity against methods that place it on a level with a circus or a dime museum and at the same time grievously mislead the public by giving it a distorted view, totally lacking in all sense of proportion. Let the newspapers retain the services of medical reporters (there are plenty of competent young medical men in almost every community whose engagements are not yet of sufficient magnitude but that it would pay them to make reports at ordinary space rates of professional matters), and let them pay due attention to the judgment of their reporters as regards avoidance of sensationalism, not only in the reports themselves, but also in the absence of startling and misleading headlines, and we think that the newspapers will find their legitimate requirements met with competent and inoffensive news matter upon which the public may rely as to accuracy, and which the medical profession will not resent or place any obstruction in the way of. Those papers which are so wedded to sensationalism that such reports would not suit their purpose can remain unrepresented altogether; and if they choose to carry out the threat, so often made, that if they cannot get an accurate report (which they would at once proceed to distort) they will publish a report anyhow, they can do so, for everyone, knowing the source, will treat it with the indifference it deserves. At present, the newspapers of high esteem and repute are largely dependent for their information on sources equally untrustworthy, scientifically speaking, with those of the "yellow" fraternity, though they do not make the same discreditable use of them. In order to maintain the high character of such semiofficial medical reports, we might suggest that the medical societies should establish a license for medical reporters, and that those holding such license should

always be welcomed at medical meetings, clinics, etc., and be afforded every facility which their duties may require. Such a course would supply all legitimate needs of the lay press, and at the same time would be a protection to the profession against the humiliation to which it is at present subjected in matters of a medical character as represented, or rather misrepresented, in the newspapers. The power to revoke the license for its abuse would be a guarantee, and all lay reporters should be rigidly excluded from clinics and society meetings.

THE LICENSING OF EMBALMERS.

Last month there was introduced into the legislature of the State of Illinois a bill decreeing that no person should embalm, prepare for transportation or burial, or otherwise dispose of the body of any person dead of a contagious or infectious disease, or embalm any body, or hold himself out as practising the art of embalming without first applying for and obtaining from the State board of health a license authorizing him so to do. The bill exemplifies the looseness of diction to be found in most of our legislative enactments, but its main purpose seems to us commendable. It is that of preventing attempts at embalming by persons who do not know how to embalm. To obtain a license, a person must pass an examination in anatomy, in sanitary science (a very broad subject), and in the care, preservation, embalming, transportation, and burial of dead bodies, also demonstrate his proficiency as an embalmer by operations on a cadaver.

It is manifest that the practice of embalming should be under legal control, if for no other reason than that, in cases of death with a suspicion of poisoning as its cause, the necessary medical and chemical examination should not be rendered unnecessarily difficult by treatment of the body with such chemicals as might chance to commend themselves to the embalmer. Its official control may be desirable for other reasons. At all events, it can do no harm, so far as we can perceive, for embalmers to be required to procure a license.

We were not aware that the embalming industry had grown to such consequence as to have journals of its own, but that must be the case, for the bill provides that notices of examinations, which

must be held as often as twice a year, shall be published in at least one journal devoted to the interests of embalming. Class journalism has put forth its buds in a multitude of different directions, and perhaps we ought not to be surprised to find that one of them turns toward the embalmers. We feel sure that the art of the embalmer must receive nothing but benefit from its special literature as well as from legal regulation.

FEMALE VERSUS MALE INEBRIATES.

In a British Blue Book recently issued and containing the report of Dr. R. W. Branthwaite, the inspector under the Inebriates' Act (1901), we find a blow at another cherished notion. Dr. Branthwaite directly traverses the common and often expressed idea that a woman inebriate is more hopeless as regards reformation than a man. Speaking from his own experience, he thinks women quite as capable of reform from alcoholic habits as men, if not more so. He states that he has himself known women inebriates who have remained strict abstainers for so long a period as ten years without giving way once. While the weight of traditional experience is against him, we shall all be delighted to know that his position can be sustained. But all through the ages, and in every clime which has left us historical records, the universal testimony is to the effect that, in vices of all sorts, when a woman is bad, she is "very, very bad." Is it possible that this universal testimony can be altogether fallacious? The average goodness of woman is so far in advance of the average goodness of man that perhaps we men have selfishly huggd this theory by way of compensation.

THE NEW YORK STATE HOSPITAL FOR THE CARE OF CRIPPLED AND DEFORMED CHILDREN.

The second annual report of this institution, recently issued, shows that gratifying results have been achieved during the short time that has elapsed since it was opened. The report cites a letter from Professor Lorenz to the surgeon in chief in which he says: "The location of the hospital is fine, and the work you are doing must commend itself. The pity is that it is so small. * * * * I hope to know, after I return home, that your hospital has been made much bigger, and I hope you may have a great success. I shall tell my own government of your hospital, and I hope we may have one like it is Austria."

THE NEW JERSEY SANATORIUM FOR TUBERCULOUS DISEASES.

The board of managers of this institution have, we think, done wisely in issuing a report while yet the sanatorium is in the formative stage. The frontispiece shows a pleasing landscape in Glen Gardner, which has been selected as the site. It consists of about 550 acres, of which 275 acres are woodland, and it is 950 feet above the level of the sea. Glen Gardner is in the township of Lebanon, in Hunterdon County, and the land adjoins the Central Railroad of New Jersey. In the report much attention is properly devoted to estimating the number of people who will probably have to be provided for. The managers recommend restricting the work of the sanatorium to curable cases of tuberculous disease of the respiratory organs. It is satisfactory to observe that five of the eight members of the board are physicians. The president is Dr. Charles J. Kipp.

MICROPHOTOGRAPHY AS AN AID TO HÆMATOLOGY.

Anyone who has undertaken the wearying task of making blood counts must realize feelingly what a headachy operation it is. According to the *British Medical Journal* for January 31st, Dr. C. A. MacMunn showed at a recent meeting of the Physiological Society of King's College, London, "several photographs of the Thoma-Zeiss hæmocytometer containing blood diluted to 1 and 0.5 per cent., in which the ruling of the cell as well as the corpuscles can be distinctly seen on the plate." A $\frac{2}{3}$ -inch objective and a Zeiss No. 4 eyepiece were found to be the most suitable apparatus. The camera must be strictly vertical. By this measure, accuracy can be secured by the comparison of the results of several pictures; the ocular strain of counting direct from the microscopic field is avoided; and a permanent record is at the same time secured.

THE NEW "CAPTAIN OF THE MEN OF DEATH."

Accepting Dr. William Osler's transfer of John Bunyan's phrase from consumption to pneumonia, Dr. Arthur R. Reynolds, the energetic health commissioner of Chicago, recently addressed the Sixth General Conference of Health Officials in Michigan on the subject of the importance of the prophylaxis of pneumonia. He would take the same precautions as in the matter of tuberculous pulmonary disease. In this we believe he is undoubtedly right.

News Items.

Society Meetings for the Coming Week:

MONDAY, March 23d.—Medical Society of the County of New York; Lawrence, Mass., Medical Club (private); Cambridge, Mass., Society for Medical Improvement; Baltimore Medical Association.

TUESDAY, March 24th.—Metropolitan Medical Society, New York (private); Buffalo Academy of Medicine (Section in Obstetrics and Gynecology); Richmond, Va., Academy of Medicine and Surgery; New York Medical Union (private).

WEDNESDAY, March 25th.—New York Academy of Medicine (Section in Laryngology and Rhinology); New York Pathological Society; New York Surgical Society; American Microscopical Society of the City of New York; Philadelphia County Medical Society; New York Dermatological Society (private); Auburn, N. Y., City Medical Association; Berkshire, Mass., District Medical Society (Pittsfield).

THURSDAY, March 26th.—New York Academy of Medicine (Section in Obstetrics and Gynecology); New York Orthopaedic Society; Brooklyn Pathological Society; Brooklyn Society for Neurology; Roxbury, Mass., Society for Medical Improvement (private); Pathological Society of Philadelphia; Church Hill Medical Society of Richmond, Va.; New York Celtic Medical Society.

FRIDAY, March 27th.—New York Clinical Society (private); New York Society of German Physicians; Yorkville Medical Association, New York (private); Philadelphia Clinical Society; Philadelphia Laryngological Society.

SATURDAY, March 28th.—New York Medical and Surgical Society (private); Harvard Medical Society, New York (private).

Change of Address.—Dr. Marcus J. Levitt announces the removal of his office from 1757 Madison Avenue to 135 East One Hundred and Sixteenth Street, New York City.

A Physician Shot.—Dr. Henry Bass, of Tarboro, N. C., was shot in the abdomen by Dr. Julian Baker, of that city, on March 16th. It is said that there had been considerable ill feeling between the two physicians for some time past.

The Falls City Medical Society recently held its annual meeting at Seelbach's Hotel in Louisville. Dr. A. O. Pfingst was elected president, and Dr. W. B. Jenkins secretary of the society for the ensuing year.

The Vaccination Bill in Minnesota has been so amended that where children present a physician's certificate to the effect that they are not in a fit condition to be vaccinated they will be admitted to the schools without vaccination.

A Pasteur Institute at Ann Arbor.—The Regents of the University of Michigan have appropriated the sum of \$3,000 per annum to carry on an institute for the treatment of hydrophobia. The present buildings and facilities will be utilized by the institute, to be in charge of Dr. Thomas Cooley.

The American Medical Association.—A special train will leave New York by way of the Pennsylvania Railroad at 4:25 p. m., on Saturday, May 2nd, carrying delegates and others who wish to attend the New Orleans meeting of the American Medical

Association. A party is being formed by Dr. Frederick Holme Wiggin, president of the New York State Medical Association, and by Dr. Wisner R. Townsend. The train will go by way of Washington, Atlanta, Montgomery and Mobile over the Southern Railway, and will be splendidly equipped in every way.

A City Tuberculosis Camp.—A site has been offered in Orange County consisting of nearly one hundred acres for use by the city as a place for locating a camp for the treatment of tuberculosis. Since no appropriation has been made for the proposed open air sanitarium no action has been taken on this offer.

The Society of Medical Jurisprudence held its twenty-first annual dinner at the Hotel Savoy, on March 7th. Among the speakers were Dr. C. H. Ramdohr, Adrian H. Joline, Prof. Harvey W. Wiley, of the Department of Agriculture, and J. Franklin Fort, of the Supreme Court of the State of New Jersey.

The Abolition of the Coroner.—The Elsberg bill providing for the abolition of the office of coroner in the city of New York and creating the office of medical examiner, passed the senate of the New York State legislature on March 17th, and seems sure of passing in the assembly.

A Serum for Cholera Infantum.—The Commissioner of Health of the City of New York has announced in interviews in the daily press that he expects that the department will have ready for the coming season a curative serum for the treatment of cholera infantum. It is stated that the serum is practically ready now.

The University of Maryland Medical School has been made the residuary legatee of the estate of Mrs. Crim, widow of the late Dr. William H. Crim. It is estimated that the university will receive upwards of \$25,000. A professorship is to be endowed in the name of Dr. Crim, and the residue of the income from the legacy is to be devoted to scholarships for impecunious students.

To Register Physicians as Pharmacists Without Examination.—A bill has been introduced into the Minnesota legislature providing that physicians who are graduates of medical colleges and duly licensed to practise and who have had four years' experience in the practice of medicine may obtain licenses as pharmacists from the State Board of Pharmacy without examination.

The Western Slope Medical Society composed of practitioners residing on the Western Slope of the Rocky Mountains, has been recently organized at Glenwood Springs, Colo., with the following officers: President, Dr. L. G. Clark, of Glenwood; vice-president, Dr. W. G. Lockard, of Newcastle; treasurer, Dr. W. W. Crook, of Glenwood; secretary, Dr. L. A. Robinson, of Glenwood.

The Will of Dr. Thomas.—The will of Dr. Theodore Gaillard Thomas provides that his estate shall be divided into three parts, one of which is to go to each of his sons, and the other to his wife. It is estimated that he leaves an estate of approximately \$1,000,000 in value.

The Nu Signa Nu Medical Fraternity.—The Lambda Chapter held its seventh annual banquet at the Hotel Bellevue, Philadelphia, on the evening of March 12th. Dr. A. O. J. Kelly acted as toastmaster, and Dr. Edward K. Dunham, of New York, was orator of the evening.

Beirut Diplomas Recognized in Turkey.—Press cable dispatches from Constantinople announce that the results of the examinations of the American Medical College at Beirut will hereafter be recognized by the Turkish authorities along the same lines as are the French examinations.

The Death of Professor Panas, of the University of Paris, has deprived the profession of a distinguished ophthalmologist. Professor Panas was a Greek by race, a British subject by nativity, having been born in the Ionian Islands while they belonged to Britain, and a Frenchman by adoption.

Tuberculosis in Children was the subject of a popular lecture given by Dr. Abraham Jacobi in the Charity Building, on March 16th. Dr. Jacobi ridiculed the character of the physiology taught to the children, and laid down general principles to be followed for the prevention of tuberculosis.

Legislation in Colorado.—A bill regulating the practice of medicine has passed the lower house of the legislature of the State of Colorado, which in its original form was all that could be desired by the medical authorities. Before the bill passed, however, a number of amendments were introduced which are said practically to nullify the effect of the bill.

An Epidemic of Influenza.—The health officials of the Borough of Brooklyn have published a notice warning the public against influenza which is declared to be epidemic in that borough. The disease is also quite prevalent in the Borough of Manhattan, and in consequence Bellevue Hospital has been taxed to its utmost capacity.

New York State Hospital for the Care of Crippled and Deformed Children.—Dr. H. A. Gates, of Delhi, N. Y.; Dr. Grant C. Madill, of Ogdensburg, N. Y.; and Dr. Frank Walker Sears, of Binghamton, N. Y., have been appointed as consulting surgeons to the New York State Hospital for Crippled and Deformed Children, at Tarrytown, N. Y.

Dr. Ohage Reappointed.—Dr. Justus Ohage has been reappointed health commissioner of the city of St. Paul for a term of four years. The commissioner has been very active and aggressive in his work and some opposition to his reappointment has developed, but this evidently had no effect, as

he is said to have been reappointed without any restrictions to his line of action having been imposed upon him.

The Psychiatric Society of New York has recently been founded with the object of promoting interest in the study of psychiatry. The active membership of the society is limited to fifteen. The following officers were elected: President, Dr. Allan McLane Hamilton; vice-president, Dr. Frederick Peterson; secretary, Dr. Pearce Bailey, 52 West Fifty-third Street.

A Decision Adverse to Osteopaths in Minnesota.—In the Municipal Court of St. Paul Judge Hine recently imposed a fine on an osteopath by the name of C. W. Young for a violation of the quarantine law in connection with his attendance upon a family, members of which were suffering from diphtheria. The defense set up was that the board of health was not constituted according to law.

To Use the Widal Test in Philadelphia.—The Director of the Public Safety of the City of Philadelphia has sent a circular letter to every practicing physician in that city, directing attention to the wisdom of having all cases of suspected typhoid fever subjected to the Widal test, and offering the services of the department for carrying out the test free of cost to members of the profession.

Legislation in Virginia.—A bill has been enacted by the Virginia Legislature under which osteopaths, Christian scientists, and "healers" of all sorts will be required to pass an examination before the State Board of Medical Examiners. An amendment to the pharmacy law has also been enacted permitting registered physicians to engage in pharmacy without undergoing examination by the Board of Pharmacy.

Another Physician in the United States Senate.—Dr. Louis Heisler Ball, of Faulkland, Delaware, who was recently elected to the United States Senate from Delaware is the second physician in active practice, we believe, to become a member of the United States Senate; Dr. Ballinger, of New Hampshire, already being a member. Dr. Ball graduated from the Medical Department of the University of Pennsylvania in 1885.

The Karamania Released from Quarantine.—As noted in our last issue the steamer *Karamania*, of the Anchor Line, on its arrival in this port on March 10th, reported the occurrence of six deaths during the voyage from a disease which had some of the symptoms of Asiatic cholera. The entire crew and the passengers of the vessel have been isolated at the quarantine station on Hoffman Island and so far no further cases have developed. The steamer after having been fumigated has been released from quarantine and has come up to her dock. The health authorities are uncertain as to the character of the disease, it being asserted by the ship's surgeon that it was probably ptomaine poisoning that was the cause of death.

The Pennsylvania Hospital.—Dr. James Tyson, professor of theory and practice of medicine in the medical department of the University of Pennsylvania, has been appointed visiting physician at the Pennsylvania Hospital to fill the vacancy caused by the recent death of Dr. Frederick A. Packard. Dr. Tyson has resigned as visiting physician at the Philadelphia Hospital, and his son, Dr. T. Mellor Tyson, has been appointed to succeed him there.

A Pathologist Wanted.—An examination will be held by the United States Civil Service Commission on April 4th for a physical instructor and a pathologist for Craig Colony for Epileptics. Applications must be filed in the office of the commission at Albany before noon of March 30th. Application blanks and further information may be obtained by addressing Charles S. Fowler, chief examiner of the Civil Service Commission, Albany, N. Y.

Medical Officers to be Promoted as in the Line.—Acting Secretary Darling, of the Navy Department, has decided that, under the law, officers of the medical department of the United States Navy must be promoted to the next higher grade just as line officers of like dates of precedence are promoted. Medical officers of the navy, upon entering the service, are to be credited with six years, and will take precedence accordingly with the line officers who entered the service on the same date six years previously. In promoting medical officers they are to be advanced grade by grade with such line officers.

To Fumigate at Sea.—Plans have been presented by the general manager of the Mexican-American Steamship Company to the Surgeon-General of the Public Health and Marine Hospital Service which provide for the establishment of a floating fumigating plant, the time required for fumigating vessels while in transit being deducted from the five days they are required to remain in quarantine before being allowed to come up to the city of New Orleans. The adoption of the scheme would, it is asserted, greatly facilitate the intercourse between New Orleans and Central and South American ports. This is of particular consequence just now since the Chinese Commercial Company has adopted a short route to New Orleans by steamers sailing to Manzanillo instead of to San Francisco as heretofore.

Chicago Drainage and St. Louis Water.—A United States commissioner has been engaged in taking testimony both in St. Louis and Chicago regarding the effect upon the waters of the Mississippi River, of the introduction into that river of the sewage of Chicago by way of the Chicago drainage canal. The most sensational portion of the testimony presented was that given by Dr. Amand Ravold, bacteriologist to the city of St. Louis, who testified that he had secured from Germany a colony of the *Bacillus prodigiosus*, that he prepared 200 barrels of cultures of this bacillus, and dumped these into the canal at Lamont, Ill. He

further testified that subsequent experiments showed that these bacilli had reached St. Louis alive. He said that in respect to the vitality these bacilli closely resembled those of typhoid fever.

Dr. Mueller Returns to the United States.—Dr. Frederick Mueller, the assistant of Professor Lorenz, and who accompanied him throughout his recent tour through the United States, has returned to this country, and will take up his residence in Chicago, where it is reported that he is to have charge of a hospital devoted especially to orthopædic surgery. Dr. Mueller operated on two patients suffering from talipes at the Beth Israel Hospital on March 16th, but found it necessary to resort to the aid of the knife, and in one case to the osteoclast devised by Dr. Lorenz. On March 15th he operated on six patients for congenital dislocation of the hip using the Lorenz redresseur for the first time in this country. This apparatus was described and illustrated in the *New York Medical Journal* for January 3rd, page 2.

Danger of Sewage Contamination from New Jersey.—Governor Odell has transmitted to the legislature of the State of New York a communication from Dr. Daniel Lewis, State health commissioner, calling attention to the plan which is being considered by the legislature of the State of New Jersey for the construction of an immense trunk sewer to take the sewage from a large portion of the northern portion of New Jersey and empty it into the waters of New York Bay to the possible detriment of the health of those residing along the water front, more particularly along the water front of Staten Island. Dr. Lewis is of the opinion that each of the cities should be required to treat their sewage before permitting it to empty into the trunk sewer. He recommends that a conference on the subject be held between the authorities of the State of New Jersey and those of the State of New York.

An Adirondack Sanitarium for the City.—Plans for a sanitarium which it would cost \$530,000 to erect, have been prepared by the Committee on the Prevention of Tuberculosis of the Charity Organization Society, and have been submitted by the committee to the commissioner of health of the city of New York. The institution will provide accommodations for 480 patients and it is proposed that it be located in the Adirondacks, where the best results will be obtained. The general plan suggested is similar to that which has been adopted for the sanitarium now being constructed in England under the direction of King Edward. In addition to the permanent pavilions, however, it is proposed to have a number of tents each provided with a wooden floor. A bill has been passed by the legislature empowering the health department to acquire land at any point in the State for the erection of the tuberculosis sanitarium. An effort will now be made to secure an appropriation to begin the work at least. In submitting the report the committee rehearses the conditions regarding this disease and points out the totally inadequate provision made for the sufferers from it in the hospitals of the city.

Trachoma Still Prevalent.—Notwithstanding the activity of the department of health in its efforts to check the spread of trachoma, it appears from the annual report of the superintendent of the schools of the city of New York that there has been no perceptible diminution in the number of cases occurring in the public schools. It is, of course, probable that but for the efforts of the department the disease would have spread much more rapidly than it has. The superintendent in his report states that the "medical inspection of the public schools has been prosecuted by the president of the department of health with much greater vigor and thoroughness than in former years. The exclusion of children who are suffering from dangerous contagious diseases was vigorously insisted upon."

The Protection of the Water Supply.—In a report submitted to the governor by the New York State board of health it is stated that the total number of deaths reported throughout the State during the year 1902 was 124,160, making an average death rate of 17 for each 1,000 of population. This is the average death rate of the five preceding years. The report calls attention to the fact that ample provision is made for the protection of the water supply of any municipality or water company, and surprise is expressed that the provisions of the law are not more generally utilized. Under the law now in force, rules for the protection of water supplies may be formulated by the State department of health on application by the municipality using the water, by the company supplying it or by an individual. It is the custom of the department to make such rules sufficiently comprehensive to prevent all contamination of a dangerous or doubtful character. When the rules are approved by the State commissioner of health and published for six weeks in a newspaper in the county or counties in which the watershed is situated they have all the force of law, and prosecutions may be made against offenders, and penalties imposed.

Official News.

Infectious Diseases in New York:

We are indebted to the Sanitary Bureau of the Health Department for the following statement of cases and deaths reported for the two weeks ending March 14, 1903:

DISEASES.	Week end'g Mar. 7		Week end'g Mar. 14	
	Cases.	Deaths.	Cases.	Deaths.
Measles.....	225	6	290	13
Diphtheria and Croup.....	376	42	376	39
Scarlet fever.....	266	19	319	17
Small-pox.....	0	0	2	0
Chicken-pox.....	147	0	120	0
Tuberculosis.....	303	169	279	152
Typhoid fever.....	46	8	63	8
Cerebro-spinal meningitis....	0	0	0	0

Public Health and Marine-Hospital Service:

Official List of Changes in the Station and Duties of Commissioned and Non-Commissioned Officers of the Public Health and Marine-Hospital Service for the seven days ending March 12, 1903:

THOMAS, A. R., Passed Assistant Surgeon. Granted leave of absence for two months from February 25.

KERR, J. W., Assistant Surgeon. Leave of absence granted by Department letter of September 20, 1902, amended so that said leave shall be for one month and fifteen days.

FOSTER, A. D., Assistant Surgeon. Upon the return of medical officer in command, relieved from duty at Wilmington, N. C., and directed to proceed to Charleston, S. C., and assume command of the service, relieving Acting Assistant Surgeon F. F. SAMS.

BEAN, L. C., Acting Assistant Surgeon. Granted leave of absence for two days.

GOLDSBOROUGH, B. W., Acting Assistant Surgeon. Granted leave of absence for one day.

PATRIE, W. E., Acting Assistant Surgeon. Granted leave of absence for fourteen days from February 27th.

RODMAN, J. C., Acting Assistant Surgeon. Granted leave of absence for three days.

ACHENBACH, J., Pharmacist. Relieved from duty at Port Townsend Quarantine, Washington, and directed to proceed to Port Townsend, Washington, and report to medical officer in command for duty and assignment to quarters, relieving Pharmacist R. F. TROXLER.

THURSTON, E. J., Pharmacist. To proceed to Gulf quarantine and report to medical officer in command for duty.

WOODS, C. H., Pharmacist. Granted leave of absence for twenty days from March 21st.

DAVIS, H. E., Pharmacist. Relieved from duty at Louisville, Ky., and directed to proceed to Memphis, Tenn., and report to medical officer in command for duty and assignment to quarters, relieving Pharmacist E. M. HOLT.

TROXLER, R. F., Pharmacist. Upon being relieved from duty at Port Townsend, Washington, to proceed to Port Townsend Quarantine and report to medical officer in command for duty.

HOLT, E. M., Pharmacist. Upon being relieved from duty at Memphis, Tenn., directed to proceed to Louisville, Ky., and report to medical officer in command for duty and assignment to quarters.

Promotion.

Assistant Surgeon H. B. PARKER commissioned as Passed Assistant Surgeon, to rank as such from March 3, 1903.

Resignation.

Passed Assistant Surgeon A. R. THOMAS resigned, to take effect April 25, 1903.

Naval Intelligence:

Official List of Changes in the Medical Corps of the United States Navy for the week ending March 14, 1903:

BOGERT, E. S., JR., Surgeon. Detached from the Naval Recruiting Station, Buffalo, N. Y., and ordered home to wait orders.

BUCHER, W. H., Passed Assistant Surgeon. Commissioned Passed Assistant Surgeon from January 10, 1903.

DENNIS, J. B., Passed Assistant Surgeon. Commissioned Passed Assistant Surgeon from February 10, 1903.

DORSEY, B. H., Assistant Surgeon. Appointed Assistant Surgeon March 2, 1903.

GROVE, W. P., Passed Assistant Surgeon. Detached from duty with Marine Detachment, Culebra, P. I., and ordered to the Naval Hospital, New York, for treatment.

HAAS, H. H., Passed Assistant Surgeon. Commissioned Passed Assistant Surgeon from February 10, 1903.

HUNTINGTON, E. O., Passed Assistant Surgeon. Commissioned Passed Assistant Surgeon from February 10, 1903.

HURD, J. N., Pharmacist. Detached from the Navy Yard, Portsmouth, N. H., and ordered to Washington, D. C., for examination for retirement, and thence home to wait orders.

McMURDO, P. F., Acting Assistant Surgeon. Ordered to the Gloucester.

LUMSDEN, G. P., Surgeon. Detached from the Hancock and ordered home to wait orders.

THOMPSON, E., Passed Assistant Surgeon. Commissioned Passed Assistant Surgeon from February 10, 1903.
WAGGENER, J. R., Medical Director. Commissioned Medical Director from January 20, 1903.

Public Health and Marine-Hospital Service Health Reports:

The following cases of smallpox, yellow fever, cholera, and plague, have been reported to the surgeon-general, Public Health and Marine-Hospital Service, during the week ending March 14, 1903:

Smallpox—United States.

Places.	Date.	Cases.	Deaths.
Alabama—Mobile	Feb. 28-Mar. 7 ..	11	
California—Fresno	Feb. 1-28	23	
California—Los Angeles	Feb. 22-28	4	
California—Sacramento	Feb. 22-28	3	
California—San Francisco	Feb. 22-Mar. 1 ..	8	
Colorado—Denver	Feb. 22-28	10	
Florida—Jacksonville	Feb. 28-Mar. 7 ..	3	
Illinois—Alton	Feb. 28-Mar. 7 ..	5	
Illinois—Chicago	Feb. 28-Mar. 7 ..	12	4
Indiana—Elwood	Mar. 1-8	6	
Indiana—Evansville	Feb. 28-Mar. 7 ..	5	
Indiana—Indianapolis	Feb. 28-Mar. 7 ..	19	8
Iowa—Davenport	Feb. 28-Mar. 7 ..	1	
Kansas—Wichita	Feb. 28-Mar. 7 ..	2	
Kentucky—Lexington	Feb. 28-Mar. 7 ..	1	
Kentucky—Newport	Mar. 1-8	1	
Louisiana—New Orleans	Feb. 28-Mar. 7 ..	3	
Massachusetts—Fall River	Feb. 28-Mar. 7 ..	2	
Massachusetts—New Bedford	Feb. 28-Mar. 7 ..	1	
Michigan—Ann Arbor	Feb. 28-Mar. 7 ..	1	
Michigan—Marquette	Feb. 28-Mar. 7 ..	1	
Michigan—Port Huron	Feb. 28-Mar. 7 ..	5	
Missouri—St. Louis	Mar. 1-8	5	
Nebraska—Omaha	Feb. 28-Mar. 7 ..	2	
New Jersey—Jersey City	Mar. 1-8	1	
New Jersey—Newark	Feb. 28-Mar. 7 ..	3	
New York—Buffalo	Feb. 28-Mar. 7 ..	1	1
Ohio—Cincinnati	Feb. 27-Mar. 6 ..	6	1
Ohio—Cleveland	Feb. 28-Mar. 7 ..	2	2
Ohio—Dayton	Feb. 28-Mar. 7 ..	5	
Ohio—East Liverpool	Feb. 1-28	3	
Pennsylvania—Erie	Feb. 28-Mar. 7 ..	3	
Pennsylvania—Johnstown	Feb. 28-Mar. 7 ..	1	1
Pennsylvania—McKeesport	Feb. 28-Mar. 7 ..	1	
Pennsylvania—Philadelphia	Feb. 28-Mar. 7 ..	17	4
Pennsylvania—Pittsburg	Feb. 28-Mar. 7 ..	27	1
South Carolina—Charleston	Feb. 28-Mar. 7 ..	2	1
Tennessee—Memphis	Feb. 28-Mar. 7 ..	3	
Utah—Salt Lake City	Feb. 23-Mar. 7 ..	26	
Wisconsin—Greenbay	Mar. 1-8	1	
Wisconsin—Milwaukee	Feb. 28-Mar. 7 ..	6	

Smallpox—Foreign.

Austria—Prague	Feb. 7-14	6	
Belgium—Antwerp	Feb. 7-14	1	
Belgium—Liege	Jan. 31-Feb. 7 ..	1	1
Brazil—Rio de Janeiro	Jan. 17-Feb. 6 ..	14	
Canada—Hamilton	Feb. 28-Mar. 7 ..	1	
Canada—Winnipeg	Feb. 1-28	2	
Canary Islands—Las Palmas	Feb. 7-14	32	
Germany—Hamburg	Feb. 14-21	1	
Great Britain—Birmingham	Feb. 14-21	8	1
Great Britain—Dublin	Feb. 14-21	2	
Great Britain—Leeds	Feb. 14-21	9	2
Great Britain—Liverpool	To Feb. 21	105	5
Great Britain—London	Feb. 14-21	7	
Great Britain—Manchester	Feb. 7-21	52	3
Great Britain—Sheffield	Feb. 7-21	4	
India—Bombay	Feb. 3-10	53	
Mexico—City of Mexico	Feb. 15-22	2	1
Russia—Odessa	Feb. 7-11	3	1
Russia—St. Petersburg	Feb. 7-14	75	14
Russia—Warsaw	Feb. 19-26	2	
Spain—Barcelona	Feb. 1-15	4	
Spain—Malaga	Jan. 1-31	3	
Spain—Valencia	Feb. 1-15	3	
Straits Settlements—Singapore	Jan. 10-17	4	
Switzerland—Zurich	Feb. 7-14	1	

Yellow Fever.

Brazil—Rio de Janeiro	Jan. 16-Feb. 6 ..	75	
Mexico—Vera Cruz	Feb. 21-28	3	3

Cholera—Foreign.

India—Bombay	Feb. 3-10	1	
India—Calcutta	Jan. 31-Feb. 11 ..	33	

Plague—Foreign.

Brazil—Rio de Janeiro	Jan. 16-Feb. 6 ..	4	
India—Bombay	Feb. 3-10	649	
India—Calcutta	Jan. 31-Feb. 7 ..	142	
India—Karachi	Feb. 1-8	38	39
Mexico—Mazatlan	Feb. 7-14	41	20
Mexico—Mazatlan	To Mar. 6	302	250

Plague—Insular.

Hawaii—Hi lo	Mar. 9	1	
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Army Intelligence:

Official List of Changes in the Station and Duties of Officers serving in the Medical Department of the United States Army for the week ending March 14, 1903:

BLOOMBERG, HORACE D., First Lieutenant and Assistant Surgeon. Order revoked directing him to be relieved from duty at Fort Bayard, New Mexico, and proceed to Manila, P. I.

RAFFERTY, OGDEN, Major and Surgeon. Granted leave of absence for two months.

Births, Marriages, and Deaths.

Married.

BEATTIE—ROCKWELL.—In Chicago, Illinois, on Tuesday, March 10th, Dr. Edward Beattie, of Kansas City, Missouri, and Miss Emma Gertrude Rockwell.

DORMAN—DALE.—In Beirut, Syria, on Wednesday, January 14th, Dr. Harry Gaylord Dorman and Miss Mary Bliss Dale.

HERZOG—SWEETIN.—In Benton, Missouri, on Wednesday, March 4th, Dr. Gustavus G. A. Herzog, of Cuba, Missouri, and Miss Sarah Sweetin.

OSBORNE—ALEXANDER.—In Baltimore, Maryland, on Monday, March 9th, Dr. Woodridge Osborne, of Portland, Maine, and Miss Jennie S. Alexander.

Died.

BEERS.—In New York City, on Monday, March 16th, Dr. George Beers, in the thirty-third year of his age.

BISHOP.—In Snow Hill, Maryland, on Friday, March 6th, Dr. George W. Bishop, in the seventy-seventh year of his age.

BORGONO.—In Santiago, Chili, on Wednesday, March 11th, Dr. Manuel Barros Borgono, the eminent surgeon and rector of the University of Santiago.

BROGA.—In Oneida, N. Y., on Wednesday, March 11th, Dr. J. D. Broga, in the seventy-second year of his age.

BROWNING.—In Smithtown Branch, L. I., on Tuesday, March 17th, Dr. John Hammell Brower Browning.

BURRIS.—In Norfolk, Virginia, on Friday, March 6th, Dr. Clarence S. Burris, of Berkley, Virginia, in the thirtieth year of his age.

DRAKE.—In Winsted, Connecticut, on Monday, March 16th, Dr. H. Hungerford Drake, in the seventieth year of his age.

DUCHARME.—In Longueuil, Quebec, Canada, on Friday, March 6th, Dr. Joseph Ducharme, in the fifty-ninth year of his age.

CHURCH.—In Jersey City, N. J., on Friday, March 13th, Dr. A. W. Church, in the thirty-second year of his age.

GILES.—In Athens, Ontario, Canada, on Friday, March 13th, Dr. John G. Giles, in the sixty-ninth year of his age.

GOODLETT.—In St. Louis, Missouri, on Sunday, March 1st, Dr. W. C. Goodlett.

GRATIGNY.—In Cincinnati, Ohio, on Saturday, March 7th, Dr. L. H. Gratigny, in the sixty-second year of his age.

HALL.—In Mason, Ohio, on Wednesday, March 11th, Dr. Clayton T. Hall.

LEECH.—In Shelbyville, Indiana, on Thursday, March 5th, Dr. E. W. Leech, in the seventieth year of his age.

LEWRIGHT.—In St. Louis, Missouri, on Monday, March 9th, Dr. J. Oscar Lewright, in the thirty-sixth year of his age.

LARKIN.—In Chicago, Illinois, on Thursday, March 12th, Dr. J. J. Larkin.

MERRILL.—In Paterson, N. J., on Monday, March 16th, Dr. Sherburne R. Merrill, in the eighty-first year of his age.

MCCALL.—In Philadelphia, Pa., on Thursday, March 12th, Dr. Charles Archibald McCall, in the sixty-seventh year of his age.

McKEE.—In Edwardsville, Illinois, on Tuesday, March 17th, Dr. A. B. McKee, in the fortieth year of his age.

Pith of Current Literature.

PRACTICE OF MEDICINE.

The Determination of the Outline of the Stomach by Inflation.—Dr. A. K. Zivert (*Roussky Vrach*, January 18th) studies the value of inflation with carbon dioxide in the determination of the outlines of the stomach. The questions which he considers are (1) Whether the boundaries of the stomach, as determined by percussion after inflating with small quantities of carbon dioxide, coincide with those obtained by other methods. (2) Whether there is any difference between inflating the stomach with a small amount and introducing a large quantity of the gas. (3) Whether the stomach is dilated uniformly in all directions in inflation. The study of a large number of cases by various methods of examination leads the author to conclude as follows: (1) The boundaries of the stomach, as determined with the aid of a small amount of gas, are almost identical with those determined by other methods, viz., palpatory percussion (splashing sound) and percussion accompanied by auscultation with the aid of a phonendoscope. The method of inflating with small amounts of gas has great advantages in that it enables us to determine not only the lower boundary but also the right boundary, and if the stomach can be felt also the upper boundary of the organ. The author believes that the determination of the right boundary is just as important, if not more so, than that of the lower boundary, in the diagnosis of dilatation of the stomach, especially in the first stages of the disease. (2) The boundaries of the stomach determined by the aid of large amounts of gas differ markedly from those determined with small quantities, and, therefore, if we introduce a large amount of gas we do not determine in reality the true boundary but the boundary of a dilated and partly displaced stomach—something that we do not care to do for diagnostic purposes. The dilatation of the stomach with large amounts of gas, however, is very important in the diagnosis of prolapsed stomach (gastroptosis) as it enables the eye to distinguish the outlines through the abdominal wall. (3) The stomach is not uniformly dilated when large quantities of gas are introduced; for the right boundary is displaced much more markedly to the right than the lower boundary is lowered.

A Case of Massive Pneumonia or Fibrinous Bronchopneumonia.—Dr. G. Pieraccini (*Clinica moderna*, January 7th) reports a case of a rare form of bronchopneumonia, known as Grancher's massive pneumonia, or Banti's fibrinous bronchopneumonia. The patient was a woman aged twenty-five years, who had a chill on June 1, 1900, and immediately afterward felt a sharp pain under the left scapula and the left breast. Dulness and respiratory silence were found over the left base behind. The diagnosis of pleurisy with effusion was made when she was admitted. The semilunar space of Traube, however, showed tympanitic resonance and the right juxtavertebral angle of Grocco was absent. The author therefore thought that he had to deal with Grancher's massive pneumonia and not with pleurisy

with effusion, and the later clinical developments proved that he was right. Netter says that this type of pneumonia is rarely recognized; it is generally mistaken for pleurisy with effusion, unless, as happens in rare instances, there are bronchial casts of large size in the expectoration. Grancher's massive pneumonia is a rare disease. Its onset may be sudden with a chill, as in this case, or slow. It resembles clinically a lobar pneumonia, with dulness over a lobe of the lung, fever, etc. But there is an absence of the characteristic expectoration and of the bronchial breathing and râles found over the affected area in lobar pneumonia. This leads to a confusion with pleurisy with effusion. Instead of being limited to the respiratory areas of the lung, the disease produces a fibrinous exudate which plugs up the bronchi. In pleurisy with effusion, if the fluid is abundant, there is a bulging outward of the intercostal spaces, and if the fluid is not so plentiful, the level thereof changes with the position of the patient. In effusions, too, there is an increase of the poststernal resistance, as felt in the upper segment of that bone in front. This symptom is passed over with brief mention in the books, but is held in high esteem by Banti in distinguishing effusions from pneumonias. The persistence of tympany in Traube's space is also valuable in this direction, and especially if the patient is sitting during the examination, nothing but a sacculated pleurisy or an adhesive pleurisy can render this sign useless. Grocco's juxtavertebral triangle of dulness or flatness is present in cases in which the amount of fluid is considerable. It is a triangular area with its base along the spine, extending vertically for about two or three centimetres, bounded externally by a line which, beginning at the lowest rib, goes on to join the vertical limit of the spine at an acute angle. This diagnostic sign is especially valuable in the diagnosis of pleurisies with effusion, particularly on the right side, from pneumonias. The triangle in question was absent in the case reported. Grocco's sign is of value when it is for some reason impossible to make an exploratory puncture.

A Case of Gastric Tetany and its Lessons Regarding the Ætiology of this Condition.—Dr. Luigi D'Amato (*Riforma medica*, February 4th) relates a case of tetany of gastric origin in a man aged thirty-two years, who had been suffering from gastric disturbances for five years. He had become cachectic as the result of vomiting after each meal, and had improved somewhat under dietetic treatment. Small doses of olive oil were given him, as is the custom in Germany in cases of pyloric stenosis, but this treatment had a very unsatisfactory effect, for the patient was seized with violent gastric pain, repeated uncontrollable vomiting; trismus; contractions of the muscles of the extremities; rigidity of the muscles; impeded, shallow breathing; contracted pupils; and a weak, rapid pulse. Coma followed on the seventh day, cyanosis, contractions of nearly all the muscles, and anuria, and death ensued as the result of a violent contraction and spasm of the respiratory muscles. The stomach contents, examined before the attack, after Ewald's meal showed superacidity; absence of organic acids; presence of mucus, and sarcinæ. The

fasting stomach was found to contain, after a profuse washing on the previous evening, a large amount of very acid yellowish liquid. On the morning of the attack the stomach contained less free acid. The patient was suffering undoubtedly from gastric tetany. In order to determine the cause of this condition, the author injected filtrates of the gastric juice obtained from this patient into animals, and found that the toxicity of this fluid was not due to the superacidity, but was, so to speak, a specific property of the gastric juice of this patient. This conclusion agrees with the observations of Bonardi and of Halliburton and MacKendrick. The symptoms observed in this patient corresponded very closely to those observed in the animals after the injections of the gastric juice. Although in this case there seems to be no doubt that tetany was caused by a substance formed in the gastric juice, yet it is impossible to generalize in view of the opposite results obtained by other authors. Tetany is not always as severe as in this case, and it is possible that in other instances there was a smaller amount of toxic substance generated, or that the patient was more resistant. Some writers even speak of a latent or chronic form of tetany. It is possible, therefore, that the toxicity of the gastric contents is not the same in all cases of tetany, but probably the same varieties of toxic substances are found in all cases. However this may be, the toxic nature of gastric tetany seems to have been shown conclusively in this instance.

Note on "Relapses" in Scarlet Fever. By Dr. A. B. Sloan. (*Lancet*, February 14th).—Relapses occur in about 1.09 per cent. of cases of scarlet fever. The author holds that a majority of these cases occur through reinfection from without, and not from self-infection and are therefore second attacks, rather than relapses. He reports two typical cases in which the original attack of scarlet fever was followed within two or three weeks by a second desquamation occurring in both attacks. There is another class of cases where the original attack is mild and not accompanied by desquamation. Such cases give a history of slight sore throat, transient rash, and slight malaise. The temperature is normal and there is no desquamation. On being put in a scarlet fever ward, however, they develop scarlet fever, not immediately, but in about three weeks' time.

A Case of Primary Sarcoma of the Lung, Simulating Empyema. With Remarks on the Nature of Primary Malignant Disease of the Lung. By Dr. H. D. Rolleston, and R. S. Trevor, M. B. (*British Medical Journal*, February 14th).—The authors report a case of primary sarcoma of the lung, occurring in a girl thirteen years of age. Clinically the interest of the case is in the close imitation of an empyema, as shown by the physical signs on the right side of the chest, the oedema of the chest wall in the right axilla, the displacement of the heart outward, and the elevation of the body temperature. Primary malignant disease of the lung is a very rare disease, and its signs are neither constant nor characteristic, while the symptoms are usually compatible with the existence of some comparatively common intrathoracic disease, such as pleural effusion, tuber-

culosis, etc. Aneurysm sometimes stimulates primary new growth of the lung. In the absence of any external growths or enlarged glands the diagnosis is most difficult. Of the recorded cases of primary malignant disease of the lung, the vast majority are described as carcinoma, and only a few as sarcoma. From the cases collected by the authors, they hold that in many instances a wrong diagnosis must have been made, and conclude as follows: (1) That primary malignant disease of the lung proper, whether of the body or of the root, is of the nature of sarcoma. (2) That primary sarcoma of the body of the lung is of the spindle-celled variety. (3) That primary sarcoma of the root of the lung is of the nature of endothelioma.

A Few Remarks on Blood Pressure. By James Marsh Jackson, M. D. (*Boston Medical and Surgical Journal*, February 26th).—Dr. Jackson urges the value of the careful study of blood pressure by means of mechanical devices. After experimenting for three years he has reached the following conclusions: (1) The apparatus needed is a mercury manometer, a Riva Rocci armlet, and a Gaertner finger ring. The manometer is interchangeable and can be used with either of the last named devices. In cases of arteriosclerosis or in patients with very fat arms the Gaertner finger ring probably gives more accurate results than the armlet. Occasionally the two instruments, when used on the same patients, will give results which vary greatly, and it is often impossible to say which reading is the most correct. (2) The average reading for young healthy men ranges from 100 to 130 millimetres of mercury. The reading may be as high as 150 and yet a condition of perfect health exist. In young women the reading ranges between 90 and 110. In a person of fifty years of age a reading even as high as 175 is without significance. Pressures of 200, though frequently met with, must always cause anxiety, and pressures of 250 and over are only met with in grave and dangerous cases. "In the last year five of my patients with pressures of over 190 have died of apoplexy, and I now make it a rule to warn the family of a patient with a tension above 190." (3) All records of blood pressure should state the name of the instrument used. The Riva Rocci gives too high readings in arteriosclerosis.

The Treatment and Care of Consumptives at their Homes, and the Urgent Need of Local Sanatoria. By S. A. Knopf, M. D. (*Medical Record*, February 21st).—The ideal way of treating pulmonary tuberculosis, in nearly all stages of the disease, is to have the patient under complete control in a sanatorium situated in a favorable part of the country. Yet, since the ideal conditions can rarely be attained, and since many patients could not, for social or other reasons, take advantage of such institutions even if they existed in adequate numbers, it is a matter of the utmost importance to know the best way of obtaining possible cures with the means at our command. Dr. Knopf's paper consists, as the title sets forth, of two parts: (1) The treatment of consumptives in their own home; and (2) The need of local sanatoria. (1) The home treatment

recommended is an adaptation of the sanatoria methods to home limitations, and minute and feasible suggestions are given how to manage a case. We summarize the author's advice under the following heads: (a) Education of the patient. Patients must be made to realize the danger they are to the rest of the community and must be taught to dispose of their sputum in such a way that all danger is eliminated. Various forms of portable sputum receptacles are described and illustrated. Patients must, moreover, be minutely instructed with regard to the natural course of the disease (the possibility of hæmorrhages and their best emergency treatment) and with regard to diet, exercise, sleep and clothing. All these matters are minutely discussed and precise advice is given. (b) The patient's abode. The chief requirements are fresh air and sunshine. In a large city and among the well-to-do the whole top floor of a house should be dedicated to the patient's use. In the country a suitable extension to any dwelling can be built at small cost. It is among the city poor that the problem is one difficult of solution. Yet by utilizing the tenement house roofs and yards, and teaching the poor how to make the most of their limited means, much may be accomplished. Dr. Knopf goes into much detail in order to show what really can be done. (c) Medication. No attempt is made to discuss this phase of treatment. Some of the newer drugs that the author has found useful are referred to and their indications given. There are four special modes of treatment, however, that the author lays some stress upon, and which he goes to some trouble to elucidate, namely, massage, aerotherapy, solar therapy and hydrotherapy. The directions are sufficiently minute to enable anyone to try these methods in their own practice. (2) The article concludes with a strong plea for local sanatoria, especially in the vicinity of great cities, like New York. In the Borough of Manhattan alone, in the year 1902, there died 1,787 homeless tuberculous patients, 31 of whom were found dead in lodging houses, hallways, and other places.

SURGERY AND ANATOMY.

The Present Status of Surgery of the Gall Bladder and Bile Ducts. By William J. Mayo, A. M., M. D. (*Medical Record*, February 21st).—The frequency with which gall stones occur is probably not so great as the statistics based on charity hospital reports would seem to show. It is also probably true that the proportion of such gall stones that can really be considered as "slumbering" is smaller than is generally believed. From the purely surgical point of view, "slumbering" stones can be left out of consideration, for they are only discovered accidentally during an operation for some other condition or are found at autopsy. If found during the course of a laparotomy they may be removed or not, depending on the condition of the patient. Cases in which *active* gall stones have periods of *rest* form a class that can be claimed for treatment by either the physician or surgeon. It is the case of chronic and relapsing appendicitis over again. The author believes in early surgical intervention and bases his beliefs on the following considerations: (1) The probability of further extension of the

trouble. (2) The low mortality, less than 1 per cent., and the improbability of recurrence. In over 2,000 operations of this kind in the hands of six surgeons there was not a single instance of the reformation of gall stones. The complications due to gall stones originate, the author believes, in the persistent irritation due to the stones and to their interference with the free circulation of bile and could be mostly avoided by early operation. These complications, often quite grave, may be classed as follows: (1) Chronic inflammations of the gall bladder or the bile ducts. This condition, aside from the trouble it may itself cause, is at the bottom of all the other conditions that are to be dreaded. (2) Conditions due to the presence of the stones: (a) Impaction of stones; (b) their passage; and (c) the possibility of their becoming encysted. (3) Inflammatory adhesions of the gall bladder or bile ducts to neighboring organs or perforation into them, and their invasion with gall stones and infected fluid. (4) Cancerous degeneration of the gall bladder due to the prolonged irritation. In the author's 454 cases this occurred in 21 (5 per cent.). (5) Infection of the liver ducts, and occasionally those of the pancreas. Infection of the liver ducts makes the outlook very uncertain, as it may lead to the condition described by Eisendrath as hepatalgia. These five conditions are the principal complications that are to be feared and that warrant the consideration of early surgical intervention. The last part of the paper discusses the most suitable operations adapted to the different conditions that are apt to arise and sets forth the author's opinions based on an operative experience of 454 cases.

The Technics of Laparotomies.—Dr. V. S. Grousdieff (*Roussky Vrach*, January 11th) describes the results obtained by him in one hundred laparotomies for various surgical and gynæcological conditions, in which he had the opportunity of judging the difference between the efficiency of the so-called "dry" method of operating in the peritoneal cavity and of the operations accompanied by irrigations with normal salt solution. No selection of instances in which the operation was technically easier than in others of the same class was made in studying these cases. The contrast between the results attained with the dry method and those attained with the method involving the irrigation of the peritonæum with normal salt solution during the operation was very marked indeed. Thus, of 28 cases operated on by the dry method three were fatal, and in two of these the deaths were directly traceable to the operative procedure. On the other hand, of 72 cases in which irrigations of the peritonæum had been employed during the operation in one form or another, only one was fatal, and even in this case the death was entirely independent of the operative procedure. In this case the operation was undertaken upon a literally dying patient, as a last resort, to delay death. During the first days, this hope seemed to be justified, and the patient's strength seemed to be returning, but the improvement did not continue for a long time, and the patient soon succumbed to the disease (tuberculous peritonitis). The author thinks that such a difference between the

results obtained by the dry method and those obtained by the wet method of operating are sufficiently eloquent in favor of the latter. Experimental facts and bacteriological examinations, as well as clinical experience, show that irrigations are of benefit during laparotomies. The patients bear the operations thus conducted much better, their general condition remains more satisfactory, the shock is less marked, the heart works better, the intestinal functions are more readily reestablished, and even the pains are less marked. The mechanism of action of these irrigations of the peritoneal cavity during laparotomies is partly by removing the germs by the mechanical effect of the washing, partly by stimulating the activity of the leucocytes. These irrigations also free the cavity from any blood or other foreign material, cyst fluid, etc., that may have entered it during the operation, and so remove substances that would serve as favorable soil for germs. In addition, the saline solution, by its absorption, stimulates the action of the heart, and by its elimination undoubtedly washes out a considerable portion of the toxins from the system. Finally, after removing large tumors from the abdomen, irrigations serve to lessen the difference in the conditions with which the heart has to deal before and after such removals. The only disadvantages of this method are that it slightly prolongs the operations, and also that, if strict asepsis is not observed, the chances are that more microbes will enter the cavity with the solution than are already present there.

The Methods of Preventing Surgical Tuberculosis. By Dr. A. A. Bobroff, (*Roussky Vrach*, January 18th).—The field of surgical tuberculosis is rapidly becoming wider. Not long ago, it was only the tuberculous affections of the bones, joints, superficial organs, and tissues that came under heading of surgical tuberculosis. To-day, the surgeon treats tuberculosis of all the genitourinary organs, of the peritonæum, and the digestive tract, and the only organs that are still inaccessible to surgery are the lungs and heart and the central nervous system. Surgical tuberculosis, in other words localized tuberculosis, can be divided into two types: (1) Cases with acute inflammation, or with chronic inflammation accompanied by the development of infiltrates, and even by the formation of new connective tissue. (2) A chronic or a subacute process of cellular infiltrations with the formation of tubercles which become necrosed. If, in addition to tuberculosis, there occurs a secondary infection, the case becomes one of acute malignant supuration.

The general condition of the patient is a very important factor in the course of the disease in these cases, and if we can improve the general health, we create favorable conditions for recovery. Age is a second factor which is of great importance in the prognosis of surgical tuberculosis. It is much easier to obtain good results in childhood, less easy in middle age, and in elderly people we can rarely obtain a good result by conservative treatment and we must usually remove the diseased part. Hospitals and sanatoria are necessary to enable such patients as cannot be treated at home to obtain the best possible care and feeding, so as to increase the vitality of the

body and to improve the general health. The best climates for these patients are warm regions at the seashore. There is no question that the time will come when free institutions for the treatment of surgical, as well as medical tuberculosis will be established everywhere.

Nineteen years of experience and observation have taught the author that a sojourn at the southern shores of Crimea is very beneficial in cases of surgical tuberculosis. A year or a year and a half passed in the Crimea always proves beneficial, especially in children. The infiltrates become absorbed, the granulations less indolent, fistulæ close, the circulation of the blood is improved, and the patient increases in weight and in strength. Sun baths are especially beneficial, the parts affected being exposed to the sun for considerable intervals. A number of sanatoria for the treatment of children with surgical tuberculosis have already been established in Russia.

A Case of Prolapse of the Bowel with Loss of Control, Treated by Injection of Paraffin Under the Mucous Membrane. By S. Paget, F. R. C. S. (*British Medical Journal*, February 14th).—The author reports a case of prolapse of the rectum, occurring in a man aged sixty-five years. The prolapse was slight; it disappeared when the patient was lying down; when he walked about, two inches of healthy mucous membrane were everted. Under an anæsthetic, paraffin was injected at several points into and around the prolapsed bowel. Some of the paraffin did no good, but at two points the mucous membrane was raised into two hummocks which effectually prevented the occurrence of prolapse. The patient was greatly benefited; he could walk erect, could keep himself clean, and discontinued the use of a rectal plug, which he had worn for seven years. The paraffin must be injected immediately under the mucous membrane of the prolapse, not outside of the bowel, but into the fold of everted mucous membrane. Numerous punctures must not be made, but only one or two, lest a vein should be wounded. The prolapse containing the nodules of paraffin in its submucous layer, must be at once put back and kept back. The bowels should be kept inactive for several days, and the patient should remain in bed for ten or more days until the tissues are thoroughly contracted.

OBSTETRICS AND DISEASES OF WOMEN.

The Present Status of the Use of Steam in Surgery and Gynæcology.—Dr. M. F. Kazlenko (*Roussky Vrach*, January 18th) reviews the different uses of steam in diseases of women and in surgery. The first application of steam was made fifteen years ago, when Snegireff suggested its use in the arrest of uterine hæmorrhage. Since then a number of new uses have been found for the method in question. A number of authors recommend the use of steam in cases of endometritis, and recently steam has been employed to obtain relief in cases of metrorrhagia in the climacteric, or in profuse bleeding from the uterine cavity depending upon senile catarrh. Such cases are often

resistant to every form of treatment, and frequently the question of removing the uterus arises, though the patient's condition is very often excellent. In such cases, steaming the interior of the uterus for the purpose of destroying the entire diseased mucous membrane has given good results, inducing ultimately an artificial climacteric. Steam has also found a number of applications in the treatment of diseases of the eye, nose, and throat, but the most interesting use of it is in resections of the liver, in which it is applied for the arrest of the bleeding. A steam saw has been devised for this purpose by Snegireff, the purpose of which is to arrest the bleeding as the liver is cut. This instrument looks like an ordinary small surgical saw, but is hollow and its hollow handle is connected with a steam apparatus. Small openings are provided on the cutting surface between the teeth of the saw through which steam passes directly into the tissues traversed by the instrument. Experiments on animals show that this saw arrests bleeding when used in resections of the liver. The steam is driven through the saw at a pressure of two atmospheres. It arrests instantly bleeding from parenchymatous surfaces, and the liver can even be kneaded with the hand after having been cut without inducing any more bleeding. The author believes that this saw offers the best method of arresting bleeding in operations upon the liver and spleen.

Treatment of Contracted Pelvis in Private Obstetrical Practice.—Dr. A. Mueller (*Münchener medicinische Wochenschrift*, February 10th) emphasizes the importance of securing, if possible, a small child in the pregnancies of women with small pelvises. In private practice, he believes that when intervention is necessary, dietetics should be tried, and possibly, artificial induction of labor should be practised. After labor has begun, a prophylactic version, a high forceps operation, or a perforation should be performed. Symphysiotomy or Cæsarean section should be done only in exceptional instances, with the full consent of the patient, and preferably in a clinic. Mueller condemns *accouchement forcé* with metal dilators (Bossi's and others) and urges that midwifery should become surgical under the rarest circumstances only.

The Ætiology of Tubal Pregnancy.—Dr. Wilhelm Hahn (*Münchener medicinische Wochenschrift*, February 10th) draws the following conclusions from his study of all operation cases in Vienna from 1892 to 1899, inclusive: (1) Gonorrhœa is the most frequent cause of tubal pregnancy; (2) it is therefore most frequent where gonorrhœa is most prevalent, that is, in large cities; (3) the number of cases has increased in recent years, due in part, to the great increase of cases of gonorrhœa, and in part to the more exact methods of diagnosis and treatment of tubal pregnancy. It is, therefore, not an uncommon condition, but is comparatively frequent; (4) the prognosis must be regarded as not as fatal as was formerly believed, as the results in operated and non-operated cases show; (5) the best means of prophylaxis against tubal pregnancy is the prevention of gonorrhœal infection.

Lacteal Secretion Replacing the Menses in a Young Virgin.—M. Gauthier (*Lyon médical*, February 8th) reports the case of a young woman, twenty-five years of age, a virgin, who began to menstruate at fifteen years of age and was regular up to her twentieth year, when there was a spontaneous suppression for three months with no phenomena on the part of the breasts. The menses disappeared again five years later, but in their place there appeared a profuse secretion from the breasts lasting four or five days, and disappearing completely during the intermenstrual periods. The fluid appears under the microscope like typical colostrum. The patient is an hysterical subject, but there is no pain in the breasts at the time the secretion is discharged.

Primary Abdominal Pregnancy.—Dr. K. Witt-hauer (*Zentralblatt für Gynäkologie*, January 31st) reports a unique case without a parallel in medical literature, in which the ovum settled upon a tip of the omentum. Similar conditions have been found in cats and rabbits. The patient was a twenty-three year old multipara, who was subjected to laparotomy on account of internal hæmorrhage. A right ovarian cyst was found, and near it, on a portion of the omentum, a hæmatoma, which was also extirpated. Distinct chorionic development was found on section. The tube was permeable and showed no changes due to gravidity. The author assumes a passage of an ovum from the left ovary to the right side of the abdomen.

Cæsarean Section and Ovariectomy for Impact-ed Ovarian Tumor.—Dr. G. van der Briele (*Zentralblatt für Gynäkologie*, January 31st) reports the case of a woman, thirty years of age, in her sixth pregnancy. A deeply asphyxiated child was delivered by Cæsarean section, but could not be resuscitated. The tumor was easily removed. It had sprung from the right ovary and was a multilocular cyst with colloid contents, and of the size of a foetal head. The recovery was uneventful.

NERVOUS AND MENTAL DISEASES.

Dreams from the Medical Point of View.—Discussing this subject, G. Cocchi (*Revista Médica Cubana*, February 15th) cites the instance of a man who dreamed of participating in a duel with pistols, only to be awakened by the sound of a pistol shot in the corridor outside his room. In explanation of this and similar coincidences, the author advances the hypothesis that the impressions of sound upon the peripheral organ of hearing consume a greater length of time during sleep in their transit over the nerve paths to the cerebral centre of hearing, than in the waking state; and that other centres, endowed with greater activity, are influenced by the stimulus, from which is developed a chain of ideas (dreams) suggestive of the external influence, before the sensation of sound has reached the brain. Cocchi quotes the statement of Vaschide and Pieron, that in psychopathic conditions, such as neurasthenia, dreams exercise an important influence upon the waking hours; so much so that such patients may confound that which they have dreamed

with that which actually occurs; and in cases of mental alienation, dreams sometimes precede the development of the infirmity. In such cases, delirium may be but the prolongation of dreams, and the latter may be considered as incipient delirium. In hysteria, dreams are believed to be sometimes an important factor in hysterical manifestations. An example of such influence is given by the author in the case of a woman who had, habitually, terrifying dreams of dogs, and in whom during the waking hours, the mere barking of a dog in the distance aroused an agony of terror; yet the general psychic condition of the patient was excellent. In conclusion, Cocchi quotes the observation of the authors named, that dreams sometimes constitute the aura of a seizure, in epileptics, and that such dreams are usually distressing or terrifying.

Astereognosis in Tabes Dorsalis. By Dr. G. E. Rennie. (*British Medical Journal*, February 7th).—By astereognosis is meant the loss of the power of perfect recognition of the physical characters of objects felt when the eyes are closed. The special senses concerned in such recognition are (1) the spacing sense; (2) the localizing sense; (3) muscular sense; (4) pressure sense; (5) temperature sense; and (6) pain sense. The loss of one or more of these different "senses" may determine an error of judgment or an entire loss of this faculty. For a completely normal stereognostic sense the cerebral cortical centre or centres, the conducting paths, and the peripheral receptive sensory mechanisms must be intact. Disturbance of any of them may lead to the manifestation of "astereognosis." It is occasionally a symptom of tabes dorsalis; the paths of conduction of sensory impressions in the spinal cord are impaired by compression or disease, with a consequent disassociation of sensations. The fact that it does not occur in every case of tabes is but another proof of the random action of the toxine, which, while it affects the afferent sensory neurone as a whole, in different cases appears to affect more particularly different peripheral sensory structures or afferent nerve fibres.

CUTANEOUS MEDICINE AND SURGERY.

Fatal Case of Pemphigus Acutus Malignus. By W. J. Caie, M. B. (*British Medical Journal*, February 7th).—The author reports a case of fatal acute pemphigus occurring in a farm laborer aged twenty-one years. The eruption of bullæ commenced on the extensor surfaces of the forearms, while subsequent crops were limited to the flexor surfaces of the upper arms. On the back the bullæ were rare, but they were profuse on the lower half of the face and anterior surface of the thorax and abdomen. The thighs and knees almost entirely escaped. On the abdomen the bullæ attained their maximum size, that of a hen's egg. The patient was given arsenic, and apparently did well for the first few days; then he grew worse, had hæmatemesis with epistaxis, and finally fell into a state of coma, dying on the twelfth day of the disease. The temperature was at first elevated (103.6° F.) but declined steadily until, a few hours before death, it was 96.2° F. The functions of the kidneys were normal, there being no albuminuria.

Notes on a Few Cases of Lupus Treated in the Electrical Department of the Western Infirmary.

—Donald J. Mackintosh, M. B. Edin. (*Glasgow Medical Journal*, December) records that the "Finsen treatment" was begun in the Western Infirmary in December, 1901. At the commencement of the light treatment, a test exposure of ten minutes to a current of ten ampères is given, and if the reaction is not too violent, the sitting is increased to fifteen or twenty minutes, and the current to twelve ampères, care being taken that the part to be treated is kept closely applied to the lamp, to ensure its being rendered as anæmic as possible. In a small number of cases, such violent inflammatory reaction with vesication has occurred that the time of exposure has been reduced to five minutes, and in certain cases the treatment has been discontinued for some days to allow the skin to recover from the blistering. In other cases, no satisfactory reaction has appeared until the patient has been under treatment for some days, or even weeks, and in general, it is possible to foresee the ultimate result from the degree of reaction—the greater the reaction to the test exposure, the greater the hope of ultimate cure. The patient's idiosyncrasy must be consulted in regard to the duration and the strength of the exposure. In most instances, the reaction follows immediately, but the patient is not conscious of any unusual sensation until some hours afterwards, when he experiences, if the reaction has been good, heat and tingling in the part treated; while, at the same time, the local redness seen immediately after the exposure is intensified. The place of the high-frequency current in the treatment of lupus has not yet been established. In the institution in question, however, when the affected area has become skin whole after treatment by the light, the high frequency current is employed in the treatment of the scar. After such a treatment for some weeks the scar becomes white, thin, and elastic, so that in the majority of cases it is scarcely noticeable. If left untreated a relapse is to be expected. It would seem that in cases where lupus has attacked regions inaccessible to the lamps, as, for example, the mucous membranes of the nose and mouth, the employment of the high frequency current, by the introduction of glass electrodes into the nostrils and mouth and the part thus treated by direct application, is productive of marked benefit to the patient and without pain. Of the sixty-five cases treated, all but one have been markedly benefited, while ten have been dismissed as cured after a course of treatment varying from three to six months.

OPHTHALMOLOGY.

Acute Glaucoma after Cataract Operations.—Dr. M. I. Auerbach (*Roussky Vrach*, December 24th) reports a number of cataract operations which were followed immediately by the development of glaucoma. After every operation for cataract, be it performed never so skilfully, there is always a certain amount of secondary cataract, so that even when the operation has been entirely successful, there still remains the posterior wall of the lens capsule, which becomes slightly cloudy and acts as a thin membrane in front of the retina. If, however, portions of the cataract have been left in the eye,

or if the operation is followed by complications of an inflammatory nature, the membrane is much thicker, and considerably impairs the vision. In such cases it is necessary to resect, or else to remove completely the capsule of the lens. This is not in itself a difficult or serious operation, but it is followed sometimes by the unforeseen complication of glaucoma. Knapp estimated that in 3 per cent. of all secondary cataract operations there was a rise of intraocular pressure, but in 2 per cent of these cases only, did the pressure become so great as to justify the term glaucoma. The question as to the occurrence of acute glaucoma in eyes operated on for secondary cataract must not be confounded with that of glaucoma following enucleation of the lens (glaucoma of the aphakic eye) which may not have anything to do with the operation itself. In the latter set of cases the glaucoma comes on perhaps years after the operation, and sometimes appears in the opposite eye. In the former set of cases, which constitute the minority, acute glaucoma occurs immediately, or very soon after, the operation, and these cases are seen in young persons not predisposed to glaucoma. These cases are especially interesting on account of their rarity. The question as to what causes these acute glaucomas is not settled. The simplest explanation is that they are due to some complication following the operation of removing the lens capsule. Thus, adhesions of the iris, prolapse and compression of the capsule or of the iris, etc., all tend to cause glaucoma. But this does not explain the fact that glaucoma occurs in cases operated on with an absolutely perfect technic. Further observations are required to clear up this question.

Paralysis of Accommodation.—Dr. J. Helbron (*Berliner klinische Wochenschrift*, February 9th) considers the ætiology in 103 cases of paralysis of accommodation. Some of the cases had their origin in cerebral and spinal disease, two cases in neurotic affections in which the paralysis affected both the internal and external muscles, while some of the cases were ascribed to intoxications and to the acute infectious diseases, especially to influenza. Cases were also observed in which the paralysis could be ascribed to metabolic disturbances and to diseases in the neighborhood of the eye.

LARYNGOLOGY, RHINOLOGY, AND OTOLOGY.

Surgical Treatment of Purulent Ethmoiditis.—M. J. Guisez (*Presse médicale*, February 14th) concludes that surgical treatment is demanded in all cases of purulent ethmoiditis. The operation should have two purposes—to relieve the retention which is responsible for the encephalic and orbital symptoms, and to bring about a radical cure of the ethmoiditis. The nasal route is suitable for limited processes and particularly for cases of empyema of the ethmoidal bulla. Orbital intervention with extensive resection of the internal wall of the orbit and abrasion of the superior part of the maxilla, is indicated in all cases of generalized ethmoiditis, and especially at the beginning when the diagnosis is

made. Intranasal drainage must accompany this method if the ethmoidal inflammation communicates with the nasal fossa. Several weeks' or months' treatment of the nose must follow the operation.

Value of Otitic Symptoms in Fracture of the Base of the Skull.—Dr. Stenger (*Berliner klinische Wochenschrift*, February 2d) lays great stress upon functional otitic symptoms in injuries of the head. Loss of hearing is the most important, and in its establishment valuable signs are diminution of perception of hearing by the bone and the absolute deafness to the higher tones on the affected side. The latter is always a symptom of labyrinthine disease. Unilateral nystagmus and characteristic vertigo are further useful diagnostic signs. If the functional examination of the ear gives positive information as to a cephalic injury, the extent of the injury can be judged and simulation can be excluded. In purely traumatic neuroses, the author says, the seat of the disease is found only in the cerebrum.

GENITOURINARY DISEASES.

Treatment of Acute Gonorrhœa.—M. Ambard (*Journal des praticiens*, January 17th) gives no injections or balsamic drugs in the acute stage. The patient is placed on a bland diet avoiding spices, asparagus, and tomatoes, wine and beer. Sodium salicylate or salol is given in doses of from thirty to sixty grains a day, and alkaline drinks are administered. A suspensory is so worn as to avoid compression of the dorsal vein of the penis. Constipation is avoided and a warm bath given daily. Pain and nocturnal erections are to be combated. In the subacute stage lavage of the urethra is practised with potassium permanganate, the urethra being injected from behind forward, with care not to infect the bladder. The patient should urinate first and the meatus should be carefully cleaned. The anterior urethra is first washed out, the urethra being somewhat compressed at the time of the lavage. The catheter is then inserted into the bladder and this is filled with the solution and allowed to be expelled, three or four times at each session. The strength of the solution is gradually increased from 1 to 4,000 to 1 to 2,000. Twelve to fifteen sessions usually suffice for a cure. If lavage is impossible on account of the intractability of the patient, santal oil, copaiba and cubeb should be given, combined with injections of protargol (one per cent.) two or three times daily.

HYGIENE AND SANITARY SCIENCE.

The Bacterioscopic Diagnosis of Sewage Pollution of Shellfish. By Dr. E. Klein. (*British Medical Journal*, February 21st).—In this article the author reports the results of his observations on the sewage pollution of shellfish. From them he concludes that, due consideration being given to all the facts as to the conditions of the precise locality whence shellfish have been derived, the presence in greater or less amount in such shellfish of certain bacteria affords a trustworthy indication as to whether or not such shellfish have been recently exposed to undesirable fouling. The organisms looked

for chiefly, were those of the colon group, including (a) *Bacillus coli communis*, (b) *Bacillus (Enteriditis) Gaertner*, and (c) *Bacillus typhosus*. The detection of the presence of colon-like bacilli bearing no near resemblance to *Bacillus coli communis* does not permit any definite opinion as to its probable or possible derivation from sewage. But it is different with the typical *Bacillus coli*, *enteriditis*, or *typhosus*: their presence in shellfish points strongly to sewage pollution.

The typical colon bacillus is not a natural inhabitant of oysters. The nearer to sewage outfalls, that is, the more exposed oysters and cockles are to sewage-pollution, the greater will be the percentage of these shell fish polluted with the *Bacillus coli communis*, and vice versa. The author also demonstrated the presence in shell fish of the spores of *Bacillus enteriditis sporogenes*, an organism which is constantly present in domestic sewage.

PHYSIOLOGY AND PATHOLOGY.

The Influence of Sodium Chloride upon Gastric Secretion. By Lyman Brumbaugh Stookey, Ph. D. (*Medical News*, February 14th).—The experiments, that were undertaken by the author on himself, had for their object the verification of Koeppe's hypothesis regarding the formation of hydrochloric acid in the stomach. The following conclusions are drawn by Dr. Stookey from the eighteen experiments he performed: (1) Excessive quantities of NaCl apparently exert an inhibitory influence on HCl secretion and thereby may impede gastric digestion. [This is in harmony with Miller's observations.] (2) The ingested NaCl is apparently not directly converted into HCl in the stomach to the extent—if at all—which one might theoretically expect, assuming the theories of Koeppe and Brasch to be tenable.

Diplococcus Phlogogenous Pleuropulmonalis.—A diplococcus which he thus describes has been isolated by L. Plasencia (*Revista de Medicina y Cirugía de la Habana*, January 25th) from the sputum of patients whose symptoms are similar to those seen at the onset of grippe, with an intense bronchitis followed by congested foci in the lungs and pleurisy with or without effusion. In all these cases, the congested areas seem to go on to suppuration, forming a veritable abscess, which is evacuated through the expectoration. The sputum is described as mucopurulent, blood-streaked or frankly purulent; being comparable to the sputum of tuberculous patients with cavity formation. Innumerable white cells—chiefly multiforminuclear leucocytes—alveolar epithelium, red corpuscles, fibrin, and mucus are found in such sputum. Neither elastic fibres nor crystals of any description are seen. The characteristics of what he believes to be the new organism are described by Plasencia as follows: They appear in the form of hemispherical cocci disposed in pairs, their flat surfaces facing and separated by an exceedingly small space. They are isolated or occur in groups of ten to twelve diplococci. The size and shape of these organisms recall the gonococcus; but a closer inspection shows them to be of different shape, and

they are endowed with a certain amount of motility. They color well with any of the basic aniline stains when alcoholic solutions are used, but do not stain well in watery solutions. They grow well in most of the culture media in common use, provided that they are not deprived of air; and stab cultures in solid media will not grow unless they have free access to the air. From the lesions seen in animals after experimental inoculation with such cultures, and from the clinical cases in which these diplococci were observed, Plasencia concludes that their presence in the sputum is not without significance, that they are phlogogenous and have a marked predilection for the production of pleuropulmonary lesions in man.

Fatalities to Workmen Caused by Breathing Sulphuretted Hydrogen. By Dr. T. Oliver. (*Lancet*, January 24th).—The author reports the cases of six men who were poisoned by breathing sulphuretted hydrogen while excavating a caisson, four of the cases ending fatally. Close to where the caisson was sunk was a heap of refuse and tank waste from chemical works which previously stood upon the spot. This waste drained into the caisson, and when rain fell upon it, sulphuretted hydrogen was given off. Three men working in the caisson were suddenly overcome by the gas, and for some time it was impossible to recover their bodies. As lights burned well in the excavation it was evident that the gas was not carbon dioxide, nor was it explosive. Later, another similar disaster occurred by which one man lost his life and three others just escaped. Examination of the bodies in the fatal cases showed rigor mortis to be present, the faces of the men were cyanosed, and the blood was dark and fluid. The abdominal viscera and other organs appeared normal. The blood gave the spectrum of oxyhæmoglobin. It is not known how sulphuretted hydrogen kills: Laborde holds that it causes a functional arrest of the respiratory centre in the medulla.

A New Reagent for Biliary Pigments in the Urine.—Dr. Corrado Bernabè, (*Gazzetta degli ospedali e delle cliniche*, January 11th) calls attention to the fact that to him belongs the priority of having applied fuchsine as a reagent for biliary pigment, and not to Boudin, as the latter claimed in a recent publication (*Semaine médicale*, 1902, No. 49). The present author, in 1895, published his researches upon the action of aniline dyes upon the biliary and blood pigments. In this publication 111 aniline dyes were studied in regard to their property of reacting upon glucose, hydrochloric acid, blood pigment, and bile pigment. Not only fuchsine, which is spoken of by Boudin, but a number of other dyes of the red series were found to react with bile pigments in these experiments. The blue series including methylene blue, etc., gave a green reaction, and the violet series including methyl violet, vahlia, etc., gave a red reaction. Four dyes are especially available for the detection of bile pigment (giving a green color) and for the detection of hæmoglobin (giving a red color) namely: alkaline blue, prune, indulin, and metaphenylene blue.

Proceedings of Societies.

SOUTHERN SURGICAL AND GYNÆCOLOGICAL ASSOCIATION.

Fifteenth Annual Meeting held in Cincinnati, November 11, 12, and 13, 1902.

The President, Dr. W. E. B. DAVIS, of Birmingham, Alabama, in the chair.

(Concluded from p. 485.)

Anterior Transplantation of the Round Ligaments for Displacements of the Uterus.—Dr. ALEXANDER HUGH FERGUSON, of Chicago, read a paper on this subject, and detailed at considerable length the various steps of the operation.

Intramural Extraperitoneal Anchorage of the Round Ligaments for Posterior Displacements of the Uterus.—Dr. GEORGE H. NOBLE, of Atlanta, followed with a paper with this title, saying that since performing his first operation for intramural extraperitoneal anchorage of the round ligaments his technique had been changed to simplify it and to fortify the abdominal wound against the danger of hernia. The feature of the operation was the intramural extraperitoneal implantation of the round ligaments. Combined transverse and vertical incisions were employed to open the abdomen. The various steps of the operation were given in detail.

Intraabdominal but Retroperitoneal Shortening and Anterior Fixation of the Round Ligaments for Posterior Uterine Displacements.—Under this title, Dr. F. F. SIMPSON, of Pittsburgh, referred to the chief objections to some of the other operative measures in vogue, and said: "In common with most of you, I have for years wished for a procedure which would be as widely and easily applicable as ventrosuspension, and which would possess its good qualities without its objectionable features."

Dr. Simpson then described a simple means of accomplishing this end. It consisted essentially in changing the course of the round ligaments from a transverse to nearly an anteroposterior direction; in shortening the round ligaments, so that the weak part was left as slack, the strong part being used to control the movements of the uterus; finally, and especially, in effecting these changes beneath or by puckering the parietal peritonæum, thus leaving no bands of adhesions and no pockets which might strangulate an intestine.

Gas Bacillus Infection.—This was the title of a paper by Dr. ROBERT T. MORRIS, of New York, who reported three cases which had occurred in his practice. The first patient was forty-six years of age, from whom he removed a myoma of the uterus. Hæmorrhages furnished an indication for the operation, which was done on April 30, 1902. On the following day the patient complained of headache; pulse 116; temperature normal; respirations, 20. There was a bloody discharge from the vagina. The next day the patient had a temperature of 99.6°; pulse, 102; respirations, 22; was nauseated, and suffered from continuous headache.

The bloody discharge from the vagina was increasing in amount. On May 2nd the patient complained of intense pain in the abdomen; headache continuous; temperature, 100°; pulse, 120; respirations, 24. He examined the abdominal wound, and found it had healed by primary union. The subcutaneous tissues on the right side of the abdomen were distended with gas, which was quite abundant in amount, but unassociated with tenderness. On the 3rd of May the gas within the bowels caused great distress; headache was continuous; temperature 99°; pulse 120; respirations 24. A bloody discharge continued from the vagina. On the 4th of May the patient became very restless, nauseated, had continuous headache, with a temperature of 100.6°; pulse 144; respirations 16. On the 5th and 6th the symptoms were somewhat similar, except that there was gas beneath the skin of the abdomen. The patient died on the seventh day.

In the second and third cases specimens submitted for examination showed pure cultures of the *Bacillus aerogenes capsulatus*. These patients recovered.

Dr. ALEXANDER HUGH FERGUSON detailed two cases of gas bacillus infection that had occurred in his practice. The *Bacillus aerogenes capsulatus* had its habitat in the soil, like the bacillus of tetanus. This bacillus found its way into the body on greens, cabbage, etc., and an important point was to clean out the alimentary canal to get rid of it. It likewise found its way into the wound from the fingernails of the operator; hence the great importance of scrubbing the nails, etc.

Dr. J. WESLEY BOVÉE had met with three cases of gas bacillus infection, all of them following the removal of the appendages for pus. One of the patients died. Autopsy showed the gas bacillus in various portions through the viscera, and particularly in the liver and skin.

Prolapse of the Uterus.—Dr. CHARLES R. ROBINS, of Richmond, Va., said the uterus was normally maintained in position by a combination of elements, and not by any one. These were integrity of the pelvic floor, making the pelvis a closed cavity, the uterus being of the same density as the other pelvic viscera, the position of anteversion, and the tonicity of the abdominal walls. Successful treatment could not depend on any one procedure, but it must meet all the pathological conditions present. Proper preliminary treatment was of the utmost importance.

The operative treatment recommended consisted of amputation of the cervix, an operation for cystocele, perinæorrhaphy, and an operation for maintaining anteversion. This treatment not only cured prolapse, but restored function. If relapse occurred, Edebohls's panhysterocolpectomy seemed to be the only operation for effecting a cure.

Diseases of the Ribs Following Typhoid Fever.—Dr. J. SHELTON HORSLEY, of El Paso, Texas, reported the case of a man, forty years of age, in whom disease of the left sixth and seventh costal cartilages, the anterior end of the sixth rib, and part of the sternum had developed a few weeks after convalescence from typhoid. The abscess had been opened, and later the resulting sinus curetted before the patient came under his care. Then two

extensive resections, involving a portion of the sixth rib, the costal cartilage of the sixth and seventh ribs, and part of the sternum had to be performed before a complete cure was effected. He called attention to five peculiarities that distinguished post-typhoid disease of the ribs from similar affections of other bones.

1. The marrow of the ribs was a particularly favorable seat for the typhoid bacilli.

2. The superficial position of the ribs and their continuous movement made a *locus minoris resistentiæ* more apt to occur here.

3. Necrosis of the ribs very rarely occurred, which was not the case with other bones.

4. Post-typhoid disease of the ribs invariably occurred in adults.

5. Thorough operative treatment was more difficult in the case of the ribs than in that of most other bones.

A table containing forty-eight cases gathered from the literature on the subject and personal communications was appended. An analysis of the table showed that forty-eight cases were in men, and seven in women.

As to treatment, conservative measures were advised in mild cases. If these were unsuccessful, incision and curettage were advocated, and if, after a few weeks, the wound had not healed, extensive resection should be practised.

Gigli Saws.—Dr. HORSLEY also demonstrated a new holder for Gigli saws.

Renal Calculi.—Dr. MACK ROGERS, of Birmingham, Ala., read a paper on this subject, confining himself to the diagnosis and treatment and reporting two cases.

Hæmaturia.—Dr. M. C. MCGANNON, of Nashville, read a paper on this subject.

Endometritis.—A paper on this subject was read by Dr. H. J. BOLDT, of New York. The local treatment giving the promptest relief from bleeding in cases of chronic endometritis was undoubtedly, he said, to be found in the judicious use of the curette. Although the operation was comparatively simple, it should not be resorted to indiscriminately; neither should it be done by one who was not trained in the technique of gynecological surgery, because frequently serious results followed its improper employment. Before the operation it was imperative that a careful bimanual examination be made, to determine whether or not a tubal swelling was present. The author had known a tubal gestation sac and pyosalpinx to be ruptured as the result of the traumatism produced by the operation. In a few instances he had desisted from curetting and opened the abdomen subsequently, because of the disclosures of bimanual examination. If resorted to, the same precautions as to cleanliness should be employed as in a major operation. In his experience, about sixty per cent. of the women were relieved from hæmorrhage for a variable period of time by curetting. After curetting, it was his custom to make an application of pure carbolic acid to the interior of the uterus. In patients who had not ob-

tained the desired relief by curetting, subsequent local treatment became necessary. The general condition of the patient in all instances required careful supervision.

After the endometritis had become chronic, it should be treated with intrauterine applications of one of the usual remedies. The writer preferred a ten per cent. solution of carbolic acid. Frequent intrauterine irrigations with large quantities of a mild antiseptic solution also gave good results.

The Use of the Electric Cautery Clamp in the Treatment of Cancer of the Uterus.—Dr. CHARLES P. NOBLE, of Philadelphia, presented for consideration a new adaptation of an old principle in the treatment of cancer of the uterus. Hysterectomy performed by means of the electric cautery clamp possessed all the advantages of any of the methods heretofore in use, and had in addition certain advantages peculiar to it alone. These special advantages were:

1. More tissue outside of the uterus was removed or cooked than by the classical methods.

2. All the connections of the uterus were severed, either through tissue which had been cooked in the bite of the cautery clamp, or these connections had been severed with the electric cautery knife. In this way the lymphatic vessels were sealed either by the burning or the roasting process. Whatever the risk of implantation of cancer upon the field of operation might be, by this means it was greatly lessened or done away with. An exception to these statements must be noted, in that the attachments of the bladder to the uterus were severed in the usual way.

3. Much less blood was lost than was usual with the classical technique, and a dry, bloodless field was left after operation.

In referring to the history of the development of the electric cautery clamp, Dr. Noble referred to the admirable work of Keith and Byrne. It had remained for Dr. A. J. Downes, of Philadelphia, to adopt the theories of his predecessors and to develop a thoroughly practicable electric cautery clamp.

The technique of hysterectomy by the electric cautery clamp method was described in detail. The essayist had operated five times by this method, and said that some years must elapse before the actual value of the electric cautery clamp in the treatment of cancer of the uterus could be determined, but in view of the results secured by Byrne, and of the positive theoretical advantages it had over the ligature method, it was reasonable to expect that it would give a larger percentage of cures than the older methods, more especially in cancer of the cervix.

The following papers, whose authors were present, were read by titles, on account of the limited time at the disposal of the association: A Case of Ovarian Fibroma, by Dr. H. A. ROYSTER, of Raleigh, N. C.; Fracture of the Spine, with Reports of Three Cases, by Dr. HOWARD J. WILLIAMS, of Macon, Ga.; Spinal Analgesia, by Dr. E. D. MARTIN, of New Orleans; The Treatment of Posterior Uterine Displacements, by Dr. EDWARD MCGUIRE, of Richmond, Va.; and Dependent Drainage in Acute and Extensive Intrapelvic and Intrapericoneal Infection in Men by Incising the Perinæum, Separat-

ing the Rectum from the Prostate and Bladder, and Puncture of the Rectovesical Pouch of the Peritonæum, by Dr. HUGH M. TAYLOR, of Richmond, Va.

The council presented the following resolution, which was adopted:

Whereas, Dr. W. E. B. Davis, during twelve years of faithful service as secretary of the association, declined to draw any salary for his services, expecting in time to establish a suitable memorial of this association with the fund created thereby; therefore, be it

Resolved, That in consideration of this fact two thousand dollars, a sum far less than the salary offered would have amounted to, be appropriated for the establishing of a memorial in Birmingham, Alabama, the birthplace of the association; and that this memorial be placed in the Charity Hospital of that city as a ward to bear the name of the association.

Officers for the Ensuing Year.—The following officers were nominated and elected: President, Dr. J. WESLEY BOVÉE, of Washington; vice-presidents, Dr. BACON SAUNDERS, of Fort Worth, Tex., and Dr. CHRISTOPHER TOMPKINS, of Richmond, Va.; secretary, Dr. W. D. HAGGARD, Jr., of Nashville, Tenn.; treasurer, Dr. FLOYD W. McRAE, of Atlanta, Ga. The place of the next meeting is to be Birmingham, Ala.; the time, in the week preceding Christmas, 1903.

Letters to the Editor.

TUBERCULOUS IMMIGRANTS.

NEW YORK, March 9, 1903.

To the Editor of the NEW YORK MEDICAL JOURNAL:

Sir: In the letter of Dr. F. L. Wachenheim, published in the current number of the *New York Medical Journal*, the unsubstantiated charge is made that I have not quoted accurately from the *Report on Tuberculosis of the United Hebrew Charities*. The passage dealing with illiteracy to which objection is made, in my article of February 7th, is a literal extract from the official report of the society, and a comparison with the original will show that the two as published are identical. As my article was largely based on facts obtained from government reports and the reports of the United Hebrew Charities, the accusation of misquoting would indeed, if true, invalidate the conclusions reached, but this unfounded assumption can be readily refuted by any one who will take the trouble to make a comparison with the original reports. I fear that the doctor, in his not very amiable criticism, has fallen into the very error of which he mistakenly accuses me. I distinctly stated that 23,893 was a "conjectural estimate" of the number of consumptive immigrants admitted in 1902, of which "the half or tenth part would constitute an amazing figure," etc., the exact figure being obviously impossible to obtain, and immaterial for the purpose of the argument. The use made of this estimate in his comments is unwarranted, nor are his criticisms supported by Cornet's classic work on *Tuberculosis*, to

which I am somewhat gratuitously referred for instruction. Cornet's estimate of 0.7 per cent. of tuberculous is for the total population, and would be too low for the defective, ignorant, poorly nourished, and pauper classes, from the ranks of which in recent years immigration to this country has been so largely recruited. For these classes the proportion of tuberculous individuals is much greater, as the statistics published by the United Hebrew Charities clearly show, and it was one of the main purposes of my article to emphasize this fact. In doing so I endeavored to discuss the subject without prejudice to any race or nationality, firmly believing, however, that the application of a uniform higher standard of health, education, and character to intending immigrants would be of benefit to the entire country and especially so to New York city. I have made no attempt to show that tuberculosis is more prevalent among Jews than among others, as is implied in Dr. Wachenheim's criticism. On the contrary, I distinctly state that "the percentage of tuberculous among the Jews has been shown to be much below that of other nationalities."

It would perhaps have been in better taste and more in harmony with the scientific spirit had my critic dropped his tone of vague disparagement long enough to adduce a few proofs, instead of loosely asserting that "some half dozen errors in the article still remain uncorrected." The facts in my article were derived from what are believed to be competent sources and, as related to Jewish immigration, chiefly from Hebrew authorities. I think the editor will be willing to grant Dr. Wachenheim the space necessary to correct any real "fallacies" and "errors" which he may detect in the columns of the *New York Medical Journal*.

HENRY L. SHIVELY, M. D.

THE TAPEWORM IN THE BRAIN.

NEW YORK, February 28, 1903.

To the Editor of the NEW YORK MEDICAL JOURNAL:

Sir: In your esteemed paper of February 28th, page 395, you quote from the *Indian Medical Record* the case of a tapeworm in the brain, and you say it would be very interesting to know by what channel the ova could have penetrated within the cranial cavity.

I beg to observe that it probably was by the blood current that those eggs reached the brain. As the eggs of the *Distomida* in Japan reach the lungs, liver, and brain, distomiasis of the lungs is very common in Japan (see *Ueber einige neue Parasiten der Japanese*). The *Distoma pulmonale* is the cause of parasitic hæmoptysis, frequently mistaken for consumption. Its eggs were at first considered to be gregarinæ.

Distoma Ringeri is also found in Formosa, in the lungs of natives and animals (see Cobbold, *Treatise on the Entozoa of Man and Animals*).

Distoma endemica hepatica is the worm of the liver. It has been also found in the brain. It especially inhabits Okayama Province, whose rivers are all infected with it (50 per cent. of the inhabitants have it). Were post mortems usual there, it

might be found more frequently in the brain, for many of the cases of meningitis there are in reality cerebral distomiasis. It is taken into the body by the drinking water, which contains the ova. The eggs reach the brain, just as they do the liver or lungs, by way of the lacteals, the mesenteric glands, the thoracic duct, and the vena cava blood current.

ALBERT S. ASHMEAD, M. D.

New Inventions.

A MEDICAL CHART FOR OFFICE PATIENTS.*

By FREDERIC GRIFFITH, M. D.,
NEW YORK,

FELLOW OF THE NEW YORK ACADEMY OF MEDICINE.

William Pepper once said that fetish worship is still too strongly fixed in the lay mind for physicians to do away with placebos. The average hospital patient will be found to take the liveliest interest in his bedside chart, this to many of them being one of the most important curative measures. So educated is the lay mind in this matter that home patients, where nurses are employed, oftentimes will feelingly complain of the nurse's negligence if she does not keep an accurate and continuous chart.

Case No. 12		Date, Dec. 5, 1902	
PATIENT'S MEDICAL AND SURGICAL CHART.			
Miss Jane Grey.			
Date	Bowels	Urine	Time in Bed
Dec. 5.	12	3	2.30 a. m. 7.30 a. m.
6	2	2	1.00 a. m. 9.00 a. m.
7.	1	1	12.45 a. m. 9.30 a. m.
8.	2	2	11.30 p. m. 7.30 a. m.
9.	3	3	12.30 a. m. 7.45 a. m.
10.	1	1	11.45 p. m. 7.30 a. m.
11.	2	2	11.15 p. m. 7.45 a. m.
12.	1	2	12.10 a. m. 9.30 a. m.
Meals	Walking	Other Exercise	
B. 8.00 L. 1.00 D. 6.45	2 miles	Dance	
B. 9.45 L. 1.30 D. 6.45	½ mile	15 min.	
B. 10.00 L. 2.00 D. 7.00			
B. 8.30 L. 12.30 D. 7.00	¼ mile	5 min.	
B. 9.00 L. 12.40 D. 7.00	¼ mile		
B. 8.30 L. 12.25 D. 6.45	¼ mile	5 min.	
B. 8.00 L. 2.00 D. 6.45	1 mile		
B. 9.30 L. 12.45 D. 7.00	½ mile		
REMARKS.			

Dr. Frederick Griffith's Medical Chart for Office Patients. Front.

* Presented at the New York Academy of Medicine, Section in Medicine, February 17, 1903.

DIRECTIONS.	
DIET.	
GENERAL.	
SPECIAL.	
REMARKS.	
MEDICINE.	
Dr.....	
.....	

Dr. Frederick Griffith's Medical Chart for Office Patients. Back.

The accompanying diagrams form a medical chart for walking patients undergoing general or special, medical or surgical treatment. The several headings may be altered to fit the requirements of different cases and may include periods of time from a few days to a week or more, the printed blanks being left with open date columns. The use of these charts kept by the patient himself will many times clear up a clouded diagnosis and cannot fail to arouse the patient's interest and secure his continued cooperation during the study of his case by the physician, fully as much as an off hand prescription given at the first office visit will do. Upon the back of the chart is arranged space for written "directions" for the patient's guidance in regard to "diet, general or special"; "medicine, time and allowable variations"; and for "remarks" regarding exercise, clothing, bathing and sleeping. The charts should be printed on good paper and of convenient size, made up in tablet form or with eyelets and board backing. They may be preserved by pasting in the case history book or upon files. Continued upon several sheets over periods of time the charts act as vouchers easily valuable in malpractice cases. The patient having kept his own record under the physician's direction. The value of the charts as a time saver alone to the doctor, doing away with the necessity for much "office talk" should appeal to the busy practitioner.

805 MADISON AVENUE.

Miscellany.

The "Dry Meal" Theory.—Dr. J. W. Carhart (in the *Texas Courier-Record of Medicine* for January) says that from time immemorial, so far as he knows, the dogmatic teaching has been that fluids taken with meals are injurious. The less taken at such times, therefore, the better. This dietetic dogma, in his opinion, has its basis in theory only. The sole appeal to fact for its support that he has ever known, has been to the habits of wild and domestic animals. But wild animals drink while feeding, where they have opportunity—which is not frequent—and they generally drink as soon thereafter as they can conveniently reach a watering place. Domestic animals are too generally excluded from the water-trough or cooling stream while feeding. If left to themselves and amply provided for, they will frequently drink while eating. To fatten well, they must be allowed their liberty, in this respect.

If Nature is to serve as a guide, her most thundering declarations are against dry meals. Who, says Dr. Carhart, when eating heartily, has not experienced an overmastering, uncontrollable thirst? It was not a still, small voice in the depths of the dietetic regions, to be easily hushed, but the tremendous outcry of Nature for a refreshing beverage, which nothing but water—pure, sparkling, fresh and cool, can silence.

If a properly constructed thermometer is passed into an empty stomach, and again after the liberal ingestion of food, the reading will show a considerable rise of temperature immediately after partaking of a hearty, dry meal. An empty stomach is quiescent. On the ingestion of food activity begins, and activity increases temperature. This develops thirst, which may become so intolerable as to be positively painful, actually interfering with digestion and rendering progress in the meal fairly impossible. Every horseman knows that a thirsty horse will frequently refuse his feed until he has slaked his thirst.

The Influence of Sound for Evil and Good.—Dr. W. Wayne Babcock (*Brooklyn Medical Journal*, February) makes the following trenchant remarks which ought seriously to be taken to heart in this age of the "damnable iteration" of discordant noises that affects us in all our cities: "Auditory impressions have a marked effect upon the higher cerebral centres in the way of exaltation or depression. Nervous excitation, joy, or moroseness may result from certain discordant or musical sounds. The street noises of large cities, by constant nervous stimulation, may predispose to neurasthenia, hysteria and chorea. The absence of sound, silence, favors abstract thought and melancholy, and is probably a factor in the prevalence of insanity in rural regions. Racking, irritating noises cause insomnia, while the continued repetition of monotonous sounds often has a soporific influence. Not only is it important that the street noises of cities be restricted by methods of paving, regulation of traffic, and other measures; but the employment of harmonious sounds for the relief of insomnia, nervous excitement and various mental affections should have a wider application."

Lung Surgery: Historical and Experimental. By Benjamin Merrill Ricketts, Ph. B., M. D.—Dr. Ricketts, in the author's abstract of this communication which was read before the Western Surgical and Gynecological Association, at St. Joseph, Mo., in December, 1902, and was illustrated by one hundred lantern slides, goes into the subject at great length and detail:

COMPARATIVE ANATOMY.

A knowledge of comparative anatomy is essential, for experimental work.

In *reptiles* only one surface of the capillaries is exposed to the air, while in man all sides are exposed to air.

The lung of the *water-dog* (*Necturus lateralis*) consists of two elongated cylindrical bodies. Both the outer and inner surfaces are smooth. There is both an arterial and a venous system. These are so arranged that each vein is at right angles to the corresponding artery.

Snakes have only one lung (the right). It is an elongated cylindrical body, and smooth in two thirds of its length. The posterior third is divided into numerous air cells.

In *birds* the bronchus, after penetrating into the lungs, breaks up into numerous tubular passages. These passages are not true bronchia, since the alveoli or true lung structures arise directly from them. The principal bronchia communicate by large rounded openings with large air sacs situated in the abdomen and in the hollow bones. These air bags should be considered as part of the lungs, as they are directly connected with the bronchia. The air sacs do not communicate with one another.

LUNG OF MAN.

Blood Supply.—The lung receives its blood from two systems, the bronchial and the pulmonary.

In the first, the venous radicles from the bronchioles empty into the vena pulmonalis, and the arterial branches into the vena azygos. Hence, in all operations involving the bronchus, the latter should be ligated transversely, whether it is transverse to the lung or not.

The larger pulmonary arteries and veins are situated in the intralobular connective tissue. They subdivide into minute vessels, each encircling an alveolus, and then split up into a very fine capillary network, only separated from the air by the exceedingly thin alveolar membrane. Only a single mesh of capillaries exists in an interalveolar septum. Malpighi, 1661 A. D., was the first to discover them. He first found them and the lung cells in the mesentery and lungs of frogs.

Lymphatics rise from the alveolar septa and communicate directly with the alveolar cavity by stomata in the alveolar walls. The lymphatics form a plexus in the submucous tissue accompanying the branches of the bronchia, as well as the pulmonary veins and arteries, emptying finally into the bronchial glands at the roots of the lung.

Nerves.—The pulmonary plexuses are formed from branches of the vagus and sympatheticus. The filaments of these plexuses follow the ramifications of the bronchia, and finally become lost on them in the parenchyma of the lungs.

In man the *septum bronchiale* is placed to the left of the longitudinal axis of the trachea. For this reason foreign bodies lodge more frequently in the right bronchus, which is shorter than the left. This is also the reason why the right lung respire before the left at birth. There are, sometimes, three branches of the bronchus. The sensibility of the bronchia is thought to be slight.

Lobes.—Some animals have one or more lobes, even as many as five on one side. Some have fissures, while others have not.

In man the normal number of lobes on the left side is two, while there are three on the right. The fissures are often so high, posteriorly, that the middle lobes will prevent palpation and auscultation of the posterior surface of the upper lobes.

Monkeys have an accessory lobe called the azygos lobe. This is supplied by an accessory bronchus, which arises from the right bronchial trunk near the point where the first branch is given off. The bronchus of the sheep grows from the trachea direct.

EXPERIMENTAL (HISTORICAL).

Davidson's (1795) observations on the anatomy and pathology of the pulmonary system form one of the first contributions to this subject.

Harlan (1819) showed by experiments upon living animals that the circulation of the blood through the lungs was immediately and entirely suppressed during expiration.

Cauman (1848) said that the capillaries of the lungs did not anastomose.

Bert (1869) contributed his research on the elasticity and contractility of the lungs, and the connection of these properties of the lungs with the pneumogastric nerves.

Brown (1884) showed the alveoli of the lungs to contain squamous epithelium; and, in 1885, that the bronchia contracted under certain conditions.

Cruveilhier, by dissection of a foetus, showed that one or both apices might extend along the cervical spine.

Here it may be remarked that the fact that the pericardium has never been found absent should be remembered in eliminating its absence in herniated lung of the left side. It should also not be forgotten that the lower costal cartilages on the left side in women are rare, and that the cervical ribs are also rare; there being but two cases of the latter reported.

LIGATURES (HISTORICAL).

Sucreta (1500 B. C.) applied a ligature to the umbilical cord of new-born babies before severing it.

Hippocrates was familiar with ligatures.

Archigenes (100 B. C.) was probably the first to use ligatures in amputations.

Celsus (30 B. C.) used linen thread.

Galen (131-211 A. D.) was partial to silk or fine catgut for ligating the proximal ends of injured vessels.

Alfonso Ferri (fifteenth century) preferred a needle three inches long, curved only at the point, and with the eye at the opposite end.

Fabricius the elder (1537-1619 A. D.) mentions the use of animal sutures for intestinal wounds.

Fabricius von Hilden (1560-1634 A. D.) was the first to introduce hemp for ligatures into Germany.

Fabricius of Acquapendente (1647) recommended metallic sutures.

Animal sutures were introduced into America by Dr. Physick, in 1814.

Wardorp used silkworm gut for ligatures as early as 1796, and McSweeney in 1818.

Dr. Ishigaro, a Japanese surgeon, used a ligature made from the tendon of a whale.

Marcy (1871) and Croft (1880) employed kangaroo tendons.

Silk, catgut and animal tendons are preferable for sutures and ligatures in the lung.

PNEUMONOTOMY; PNEUMONECTOMY; PNEUMONOPEXY.

In this chapter are included all cutting operations, such as amputations, incisions, removal of foreign bodies, opening of abscesses, gangrene, cysts, etc. In each of these chapters, however, have been placed their respective cases.

Fabricius (1646) records cases in which large portions of the lungs were excised, with recovery of the patients.

Baglion (1714) advocated operations on the lungs; and Barry, twelve years later, advised operations on the lungs for consumption.

A fellow officer wounded with General Wolfe at Quebec, in 1759, is said to have recovered after the removal of a large portion of the injured lung.

Hale (1851) referred to a case of penetrating wound of the chest in which he removed a piece of the protruding lung.

Little was said concerning operations on the lung for more than a century later, when Richard, in 1880, reported a case of penetrating wound of the thorax with immediate pneumocele. Excision of the lung was employed, and the patient recovered.

Thomas (1885) suggested and treated cysts of the lung by opening and drainage.

Bull (1891) treated two cases of gangrene by operation.

Tuffier, in his Moscow address, analyzes 306 pneumonotomies, as follows: Metapneumonic gangrene from different causes, 55 operations with 10 recoveries; abscess, 49 operations with 23 per cent. mortality; incipient tuberculous foci, 3 operations, all curative; cavities, 26 operations with 13 recoveries; aseptic lesions, 29 operations with 22 recoveries, or 75.8 per cent.; hydatids, 61 operations with 55 recoveries; septic lesions, 215 operations with 140 recoveries, or 64.8 per cent.; tuberculous cavities, 36 operations with 36 deaths; abscess, 49 operations with 12 deaths; bronchiectasis, 45 operations with 13 deaths; foreign bodies, 11 operations with 4 deaths; gangrene, 74 operations with 30 deaths; actinomycosis, 1 operation, recovery. Total operations, 306; cured, 217; died, 88.

B. Bell advises and practises the opening of abscess in any locality of the lung with more or less success.

ABNORMALITIES.

There are many types of abnormalities of the lungs, any one of which might greatly influence surgical intervention. There may be one, two, three, four,

five, or more lobes, or there may be entire absence of lung tissue on either side. The blood vessels, nerves, and bronchi vary greatly in number and position, so that there is no way of determining their presence or absence without opening the chest before or after death. General body deformity is also many times a cause for variations from the normal type. The diaphragm is oftentimes entirely absent in man. Hoffman (1783) reported a case of diaphragmatic junction with the lung, and Broca (1852) reported one with complete separation of the two lobes of the lung. There have been about fifty interesting papers constructed on hereditary defects of the lung.

Atelectasis is collapse of the lung before birth, and is due to various causes, such as continued compression of the lung by fluid, new growth, or deformity.

Apneumotosis is collapse of the lung after birth due to the same causes.

Joerg, 1832; Barlow, 1841, and Spanganberg, 1844, each record such cases. More than thirty observers have reported upon this subject in the various journals.

Hernia or Pneumonocele.—This is of many varieties and degrees. Lung tissue may protrude from an opening in any portion of the chest. It may be congenital or acquired: congenital when there is defective development of the chest wall; acquired when due to injury. Sudden herniæ have no pleural sac, while those which come gradually do have a sac. If let alone the first always have adhesions, while the latter may or may not have adhesions if let alone.

Rolandus (1499) removed a portion of a herniated lung with recovery, and he took the patient to Bologna for inspection by his colleagues.

Tulpius (1674) ligated and cut off three ounces of the lung which protruded.

Knox reports two cases of hernia of the lung in the neck.

Couvey reports fourteen such operations with two deaths.

Morell Lavallie (1824) reported eight cases with one death.

Of twenty thousand wounds of the chest during the rebellion there were only seven herniæ of the lung.

Abscess is the most frequent surgical lesion of the lung, and recovery more certain in the acute form when operated upon.

Balgious (1710) was one of the first to treat tuberculous abscess of the lung.

Bligny (1720) and Berry and Boerhaave (1726) each advocated opening tuberculous abscesses of the lung.

Comparadon (1769) treated a case of abscess of the lung and cured it by surgical intervention.

Gumprecht (1793) treated an abscess of the lung surgically.

Richeraud (1812) successfully incised an abscess of the lung, with recovery.

There are many other cases of abscess of the lung, tuberculous and otherwise, in which operation has been done, in many of which the patients have recovered. Abscess of the posterior surface of the lung is the most inaccessible form.

Resection of one or more ribs is necessary, and should be done, in order that location of the abscess may be determined by palpation.

There are several hundred operations for abscess of the lung reported, with about 66 per cent. recoveries. Block (1881) opened an abscess of the lung; the patient died. The coroner censured him for operating and Block committed suicide by pistol.

Gangrene is rather frequent, and is due to many causes, such as injury, syphilis, abscess from any cause, foreign bodies, and the acute inflammatory diseases of the respiratory system. Pneumonia is the most frequent cause. Pressure from aneurysmal or other intrathoracic tumors, which interfere with the blood circulation, is another common cause.

The most frequent site is the posterior aspect of the upper portion of the lower lobe.

The mortality of gangrene of the lung, if let alone, is from 85 to 90 per cent.; while it is only about 40 per cent. if subjected to surgical operation.

The treatment is very much the same as for abscess of the lung. All gangrenous portions should be removed and free drainage established.

There are about seventy contributions to this subject.

Syphilis.—Unless syphilitic lesion of the lung becomes an abscess or gangrenous, nothing is to be done except to place the patient upon antisyphilitic remedies. There are perhaps no pathologic lesions of the lung more easily influenced or completely overcome by medicaments than those due to syphilis. It is probable that but a small percentage of the syphilitic lesions become gangrenous or terminate in abscess.

The early literature begins with Zadig (1797) who presented a paper on diseases of the lung due to venereal causes, but little was said concerning syphilitic lesions of the lung until 1841, when Munk published his paper on syphilitic diseases of the lungs.

Lagneau, in 1853, published his work on diseases of the lungs caused and influenced by syphilis.

Edema is an effusion of serum into the submucous connective tissue. Flint says that the transudation is primarily within the air cells, the serum also infiltrating the interlobular structure. It is found in acute infectious diseases. Valvular diseases of the heart constitute a prominent factor in its causation. Also compression of the lung by a tumor of any character, inhalation of hot or cold air or gases, suppurative hepatitis, Hodgkin's disease, eclampsia, leucæmia, anæmia, and chlorosis may cause it. It may be local or general; is found in persons under fifteen years of age.

Muller (1891) is one of the first to describe this most interesting condition.

Anthony (1891) speaks of a case of pulmonary œdema complicating pregnancy.

There have been about twenty contributors to this subject.

Treatment of Edema.—Phlebotomy has been advocated in acute œdema. The surgical treatment is essentially the same for bronchopneumonia, hydrothorax, and œdema.

[We shall publish more of the abstract of Dr. Ricketts's exhaustive article as opportunity permits.]

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Original Communications.

SYPHILITIC PSEUDOTABES. REPORT OF A CASE; THE DIFFERENTIAL DIAGNOSIS OF TABES.*

By JOSEPH COLLINS, M. D.,

NEW YORK,

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The differential diagnosis of tabes is sometimes very difficult, occasionally it is impossible. There are some cases in which the symptoms, subjective and objective, point with equal directness and distinctness to tabes and to general paresis. There are cases of spinal arterial sclerosis (with or without general arterial sclerosis) which are distinguished from tabes with great difficulty. At times it is not an easy matter to distinguish multiple neuritis from tabes. This is particularly true of those forms of neuritis which occur after some of the infectious diseases, such as diphtheria, to which unfortunately the clinical designation "pseudotabes" is given. There is very little excuse, however, for mistaking multiple neuritis for tabes, because in multiple neuritis symptoms whose existence is necessary before a case can positively be diagnosed as tabes are never present. These are the pupillary symptoms, the objective sensory symptoms, and the hypotonia. Multiple sclerosis occasionally has to be distinguished from tabes. It is only when the newly formed sclerotic tissue develops predominantly in the posterior columns of the cord, that the symptoms parallel those characteristic of tabes. The disease with which tabes is most easily confounded is that described by many writers as syphilitic pseudotabes. This name is applied to the condition in which clinically there is the picture of tabes, and pathologically lesions of the cord or meninges, or both, characteristic of syphilis, are found. The lesions of tabes may also exist, though not necessarily.

The patient whose history is here recorded had the subjective and objective symptoms of tabes (plus weakness of the lower extremities), and the findings on study of the cord when

subjected to microscopical examination were entirely unexpected. The investigation was undertaken with much interest, for it was hoped that some new light might be thrown upon the location and constitution of the vesical centre in the spinal cord, the most conspicuous symptom of the disease having been incontinence of urine.

The facts of the case are as follows:

CASE I.—The patient, a laboring man, forty-seven years old, was admitted to the City Hospital, April 4, 1902. Very little information concerning his family or personal history was to be obtained. He has always been healthy, and he denies absolutely ever having had syphilis or other venereal disease. He has been moderately alcoholic. For many years, perhaps ten, he has suffered from sharp pain in the arms and sides, which has come paroxysmally and lasted a variable time, but usually only a few seconds. During the same period he has had at times, peculiar sensations of numbness and tingling in the chest. About two years ago he began to have shooting pains in the legs. These pains were paroxysmal, sometimes of such severity that he would have to stop work; at other times they were quite bearable. For eight years past he has had no sexual desire and no capacity, and for the past eighteen months he has had difficulty in retaining the urine. The bladder symptoms gradually grew worse, until, at the time of his admission to the hospital, he was quite incontinent. He began to complain of weakness of the legs and difficulty of locomotion about the same time that the incontinence came on, *i. e.*, one year and a half ago. The impairment of gait seemed to progress gradually, and six weeks ago he became quite unable to walk. It has been noticed, he says, by some of his friends, that he talks slowly and not quite so distinctly as before.

His complaint during the eighteen months previous to entrance into the hospital has been of occasional diplopia, attacks of vertigo, girdle sensation around the abdomen, and the infirmities mentioned above. During the two weeks previous to examination incontinence of feces was added to his other troubles.

Examination shows that the pupils are irregular, the right larger than the left. The right pupil is wholly inactive on exposure to light; the left reacts very slightly, in other words, the Argyll Robertson pupil is present. The ocular movements are normal. There is slight tremor of the face. The upper extremities show very marked ataxia, the same on one side as on the other. The knee jerks and ankle jerks are absent. The plantar reflex is lively, of the flexor type, and alike on both sides. The abdominal and cremasteric reflexes are easily elicited. There is marked ataxia of the lower extremities, more pro-

*Read by invitation before The Society of Psychiatry and Neurology, Boston, January 15, 1903.



FIG. 1.—The black spots indicate the hæmorrhages beneath the floor of the aqueduct.

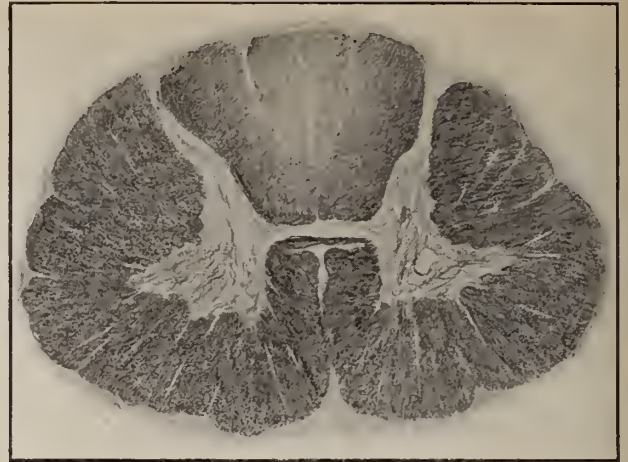


FIG. 4.—Transection of a segment from the midcervical region to show slight involvement of the columns of Goll and Burdach.

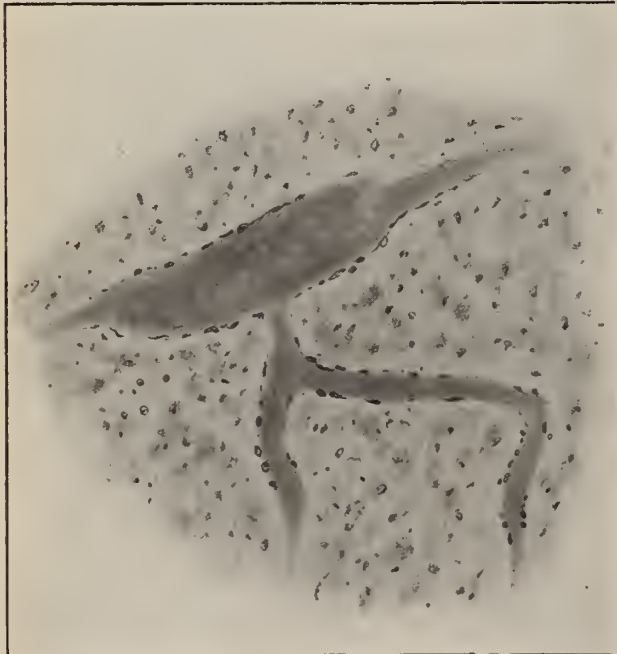


FIG. 2.—Aneurysmatic dilatation of a blood vessel and round-cell infiltration. (From the oblongata level of the tenth dorsal nucleus.)



FIG. 5.—Showing the patch of syphilitic new formation in the meninges and cord. The arrow indicates the area depicted in Fig. 6.

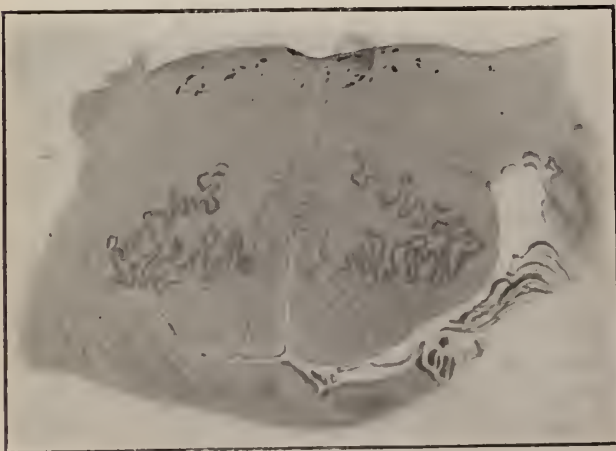


FIG. 3.—Cross-section of the oblongata above the dorsal tenth nucleus, showing multiple hæmorrhages in the so-called internal nucleus of acoustic.

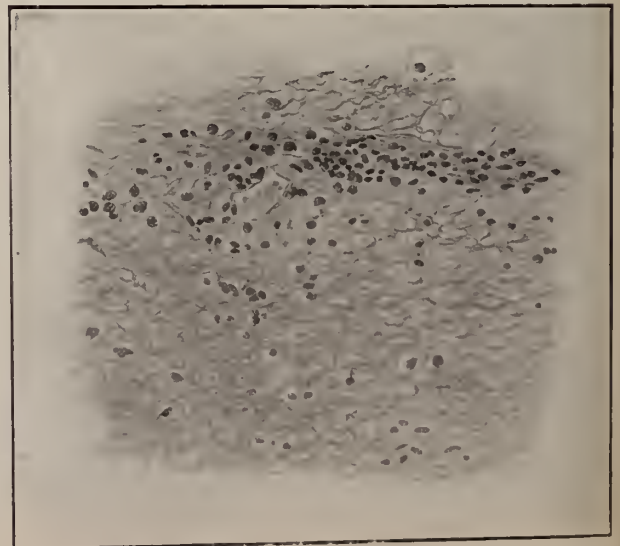


FIG. 6.—Illustrating the area shown in Fig. 5.

nounced on the right side than the left. The patient is unable to stand, without assistance, on account of weakness of the legs, and of giving way of the knees. The legs, when he is lying, can be moved about freely, but when he attempts to put his weight upon them they wobble and give way. There is no atrophy of the muscles. Examination of the sensory sphere shows irregular areas of anæsthesia in the lower extremities, principally over the outer surface of the legs. The loss of tactile and pain sensibility is not complete, but perception of these stimuli is very much obtunded. The sensory disturbances of the upper extremities are of similar nature, but are confined to the ulnar areas of both sides. It is noted that the patient's speech is slow, and that articulation is somewhat indistinct, but there is no greater difficulty with words having a number of consonants, than those made up largely of vowel sounds.

Examination of the urine shows nothing of importance. The pulse is 100, the impulse feeble; the arteries are thickened, the temperature and respiration are normal.

The diagnosis of tabes was based upon the following facts of the history (symptoms), and upon the elicitation of the examinations (signs).

Symptoms—(1) Pain of a neuralgic character, paroxysmal in its appearance and described as shooting, about three years' duration. (2) Disturbance of function in the urogenital system: progressive impotency, incontinence of urine, occasional loss of control of the rectal sphincter. (3) Difficulty of station and impairment of gait, which progressed to such a degree as to cause inability to walk. (4) Diplopia.

Signs—(1) Ataxia of station and locomotion. (2) Loss of the tendon jerks at both knee and ankle. (3) Hypalgesia, hypæsthesia, ulnar anæsthesia. (4) Argyll Robertson pupils. (5) Ataxia of the upper extremities. (6) Hypotonia.

As a matter of fact, the symptoms and signs of tabes were typical. The patient died of acute Bright's disease after I had gone off duty at the hospital.

Only the spinal cord and brain were at my disposal for examination. The pia around the dorsal portion of the cord seemed to be somewhat thickened. Aside from this the cord showed no abnormality to the unaided eye, save slight diminution in size and slightly increased resistance to the knife as it passed through in the fresh state. The cord, oblongata, and the pons were prepared for microscopical examination by hardening in formalin, and staining with Nissl's methylene-blue, Böhmer eosin, and Van Gieson picric-acid-fuchsine. For staining with Busch's method, the preparations were transferred from formalin to Busch's fluid, and for the methods of Pal and Weigert from formalin to Müller's fluid. Sections were made from every segment of the cord. Of the dorsal cord sections were obtained from each succeeding one third of an inch.

I shall give a brief description of the principal pathological changes that were made out in micro-

scopical examination, beginning with the upper part of the oblongata.

Specimens from the region above the facial nucleus, stained according to the methods of Pal, Weigert, and Böhmer show the presence of numerous very small hæmorrhages in the floor of the aqueduct. These hæmorrhages implicate the substantia ferruginea of the right side, both abducens nuclei but chiefly the left, and the knee of the facial on both sides (Fig. 1). Some of them are extremely small, especially those in and around the substantia ferruginea. Besides these minute hæmorrhages there are remarkable alterations of the blood vessels, consisting of irregularity of calibre, aneurysmal dilatation, and round cell infiltration of the vessel walls. In many places the round cell infiltration is to be seen distinctly also in the circumvascular spaces (Fig. 2).

Sections from the region of the facial nerve and nucleus, stained in the same manner as those mentioned above, show punctate hæmorrhages in the floor of the aqueduct, chiefly around the knee of the facial on both sides. Punctate hæmorrhages are also to be seen in the course of the right facial nerve and in the nuclei of the abducens.

Sections from the region above the dorsal X nucleus show multiple hæmorrhages of very small size in the so-called internal nucleus of the acoustic on both sides, and an aneurysmatic dilatation of a blood vessel (Fig. 3).

When the region of the nuclei of the posterior columns is reached, the specimens show round cell infiltration in Burdach's columns. In addition to infiltration of the blood vessels, sections from the mid-cervical region (fourth and fifth segments) stained according to Pal and Weigert, appear when viewed under weak magnification to show slight degeneration of the posterior columns and the dorsal portion of the lateral columns, *i. e.*, the area between the entering posterior roots, the dorsal tip of the direct cerebellar tracts, and the dorsal margin of the crossed pyramidal tracts. When viewed under strong magnification, however, it is seen that there is very little destruction of neuraxones, except at the posterior margin of the columns of Gall and Burdach where the process in the meninges has infiltrated into these columns and strangled the neuraxones. The apparent degeneration of these columns under weak magnification is due to round cell infiltration involving the fibrous strands, the walls of the blood vessels, and the circumvascular spaces. The infiltration of the blood vessels and the circumvasculitis are particularly striking. Many of the vessels are so thickened that they can be made out by means of a weak magnifying glass. The foci of round cell infiltration, to be seen in the connective tis-

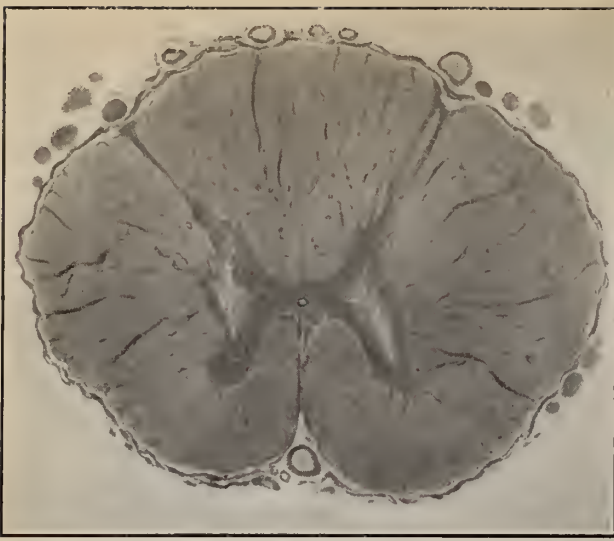


FIG. 7.—Cross-section of the tenth dorsal segment, showing thickening of the pial prolongations and the vascular degeneration.



FIG. 8.—Infiltration of blood vessels at the level of the tenth dorsal segment. V.T. Vessel in transverse section. V.L. Vessel in longitudinal sections. (High power.)

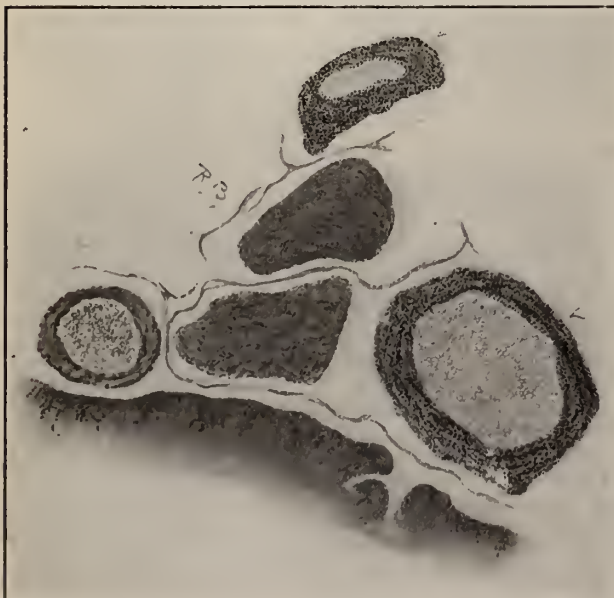


FIG. 14.—Showing round-cell infiltration of meningeal blood vessels. V.V.V. Veins. R.B. Root bundle.



FIG. 10.—Illustrating chromatolysis of the cells of the lateral horns.

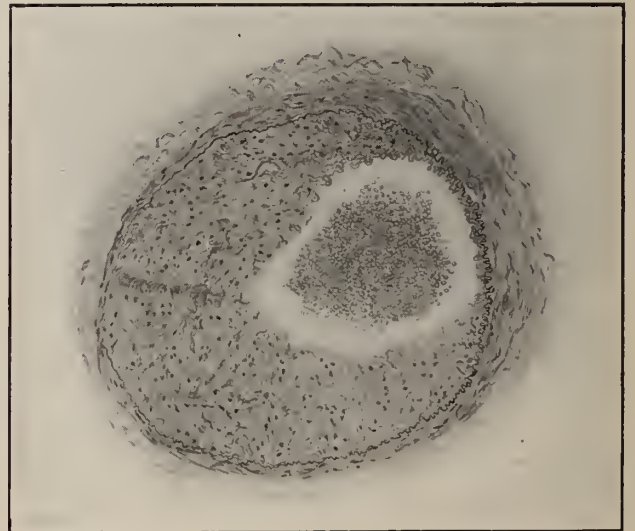


FIG. 9.—Anterior spinal artery, showing enormous thickening of the intima, and atrophy of the tunica muscularis, second lumbar segment.

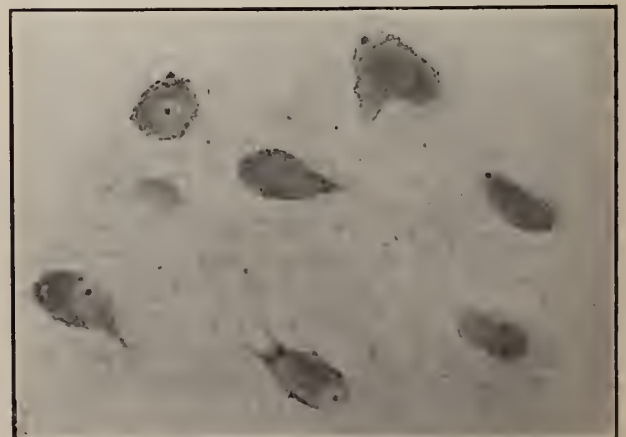


FIG. 10.—Showing various degrees of disintegration in the cells of the anterior horns in the third lumbar segment.

sue strands, are, many of them, circumvascular. The pia is distinctly thickened (Fig. 4), especially over the posterior columns. It is a question of interpretation whether or not it might be said that there is slight degeneration of a systemic character of the posterointernal columns in this region. My own conviction is that there is none.

Sections made through the second dorsal segment show that the lesions are somewhat more extensive than they are in the levels just described. The dorsal portion of the right lateral column shows extensive circumvascular round cell infiltration in the form of multiple foci or patches.

In the posterior portion of the right lateral half of the cord one of these patches is so conspicuous that it is readily visible to the naked eye when stained according to the methods of Van Gieson and Böhmer. Its extent and appearance under weak magnification (A.*) is depicted in Fig. 5. The patch is most profoundly developed at the border rear the entrance of the posterior root, into which it extends, destroying every vestige of the latter. The posterior horn seems to have been amputated at a point about the junction of its peripheral and middle third, the amputation being effected by the patch which extends toward the crossed pyramidal tracts of the right side, upon which it encroaches. In reality the posterior horn was not amputated, the newly formed tissue having winnowed its way between the cells and fibres. This is readily made out when the sections are examined microscopically and accounts for the absence of ascending degenerations. The intensity of the lesion diminishes as we trace it toward the pyramidal tract. At the posterior periphery of the cord, where I have said the patch was thickest, the pia is as profoundly implicated as the cord itself. In fact, the whole lesion has, to the naked eye, the appearance as if a miniature sword had been thrust into the cord from behind forward in an obliquely outward direction, the handle of the sword being represented by the part of the patch in the meninges. The apex of the lesion lies between the ventral end of the direct cerebellar tracts and the dorsal end of the anterior ground bundle. This patch extends up and down the cord to a distance of about 2 cm. On microscopical examination it is seen to be made up of glia tissue, of round cells and nuclei, many already budding into connective tissue formation, and of diseased blood vessels, such as have already been described. In many places the newly formed tissue seems to be on the point of breaking down and becoming homogeneous. Although it has not the appearance of a gummatous formation there can be no question, I believe, that it is a syphilitic process. In the portion of the patch that is developed in the pia, coat sleeve proliferation of the blood vessels is more evident than it is in any other part of the

cord. The posterior columns show the same changes to a lesser degree, although there are, here and there, small areas in the posterior columns in which the round cell infiltration is particularly marked. The gray matter, especially in the anterior horns, shows a number of vascular foci, but the process is not so intense here as it is in the columns just mentioned. The pia is moderately thickened in places other than the one described, and it shows a distinct round cell infiltration in the thickened parts. There is no degeneration in the white matter, the columns of Gall and Burdach have a fairly normal appearance.

The alteration of the vessels of the pia is very striking. The walls of many of them are thickly beset with round cells while others show hypertrophy of the muscular coat. On one side in the dorso-lateral portion of the posterior column many of the small vessels show foci of circumvascular infiltration which is made up in part of typical round cells and rod-shaped, spindle-shaped nuclei. In the third dorsal segment the vascular changes in the white matter are slighter than in the second segment; small foci of the kind mentioned are to be seen scattered rather uniformly over all the columns. In sections from this segment, and indeed from all the segments of the dorsal cord, the vascular changes in the pia are particularly marked around the posterior roots. The most noteworthy features of sections from the fourth dorsal segment are numerous minute hæmorrhages in the posterior columns and in the dorsal portion of the lateral columns. Sections from the fifth dorsal show a budlike growth of the intima into the lumen of the pial blood vessels, round cell infiltration of the vessel walls and thickening of the media, and a few hæmorrhages in the posterior columns. Sections from other segments of the dorsal cord show pronounced proliferation of the intima which produces a picture resembling somewhat that of obliterating endarteritis.

When the tenth dorsal segment is reached, the foci of round cell infiltration involving the connective tissue prolongations into the cord, the blood vessels and the circumvascular spaces are more conspicuous (Fig. 5) than they were in the midcervical and in the upper dorsal region (Fig. 6). The anterior horns show a number of what seem to be small hæmorrhages but when examined closely it is seen that the blood is mostly within the vessels. The gray matter is relatively free from morbid changes, *i. e.*, in contrast with the white. The pia is distinctly thickened, and at this level shows blood vessels with numerous round cell infiltration.

The tenth dorsal (Fig. 7) shows changes similar to those described above, and in addition, the fibrous sæpta and neuroglia strands of the posterior columns are greatly thickened and infiltrated with round cells. A somewhat similar condition, but less advanced, is



FIG. 11.—Aneurysmatic dilatation of a blood vessel in the third sacral segment cut longitudinally, showing round-cell infiltration and leucocyte migration.

to be seen in the fibrous strands of the anterolateral columns, chiefly in their dorsal portions. Sections from this level stained according to Nissl's method show well marked chromatolysis of the cells of Clarke's column, and in some sections there is to be



FIG. 12.—Cross-section of half of the eleventh dorsal segment, showing slight hæmorrhage into the anterior horn, and disintegration of the anterior horn cells.



FIG. 13.—Enormous thickening and round-cell infiltration in a blood vessel from one of the lower sacral segments.

seen a similar change in some of the cells of the lateral horn group (Fig. 8). The walls of some of the meningeal vessels, especially those around the roots, are heavily infiltrated with round cells. These changes are to be seen most strikingly in the sections stained with Böhmer's hæmatoxylin and eosin.

In sections taken from the first lumbar segment, the anterior spinal artery shows conspicuous eccentric thickening of the tunica intima, which has led to distinct atrophy of the muscular coat and to slight narrowing of the lumen (Fig. 9). This thickening is due to an increase of the fibrous tissue and only slightly to round cell infiltration. The process has gone beyond the stage of round cell infiltration. In places in which the intima is seen to be not thickened, the muscular coat appears to be disproportionately thick. The lumen of the artery is not very much diminished despite the enormous thickening of the inner and outer coats. The sulcocommissural artery, on being traced down through the artery of the fissure, does not show any evidences of narrowing of the lumen, although the walls are seen to be thickened. The pia at this level is distinctly thickened and shows some circumvascular round cell infiltration. The cord itself on transection is relatively free from change, although the posterior columns reveal slight disproportion of the nerve fibres and neuroglia, the

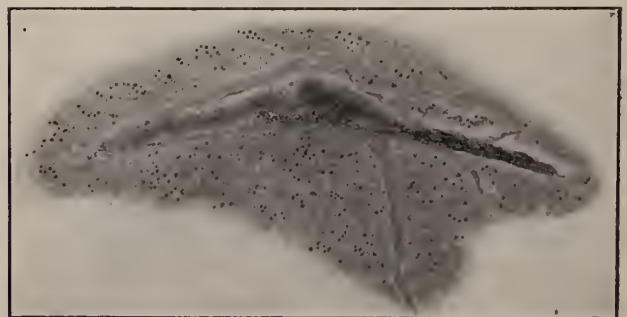


FIG. 15.—Longitudinal section of an aneurysmatic blood vessel, showing round-cell infiltration and thickening of the walls.

latter being in excess. There is a slight round cell infiltration of the fibrous *sæpta*, and of many of the blood vessels. The changes are not profound, however. There is no degeneration of the white matter.

In lower levels of the lumbar segments the cells of the anterior horns show slight degrees of disintegration, chromatolysis, nucleus migration, and homogeneous transformation (Figs. 10). The blood vessels are thickened and have a gaping, brittle appearance. This is not more evident in the vessels of the meninges than in those of the cord. When we reach the fifth lumbar segment the changes are confined almost entirely to the pia, which is unusually vascular. It is of very much the same appearance as that described in the section above, viz., thickened and studded with round cell infiltration. It is safe to say that the latter is not quite so pronounced as in the upper lumbar segments. There is no degeneration of the white matter.

On account of the most conspicuous symptom in this case, *i. e.*, incontinence of urine, the third and fourth sacral segments were halved laterally, cut serially, and examined with great care, in the hope that some information regarding the incontinence of urine which the patient had might be obtained. In this, however, I was disappointed. The findings were, taking them all together, meagre; there were a few hæmorrhagic foci accompanying aneurysmal dilatation (Fig. 11), and foci of round cell infiltration in the gray matter of these segments, but as somewhat similar foci were found in the dorsal region (Fig. 12) it is not safe to say that these stand in relationship to the disturbance of the function of the bladder. The changes in the blood vessels at this level are well portrayed by Fig. 13, which represents a blood vessel from the lower part of the sacral cord.

The blood vessels of the oblongata, the cord, and the meninges are the seat of a disease-process which is best designated by the term "fibrosis" or "sclerosis." The walls are thickened, principally from round cell infiltration (Fig. 14). In some sections the tunica media is more affected than the intima, in others the reverse of this is the case. Here and there the vessels having the so-called "coat sleeve" infiltration are seen. There is little that corresponds to endarteritis obliterans in the picture. The calibre of the vessels is not reduced, but some of the vessels seen on cross section have a gaping appearance, while those cut longitudinally (Fig. 15) show the variable thickness of the vessel wall and the thickening of the media most distinctly. At some levels, but notably in the oblongata and the sacral region, the diseased blood vessels have ruptured and punctuate hæmorrhages are to be seen distinctly. At these levels there are slight changes in the ventral horn cells that are no doubt dependent upon the lesion of the blood

vessels. Around the diseased vessels the lesion is that of round cell infiltration and overgrowth of connective tissue. The pial prolongations into the cord show these round cell infiltrations. The pia itself is irregularly thickened, more so at one level than at another. This thickening is due to vascular and circumvascular round cell infiltration. The posterior columns may be slightly degenerated in the lower cervical region, but at other levels of the cord they are free. This appearance of slight degeneration is often seen in very thin Weigert specimens, especially if there is any increase of pial radiations. Even though it may be looked upon as beginning systemic disease, it has not the characteristic distribution of the lesion of genuine tabes nor the appearance of it.¹

When we attempt to answer the question, "What caused this arterial fibrosis of the cord and oblongata and the patches in the cord and meninges?", we find some difficulty in giving a satisfactory reply. The commonest cause of such lesion, undoubtedly, is syphilis; but whether the alteration of the blood vessels should be considered syphilitic or not, is a matter of personal judgment. Although there is nothing that is pathognomonic of exudative syphilis in the anatomical picture, *i. e.*, gummatous formation, endarteritis obliterans, or amyloid degeneration, the lesions are those that may be caused by syphilis and in my opinion they are syphilitic. The vascular changes herein described may be caused by other infections and by toxic agencies, but the patch described in the second dorsal segment is only produced by pressure from outside, such as from disease of the bone and from syphilitic reaction or deposit.

(To be concluded.)

The Basis of Accuracy.—The *Polyclinic* for February cites the following from Dr. John Brown: "It is this ἀκρίβεια of the wise and subtle Greek, this accuracy (*ad* and *cura*) of the stout Roman, that is the eye of the physician and its memory, and it depends greatly on vivid *attention* in the act of seeing; as Dr. Chalmers said, there is a looking as well as a seeing. 'I've lost my spectacles,' said good easy Lord Cunninghame, as he was mooning about Brougham Hall in search of them, when on a visit to his vehement old friend, its lord, whose mind was always in full spate. 'Where did you lay them?' said Brougham. 'I forget.' 'Forget! you should never forget; nobody should forget. I never forget. You should attend; I always do. I observed where you laid your spectacles; there they are!'"

¹ I am indebted to my friends, Van Gieson and Onuf for aid in the interpretation of the lesions in this case.

STREPTOCOCCUS AND STAPHYLOCOCCUS BRONCHITIS.*

By JOSEPH M. PATTON, M. D.,
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If any apology is needed for such denomination of bronchial inflammation as is here employed, it may be found in the more or less unsatisfactory classifications of bronchitis which, up to the present, have served to indicate the individual preference of authors, relative to various conditions sustaining an actual or supposed ætiological relation to inflammatory conditions of the bronchi.

In justification of such denomination we may, without plea as to ætiological fitness, call attention, not only to the growing recognition of the importance of microorganisms in connection with the ætiology of bronchitis, but also to the recognition of certain more or less well defined types of bronchitis, which result from infection due principally, or wholly, to certain organisms.

Laennec's anatomical classification of bronchitis, which has prevailed since shortly after the recognition of bronchial inflammation as an affection independent of other pulmonary processes by Badham and Peter Frank and its clinical recognition by Sydenham, has maintained its position through its simplicity and clinical applicability, though the ultra refinement to which Sée subjected this classification in his recognition of intralobular and broncho-alveolar forms of bronchiolitis requires a subtle faculty for diagnosis which is apparently beyond the ordinary clinician.

Various other classifications have proved unsatisfactory. Ferrand's classification, based mainly on the character of the bronchial secretion, results in confusion of terms. Riegel's division, which has been the standard classification of Germany, is but a modification of the classification of Laennec. The same may be said of Walshe's classification, with the addition of certain special varieties of bronchitis. The divisions of Fothergill were based largely on pathological grounds and have not been as generally recognized as those which followed more or less closely the anatomical classification. Of those classifications based on the character of the auscultatory signs the less said the better, while as regards basing a classification of bronchitis on the primary or associated conditions, we may, like Aufrecht, turn aside at the burdensome nomenclature, to say nothing of the ætiology and clinical ambiguity of such a classification.

Marfan's classification, with two main divisions of specific and non-specific bronchitis, though necessarily incomplete from the present state of bac-

teriological knowledge, yet represents the essential nature of what must ultimately be the most practical method of classifying bronchial inflammations.

It is a well known fact that the air passages constantly contain bacteria capable of causing inflammation. That they only do so under special conditions is also well recognized, and to the combination of circumstances—represented in the long established effect of cold or exposure or of other deleterious influences, and the infecting properties of these organisms under favorable conditions, must be ascribed the chief ætiological factor of certain forms of bronchitis.

The local effect on the circulation and the epithelium of the laryngeal, tracheal, and bronchial membranes of depressing influences, such as cold, has been detailed by Landois and Stirling, and is shown by the experiments of Rossbach and others.

Pansieri found in healthy bronchi eight varieties of streptococci, twenty-one kinds of bacilli, ten varieties of micrococci, and various sarcinæ. Pyogenic streptococci and staphylococci, pneumococci, and influenza bacilli seem to be the most common organisms found in the air tract, though the *Bacillus proteus*, *Bacillus typhosus*, *Bacillus coli communis*, and other organisms, such as the *Aspergillus fumigatus*, *Oidium albicans*, etc., are occasionally found.

Though the finest bronchi are generally free from the presence of pathological organisms, they are found, according to Bartels, in greater number in the bronchi than in the mouth, and must therefore grow there freely.

The records of any bacteriological laboratory will show the great frequency of mixed pus cocci in the sputum, and especially the frequent presence of streptococci and staphylococci, especially the former, in sputum from patients who have presented for some time subjective symptoms of a suspicious character.

It becomes apparent that certain of these microorganisms affect, in a more or less direct manner, the clinical features, course, duration, and severity of bronchitis, and that especially bronchitis due to streptococcus infection presents definite clinical features which, to some extent, distinguish it from other forms of bronchitis.

The acute bronchial type of influenza is, of course, quite familiar. That there is a chronic type, localizing in tendency, with, apparently, a predilection for the lower posterior portion of the bronchial tract, is not so generally recognized. Neither is it generally understood that bronchitis may result from pneumococcus infection, and be local in extent, moderately severe or mild in type, and with little disposition to extend, as shown by a patient who re-

* Read before the Chicago Society of Internal Medicine, January 19, 1903.

cently had a local inflammation of the first branch of the left bronchus, of rather persistent nature, and in whose sputum nothing could be found but a few pneumococci.

I have observed some cases in which staphylococci appeared to be the chief or only causative agent. These cases have shown as a rule tendency to chronicity, mild type, scanty expectoration, persistent cough, and, at times, dyspnoea of an asthmatic character.

The cases, however, which have shown the most definite clinical features have been those due to streptococcus infection. These features are: a persistent and rather high temperature; a more or less generalized bronchial involvement presenting marked physical signs of bronchitis; a persistent and troublesome cough; rather free expectoration of heavy mucopurulent sputum, occasionally tinged with blood; occasional night sweats; moderate rapidity of the pulse; and, aside from the disturbance from cough, a freedom from subjective discomfort rather suggestive in relation to the continuous, and, at times, high temperature.

When these symptoms are of moderate severity and continuous, the differentiation from tuberculosis may be difficult, and may rest largely on the sputum examination. This is particularly true of bronchitis from staphylococcus infection alone, as its type is more subacute and less distinctive.

Forcheimer, who does not think a bacteriological classification of bronchitis practical, has called attention to the clinical picture presented by streptococcus infection in symbiosis with infection by the influenza bacillus, or as an infection secondary to a primary influenza, without which he has not seen the clinical picture he describes, the characteristics of which are: generalized bronchitis, violent cough, more or less abundant mucoid or mucopurulent expectoration, a temperature varying from 99° F. to 100° F. in adults, or 103° F. in children; and, in the excessively developed cases, a type of septicæmia or cryptogenetic septicopyæmia, such as described by Leube and other German authors, presenting high fever, chills, rapid pulse, sweats, and the general symptoms and course of septicæmia. In children this type of bronchitis presents relatively a higher temperature and more rapid pulse, while after thirty years of age streptococcus infection of the bronchial tract is considered uncommon.

The streptococcus was found in all of Forcheimer's cases, and in twenty-seven cases was the only bacterium found. In twenty-three cases the streptococcus was associated with the staphylococcus only. In three cases diplococci were found associated with the two former. In one case the streptococcus was associated with influenza bacilli.

In view of the fact that during the last epidemics of influenza von Jaksch found the influenza bacillus to be absent after a few weeks, and replaced by the streptococcus, Forcheimer regards the condition he describes as a secondary infection, either accompanying or following influenza.

The above findings and conclusions are cited in support of the argument that acute bronchitis at least may be due to streptococcus or staphylococcus infection. The evidence presented appears in favor of the commensal nature of the infection in the cases studied, and yet, granting that such is the case, we know of no reason why if the streptococcus is capable of instituting or continuing a bronchitis under such circumstances, it should not also act, under favorable environment, as a specific and primary ætiological factor for the same process.

However, this paper is not for the purpose of argument for or against the principle of symbiosis in the class of cases presented by Forcheimer, but to present three case histories selected from a number of cases in illustration and support of the occurrence of a form of bronchitis due to infection by streptococci or staphylococci or both, and probably primary, which exhibit more or less characteristic clinical features, and in some cases simulate the early clinical features of tuberculous infection.

CASE I.—Mr. S., aged nineteen years; clerk by occupation. Family history good, personal history negative. Came under observation in October, 1901. History of violent, distressing cough with abundant expectoration for previous three weeks, which had failed of being relieved by various cough remedies. Had irregular night sweats, appetite fair. Bowels regular. Sleep good, except when disturbed by cough. No history of influenza of upper respiratory tract. At this time (2 p. m.) his pulse was 110, and temperature 101.5° F.

On inspection the respiratory excursion of the chest appeared symmetrical, though somewhat retarded. Palpation gave a rough, increased fremitus, especially over the upper anterior, and lower posterior regions. Percussion resonance was normal. Auscultation gave a rough, vibratory, bronchovesicular type of respiration. There were numerous loud, vibrant, sonorous râles, an occasional sibilant râle, and numerous large and small mucous râles to be heard all over the chest. The sputum was thick, heavy, mucopurulent, and occasionally tinged with blood. The nasopharynx was congested and showed moderate increase in secretion. The larynx was slightly congested and its vestibule slightly swollen. The sputum showed numerous streptococci, a few staphylococci, but no influenza bacilli.

For six weeks his condition remained much the same, with remissions in pulse and temperature, the latter averaging from 99° F. to 99.5° F. in the morning, and 100° F. to 101° F. in the afternoon. He gradually improved under local and general

medication, and was entirely recovered after three months.

CASE II.—Mrs. H., aged twenty-three years. Slight build, average weight, 112 pounds. Two children. Previous health good, with exception of some slight uterine trouble. Family history negative. Came under observation three months ago. History of cough for six weeks. No relief from cough medicines. Coughs most nights and mornings. Feeling of tightness and discomfort over second and third ribs anteriorly in mamillary line. Temperature, 100° F. Pulse, 96. Slight loss of weight. No history of primary influenza.

Examination showed slight delay in expansion of upper right lung. Respiratory excursion generally deficient. Slight increase in percussion pitch over upper right lung, such as is common in persons with short anteroposterior diameter. Fremitus slightly increased over same area. Inspiration slightly interrupted in both lungs. Moderate prolongation of expiratory sound over upper right lobe. Pitch of expiration slightly increased over same area. Harsh breathing, bronchovesicular in quality, with occasional moist râles of metallic quality in lower portion of upper right lobe anteriorly, not extending to apex. Sputum mucopurulent in character with staphylococci, pus cells, no streptococci, tubercle bacilli, or influenza bacilli.

The subjective symptoms in this case were not marked, the cough being much less troublesome than in case I. Recovery was complete in two months.

CASE III.—Boy aged nine years. Clinic case, out-patient. Family and personal history good. Came under observation in March, 1902. History of cough for two months, not relieved by medication. Cough severe, violent, most troublesome at night. Expectoration abundant. Temperature, (4 p. m.), 100.6° F. Pulse, 110.

Examination showed generalized bronchitis with numerous large and small mucous râles, especially in lateral and posterior regions of chest. Sputum mucopurulent, showed streptococci and staphylococci in moderate numbers.

This patient recovered completely in about six weeks.

These cases have been selected from a number to illustrate what appeared to be the most marked clinical features of bronchitis depending on infection with streptococci and staphylococci, either alone or in combination, with little or no general toxæmia, and to emphasize the resemblance which these clinical features bear to those of certain forms of tuberculous infection. That the subjective signs are in no way sufficient for diagnosis is evident. Neither can the physical signs be regarded as more than suggestive, especially in some of the cases due to staphylococcus infection, as the lack of sudden onset, the tendency to localization, and the subacute character of the subjective signs much resemble the onset of tuberculosis involving the terminal bronchial tract, the main difference being the infrequency of apical localization.

In the cases presenting the streptococcus as the chief or sole infecting agent, the subjective, as well as the local, symptoms are more distinctive of the nature of the infection, but even here a tuberculous element can only be excluded by careful and repeated examinations of the sputum.

It is not asserted that these cases represent absolutely primary infections, as they were not observed during the initial stage, but, so far as can be judged, they cannot be considered as symbiotic with other infections.

Taking the two infections, streptococcus and staphylococcus, as far as they have been observed singly, as a cause for bronchitis, their effects, relatively, appear to bear much the same relation to each other as do those of pure tuberculous and mixed tuberculous infection in their earlier manifestations. Having no intention of discussing at this time the therapeutics of this class of bronchial inflammations, I may be excused for calling attention merely to the unsatisfactory results attending the administration of the usual sedative and stimulant expectorant remedies, and for remarking that my most satisfactory results were obtained through tonics and alterative expectorants and the employment of soothing and stimulating local medication by deep inhalation.

INTESTINAL RESECTION AND END TO END ANASTOMOSIS

WITH THE O'HARA FORCEPS IN A CASE OF
TUBOOVARIAN ABSCESS WITH AP-
PENDICITIS: RECOVERY.

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CASE.—Mrs. A. S., age twenty-six years, married seven years, was perfectly healthy until the birth of her only child five years ago. Her labor was a difficult one, requiring a high forceps operation, and was followed by symptoms of puerperal sepsis, which resulted in the formation of a tuboovarian abscess on the right side, which became chronic in character. From the onset of the trouble until her operation, she suffered from constant dull pain in the right ovarian region and uterus, worse during her menstrual periods. She was treated with local applications by her physician for two years, when an abscess appeared in the right inguinal region just above Poupart's ligament, which was then operated

upon, being incised and thoroughly curetted and washed out. But the wound would never heal, and the sinus persisted in the discharge of a large amount of pus for three years until she came into my service at the Post-Graduate Hospital, last summer. At times she had a profuse leucorrhœa, and occasionally a discharge of pus from the inguinal sinus. Flatus was also passed by the sinus. Her general health was greatly affected. She was anæmic and emaciated and her very existence was miserable. Vaginal examination disclosed a subinvolved retroverted uterus, firmly bound with adhesions, and a mass in the right broad ligament, of the size of a duck's egg. The mass and uterus were excessively tender. The left ovary was of normal size, but was adherent. She was placed under ether to permit of a more careful examination and a probe was passed through the sinus in the groin for a distance of seven or eight inches, directly into the mass at the right of the uterus. On July 30, 1902, I operated upon her as follows: A posterior vaginal section was first made for the purpose of exploration, with the idea of removing the abscess cavity from below and establishing a through and through drainage from the sinus above, if possible, in order to avoid opening the abdomen in such close proximity to the pus discharging sinus. It was quickly determined that the dense adhesions of intestines to both the uterus and the abscess absolutely forbade any attempt at removal from below, so a piece of gauze was passed into the cul-de-sac for subsequent drainage. Before opening the abdomen the sinus was covered with a layer of gauze and sealed with collodion. A four-inch incision revealed the omentum adherent clear across the abdomen, and it was ligated in sections and freed from the bladder and uterus. The tuboovarian abscess was found densely adherent to the ileum and the caput coli. The vermiform appendix, which showed evidences of severe inflammation, was part of the mass.

An appendicectomy was next done and the head of the colon separated from the abscess, then two loops of the ileum were loosened with the greatest difficulty after careful dissection. One loop communicated directly with the cavity of the abscess by an opening about one inch in circumference. This opening in the bowel was closed with mattress sutures of silk, inverting the edges. The remaining loop of intestine was constricted at its centre and the walls were denuded and the coats damaged in several places. There were also a couple of small perforations, so that I did not consider it safe to attempt a repair of the walls, and decided that it was wisest to resect the whole loop. The O'Hara forceps was used for this purpose, and an end to end anastomosis made, using mattress sutures of silk after Halsted's method. The suture devised by Mitchell and Hunner for obtaining a secure approximation at the mesenteric attachment was employed.

The length of bowel removed was seven inches.

The walls of the abscess were next dissected out and the opening into the inguinal sinus was closed. The uterus was freed from adhesions and the left tube, which was diseased and adherent,

was removed. The left ovary was saved as it was in good condition.

Twelve hundred c. c. of normal salt solution were infused into the median basilic vein, and the abdominal cavity was flushed with the same. The patient left the operating room with a pulse of 132, but reacted quickly. On the third day the pulse was 112 and temperature 99.5° to 100° F. Both pulse and temperature continued to fall and remained at the normal after the fourteenth day. An ice coil was placed on the abdomen from the beginning and kept in use during the first five or six days as a prophylactic measure. The bowels moved on the eleventh day, and the patient was out of bed on the twenty-seventh day. She made a perfectly smooth and uneventful recovery. Primary union of the abdominal wound was obtained with the exception of the lower inch, where there was a superficial infection. This was not surprising considering the inflamed condition of the skin in the immediate neighborhood, due to its being bathed in pus from the inguinal sinus. Rubber gloves were used.

At this writing the patient has gained fifteen pounds and is entirely free from all pain. The sinus has closed, and she menstruates regularly and in a normal manner. There is no leucorrhœa. Her bowels move daily without the aid of drugs.

The ease with which I was able to make the resection of intestine with the O'Hara forceps and the satisfactory result obtained fully confirm the claims made for this instrument. This forceps has such decided advantages over the other aids to intestinal anastomosis, that I believe its virtues need but be emphasized to insure its being given a trial. I have been surprised to find many men prominent as abdominal surgeons who are not familiar with it.

Dr. M. O'Hara, Jr., of Philadelphia, first presented it in the *American Journal of Obstetrics* for July, 1900, and it has attracted considerable attention. It has been used a number of times with very satisfactory results. In a letter recently received from Dr. O'Hara, he reports its use in four cases; three successful, but one patient died from shock, eighteen hours after a severe laparotomy for adhesions. Dr. Brooks Wells has also reported its successful use in a case of ileocolostomy for carcinoma. The forceps has been severely criticized as unsafe by Dr. R. C. Coffey, of Portland, Oregon, in an article in the *Journal of the American Medical Association* for November 1, 1902. Dr. Coffey conducted a series of experiments upon pigs in intestinal anastomosis, and he tried the O'Hara forceps in two cases, in both of which death occurred promptly from total obstruction. He therefore states that he considers it absolutely unsafe, as the crushing of the bowel within the blades of the instrument predisposes to adhesion of the intestinal walls. It is of inter-

rium until the time when there will be an opening in the proper institution. Even our very recently built dispensaries are ill adapted for the treatment of tuberculous patients, and the majority of general dispensaries where tuberculous patients are treated are probably sometimes veritable centres of infection for the spread of tuberculous germs.

A specially constructed, well equipped, and well conducted tuberculosis dispensary would in New York or in other large cities of the State materially aid in the combat of tuberculosis as a disease of the masses. Of course, such a dispensary can only accomplish the most good when aided by a diet kitchen or by some other arrangement whereby the absolutely poor can be provided with the necessary food. In illustration of this I recall an incident which occurred during the earlier years of my medical career. I was the attending physician to a dispensary and one of my patients was a young man suffering from

important European tuberculosis dispensary is the one called Dispensaire Emile Roux, in Lille, France. I reproduce here the plan and elevation of this magnificent institution, where after hardly a year's existence they have treated more than 500 patients. Each one has been submitted to a careful physical examination and a bacteriological examination of his sputum. Pocket flasks and antiseptics have been gratuitously distributed, and when required a disinfection at home has been provided. Of these 500 patients, 120 received financial assistance when in the opinion of the visiting committee this had become necessary. Others have received food and bedding and during the winter months extra blankets. When in the opinion of the visiting committee removal to more healthful apartments was essential, this, too, had been accomplished by the officers of the dispensary.

The actual result of the treatment of ambulant



FIG. 2.—Entrance of the Emile Roux Dispensary at Lille.

the very early stages of pulmonary tuberculosis. At his first and second visit I had given him the necessary instructions how to live, what to eat, what to do, and what not to do. His lack of appetite I tried to overcome by a tonic. After a few weeks' absence he returned again to the dispensary and, as usual, he was placed on the scales to determine the gain in weight. To my astonishment he had lost several pounds. I asked him whether the tonic had not increased his appetite. He answered that it had indeed. "But," he added, "I could not get enough to eat; I have been out of work for months and in order to pay my rent I have lived on milk and bread." The lesson I learned from that experience was, never to try to increase the appetite of a patient without being sure that he had the means to gratify it, or that I myself was able to procure for him in some way the necessary food to supply the demand which I was trying to increase. The first and most

cases cannot be as good as in a sanatorium, but there is no gainsaying that a vast amount of good will be accomplished through the establishment of such dispensaries. The United States government fully realized the importance of such institutions while Cuba was under its sanitary care. My friend, Dr. Furbush, at that time surgeon major and acting chief sanitary officer, made an interesting report on this subject some time ago, and it bears witness to the admirable work which was done in the Dispensaria Especial de la Sanidad in the education and treatment of consumptives who could not be received in the existing institutions.

I am strongly in favor of special divisions for tuberculous patients in existing dispensaries, but still more do I favor special tuberculosis dispensaries after the pattern of the Emile Roux in Lille and the one created in Havana by the United States government.

Some day (and let us hope that this day may not be too far off), when a number of mountain sanatoria for early consumptive adult cases, a few city institutions for more advanced cases, and some seaside sanatoria for tuberculous children are in operation, such special tuberculosis dispensaries would serve most admirably as clearing houses from whence cases most suitable for the respective institutions could be selected. But besides the purpose just mentioned, and taking care of such early cases as cannot find accommodation in existing sanatoria, the tuberculosis dispensary has an additional and very important work to do. It should serve to the patients who have left the sanatorium improved or with the disease arrested as a safe place to go to, not only in case of a relapse, but also to receive competent advice and guidance whenever necessary.

To avoid pauperizing and indiscriminate medical charity, a regularly employed visitor or visiting staff (preferably composed of trained workers) is of course as essential for a tuberculosis dispensary as for any other kind of institution where gratuitous treatment is offered. In visiting the family of a tuberculous patient, the visitor has, however, a particular mission to perform. He will see for himself the environments which might have caused the aggravation or outbreak of the disease and be able to suggest changes for the betterment of existing conditions. Again, becoming acquainted with the other members of the family, he might discover that a careful examination was imperative for the one or the other, and thus valuable lives might be saved by the inauguration of timely and judicious treatment.

In conclusion of this plea for special dispensary classes or, better yet, specially constructed dispensary buildings for indigent ambulatory tuberculous patients, I desire to express an opinion which I know to be at variance with our usual conception of dispensary work. I am nevertheless convinced that this opinion is shared by many who have given the matter sufficient thought. As a rule the tuberculous patient in the general dispensary is the one most easily disposed of. Cod liver oil, creosote, and some cough mixture is the routine treatment. I do not blame the dispensary physician for this seeming neglect. With from twenty to forty cases to be attended to in an hour or an hour and a half one cannot do any better. To examine, treat, and educate the tuberculous dispensary patient requires a good deal of time, a good deal more than is allotted to the general patient, and it requires an experienced physician acquainted with the principles of modern phthisiotherapy to do the work well.

Every tuberculous patient educated, cured, or only improved by the regular visit to the special

tuberculosis dispensary, represents so much of sanitary and financial gain to the community. Through the training received in the dispensary those consumptives, instead of being sources of infection, will become educational factors in their families and among their neighbors and friends, also a goodly number will be cured and instead of ultimately becoming a burden to the community they will become bread winners and useful citizens. I ask, Is it more than right and just that the physician who by his labor, time, and devotion thus not only improves the sanitary condition of the city, but also saves indirectly perhaps thousands of dollars for the public treasury, receive a just and reasonable compensation for his service to the tuberculosis dispensary?

A physician in charge of a large tuberculosis dispensary class, in order to do justice to these unfortunate consumptives, must devote several hours each day to this work. There should even be evening classes for patients who are obliged to work during the day.

The average practitioner cannot afford to sacrifice so much time without compensation, and the municipality, benefiting in every respect by the labor of the tuberculosis dispensary physician, should not expect it.

Let us hope that the municipal governments of all our large cities will soon awaken to the necessity of properly conducted special dispensaries as an important factor in the solution of the tuberculosis problem among their poor.

There is an opportunity for some generous millionaire to perpetuate his name after the example of Mr. Emile Roux, of Lille, by giving his city such a useful and much needed institution.

16 WEST NINETY-FIFTH STREET.

OPIUM IN SURGERY.

By EDWARD WALLACE LEE, M. D.,
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That opium and its alkaloids have a definite place in surgical therapeutics, I have no doubt. Also I am aware that opium is strongly opposed by eminent men in the surgical profession, for we often hear strong objections offered against its use under any circumstances in surgical diseases. These objections and denunciations of opium are often exaggerated; for instance, when we hear that opium has no place in the treatment of any surgical condition; that it has killed or ruined more lives than it has ever benefited; that the hypodermic syringe is the instrument of the devil; that it is the weapon of the coward, a shield of the ignorant; that it is used by the lazy and careless practitioner to relieve distressing symptoms without the necessity

of studying the case to find out the actual cause and the proper means for its removal; that it masks the true condition that exists by altering the character of the symptoms, therefore making it impossible to arrive at a correct diagnosis; that it checks normal secretion, prevents peristalsis, and therefore favors the absorption of toxic products, and, with all, its use is universally condemned; that it is a poison and tends to lower normal vitality; and that by its use there is danger of establishing a habit which may make a fiend of the patient, so that one eminent surgeon remarked, "If your patient is going to die, let him die honestly and in his right mind, and do not send him into Eternity paralyzed and befuddled, under the influence of dope."

These and many other arguments are used to prove that opium is contraindicated in surgical cases. Opium, like many other things, must be used judiciously. It is the injudicious use of this powerful therapeutic agent that has brought it into disrepute. The fault is not so much that of the drug, as of the practitioner who uses it in a careless and unscientific manner. These arguments against the use of opium in surgical practice seem to me absolutely puerile, for the same could apply to any therapeutic agent or apparatus used in the surgical art.

Regardless of its benefits as a scientific therapeutic agent, from a humanitarian standpoint it has many indications. It is not supposed that sentiment should enter into our cold, scientific, surgical calculations; but nevertheless the relief of suffering humanity is our first duty. The mental anguish, the physical suffering, the positive harm that I have at times seen from withholding a judicious dose of morphine, because some brilliant operator would not relax his dogmatic opposition to its use, is beyond description. A single case may illustrate how some men may change their minds. A surgeon friend of mine, a brilliant operator, who would not under any circumstances permit the use of opium after his operations, underwent an operation. About one half hour after recovering from the anæsthetic, he called out, "My God, give me a hypodermic of morphine." I asked him how much he wanted. "All you can get into me," was his reply. Since that time his opinions have changed.

That the injudicious administration of morphine is injurious I will admit without argument; but that it has special indications, I am fully convinced. Morphine is especially indicated in fractures. Not only does it relieve the immediate pain, but it brings about muscular relaxation, relieving many distressing symptoms. How nonsensical it is to prescribe from five to ten grain doses of salol every hour to relieve muscular contraction and nerve irritation

after fracture, when one fourth of a grain of morphine administered hypodermically will bring about instant relief. Morphine hypodermically or opium by rectal suppository will often relieve spasmodic contraction of the vesical sphincter when catheterization is not only painful but almost impossible. In severe burns morphine is a blessing, as is well illustrated in an article by Henry Flood, of Elmira, New York, entitled *The Lessons of a Wreck*. The doctor was himself on the wrecked train. The only remedy he had was morphine, and with its judicious use he prevented untold agony. It is asserted that the administration of morphine prevents the healing of tissue. This is disproved by my observations on opium habitués, where, other conditions being equal, primary union is secured as rapidly as in other cases.

Morphine is the first remedy indicated in traumatic or surgical shock if accompanied by pain or hæmorrhage; therefore morphine given hypodermically is strongly indicated in shock following injury, especially if the injury is to be followed by operation. Morphine not only controls the existence of shock, but is a very potent factor in preventing secondary shock.

Morphine hypodermically is indicated before the administration of anæsthetics. Especially is this true if the individual is addicted to alcoholic stimulants and suffering from fever and nervousness. I know its use is emphatically objected to in abdominal surgery; but in cases where it is possible completely to clean out the intestinal tract and to relieve the lungs and kidney and liver of any existing congestion, I do not believe a little morphine, sufficient to stop pain, is going to do the harm that some have given it credit for producing. Its administration should be attended with great caution, and its effects closely watched, but it should not be withheld when by its proper use great relief and benefit may be gained. Morphine should be given hypodermically and in sufficient doses to accomplish the purpose for which it is given. When surgical shock is accompanied by such severe pain as to cause uncontrollable restlessness, morphine should be given in doses adequate to relieve it. The same treatment is indicated for shock or restlessness without pain, a condition usually due to hæmorrhage, the other appropriate general treatment for shock, of course, being carried out. Morphine is the best internal hæmostatic in the treatment of hæmorrhage. When the hæmorrhage is complicated by restlessness, morphine is absolutely indicated because of its quieting effect both on mind and body. When drunkards or exceptionally neurotic patients are to be anæsthetized, a preliminary hypodermic injection of morphine renders such anæsthetization quicker

and safer, and favorably effects the stage of recovery. Obstinate and exhausting vomiting after ether or chloroform is often relieved by morphine given hypodermically. If, in the first twenty-four hours after operation, pain becomes so severe as to cause uncontrollable restlessness, this pain should be relieved by morphine. To this rule there are practically no exceptions. It applies to all operations, regardless of the operator's area. When used in accordance with these indications, the beneficial effects of morphine so overshadow its injurious effects, that the latter are not demonstrable.

Under many conditions I still believe in the teachings of Alonzo Clark when he advocated the judicious administration of opium in peritonitis, regardless of its cause. I believe that the patient demands mental, anatomical, and physiological rest. With surgical procedures I believe that rest can be promoted and carried out by hot applications, flaxseed poultices, or anything to maintain heat constantly, or, if you wish, cold applications. But there should be some application made to the abdominal surface. Of course the free administration of cathartics is indicated to a certain extent; but after they have accomplished their purpose, I believe the parts should be put at rest and maintained in that condition by the judicious use of opium; and I believe the time is coming when this will be considered the proper treatment in peritonitis, and that more suffering will be relieved and more lives saved than by the active treatment with cathartics which is generally prescribed to-day.

71 CENTRAL PARK WEST.

RETINOSCOPY.*

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For the past decade or more, particular attention has been directed to the refractive conditions and errors of the eyes; marked relief has been afforded by the wearing of properly fitted and adjusted glasses; a long train of symptoms, classed under the general term of asthenopia—eye strain—have been alleviated, in many instances entirely overcome. This asthenopia includes headaches, pain in the eyes and temples, blurring of vision, blinking and pinching of the eyelids, and among school children inability to see the blackboard work distinctly at the usual distances.

Without entering into the technicalities or intricacies of the subject, nor yet the bibliography, the purpose of the paper is to bring to the notice

of this meeting of the Medical Society of the State of New York some facts and plain rules and methods of retinoscopy.

Many sufferers from asthenopia apply for relief at first to the family physician. Eliminating other causes, if the doctor feels the lack of proper focusing power of the eyes to be the reason of the asthenopia, would it not be to the advantage of the family physician to have a simple and yet fairly certain test to be a guide in the advising of the patient? To many general practitioners the eye is a sealed book, outside of simple anatomy. It may be that by knowledge of the retinoscopic test, one not particularly difficult of acquiring, a new field will be opened that will be of the greatest help and advantage to both the family physician and his patients. In conversation with a brother oculist on this matter, he remarked that the general practitioner was not educated up to the point where he could use the retinoscope intelligently to mutual advantage of the doctor and patient. Is not this a direct stigma when it is a fact that so many self-styled "refracting opticians," "optical specialists," etc., do use retinoscopy and get results and draw deductions from them and give glasses?

The physician has knowledge of the anatomy and physiology of the eye; with patience and perseverance he may acquire enough skill and proficiency in the use of the retinoscopic mirror to enable him to diagnose the refractive condition present in the patient and direct him where he can be skillfully and scientifically treated.

The "refracting optician" has no knowledge of the physiological functions of the eye; he is not fitted by study or training to fit or prescribe glasses, and should not be allowed to do so. This matter might be gone into more at length, but let this suffice.

The retinoscope is a piece of plane mirrored glass, circular in shape, with an opening in the centre, and should not be more than $1\frac{1}{2}$ inches in diameter; this is mounted on a handle, preferably a long one, as this facilitates rotation. The light for illumination, preferably that from an argand gas burner, should be behind the patient. When examining the right eye, the examiner stands in front of the patient and uses his right eye—contrariwise with the left. The distance from the examined eye should be about one metre—40 inches. It must be mentioned here that the retinoscope reveals no pathological changes or conditions within the eye. Using the retina as a point of illumination, the mirror only shows by its rotation the refractive condition of the eye, whether this is normal or in error. This it does by showing up the illuminated retina through the pupil, which illumination in the usual cases is round or circular, in some of oval shape,

* Read before the Medical Society of the State of New York at its ninety-seventh annual meeting.

again in others showing a band of light, vertical in direction. This may also be off from the vertical to the one side or the other. This illumination I purpose to study without entering to any great length upon discussing the optical reasons for the illumination, nor yet the why and wherefore of the results shown by the mirror. I shall take facts and findings as they are and draw deductions therefrom. Both meridians, the horizontal and vertical, are to be studied.

Hyperopia.—The hyperopic eye is the one shorter in its anteroposterior diameter than that described as the normal—emmetropic. Incidentally it might be mentioned that, emmetropia being the normal, all other conditions are classed under the general head of ametropia, also that the emmetropic eye is extremely rare, seldom met with, most people being born with eyes slightly hyperopic, Nature evidently intending that the ciliary muscle, the muscle within the eye that by its action on the lens focuses rays of light properly on the retina, should not be inert. So seldom is the emmetropic eye seen that the slightly hyperopic eye has been considered as the normal by many. To have a standard of comparison, it is better, however, to have a positive starting point; hence we employ the emmetropic eye—the eye in which rays of light passing through the dioptric media focus on the retina without the use of any accommodation.

The hyperopic eye is the one in which entering rays of light focus behind the retina, also in which the emergent rays, and these are the rays to be studied, are divergent, if continued to infinity would never meet. So, using the mirror, the illuminated pupil is circular, on rotating the mirror, the illumination moves in the same direction with the rotation in both the vertical and horizontal meridians; these movements are rapid, their rapidity depending on the amount of the hyperopia, very low degrees causing a very rapid movement, the higher degrees of this error producing a slower movement. The beginner may have difficulty in illuminating the retina and in handling and rotating the mirror, and also in appreciating the showings of the mirror, but after repeated efforts one may become very skilled in the use of the test and its findings.

The illumination moving with the rotation of the mirror in the horizontal and also in the vertical, the case is one of hypermetropia.

Myopia is the reverse of hyperopia; the eye is longer than the normal; rays focus in front of the retina. Compared with hyperopia, myopia is rare in children in this country; in many instances being an acquired condition. In the myopic eye rays of light emerge in a convergent manner, focusing at some point in front of the eye, which point

measures the amount of myopia; now, using the mirror, it will be found that the movement of the illumination will be in a direction opposite to the rotation of the mirror; therefore when the illumination moves in a direction opposite to the tilting of the mirror in both meridians the case is one of myopia.

There remains another condition, astigmatism. This is a refractive error due to a faulty curvature of the cornea, so that when the term astigmatism is used it will be remembered to apply to the cornea. To be sure, astigmatism of the lens exists, but is rare, and need only be mentioned in this paper.

Astigmatism may exist alone, being either hyperopic or myopic, according to a lessened or increased curvature of the cornea; it may be hyperopic in one meridian and myopic in the other, causing what is termed mixed astigmatism; and may be associated with hyperopia or myopia, producing compound hyperopic or compound myopic astigmatism. Astigmatism is in one or the other meridians, hence hyperopic astigmatism is with the rule when at 90° and myopic when at 180° —the reverse of this is met with when the astigmatism is against the rule; again, the axis may be anywhere between the vertical and the horizontal, at an off axis.

Simple hyperopic astigmatism may be recognized as follows: If of not too high a degree the illumination will be clear and distinct, but instead of being round or circular, will assume the shape of a band of light. Now, in examining the two meridians, if it is found that the illumination moves with the mirror in one, while in the other there seems to be or there is no movement, the condition is one of simple hyperopic astigmatism.

Myopic astigmatism may be recognized in many cases by the band of light rather than the round circular illumination; if now the mirror is tilted in one meridian the movement of the illumination is against, while in the other there is or seems to be no movement, the case is one of myopic astigmatism. Mixed astigmatism may be recognized by the fact that the movement in one meridian is with the mirror, while in the other it is against it; that is, there is a condition where both hyperopic and myopic astigmatism exist, but in the opposite meridians. Simple astigmatism that is unassociated with hyperopia and myopia is common, but by far the greater number of cases of astigmatism are in combination with hyperopia or myopia, and then they constitute compound hyperopic or myopic astigmatism.

There remains one other condition to be mentioned, antimetropia—that is, where one eye is hyperopic or astigmatic with hyperopia, and the other myopic or astigmatic with myopia. Here the mirror will detect the condition, when, if the move-

ment is with, the condition will be hyperopia, and if against, myopia, testing each meridian separately and individually.

Just a word as to determining the amount of error of refraction, ametropia—by using test glasses. If the retinoscope mirror has determined the condition to be hyperopia, the movement of course being with the mirror, now by placing a $+1$ D spherical lens over the eye, if the movement still is present, we know that all the hyperopia is not neutralized; if now with a $+2$ D spherical, both in the vertical and the horizontal meridians, the movements cease, we may conclude that the condition is one of general hypermetropia of two dioptries. If, however, the movements in the vertical seem to cease, but in the horizontal still persist, and with a $+3$ D in the horizontal cease, while in the vertical they are reversed and move against the mirror, the case is one of compound hyperopic astigmatism, of two dioptries hyperopia and one dioptrie astigmatism. The same method of procedure would apply to all conditions, always remembering that a hyperopia, whether simple or astigmatic or in combination, causes a movement with the mirror at all times, and that a myopia, whether simple or astigmatic or the combination of the two, always produces a reversal of the movements, against the mirror, at all times. There are of course cases of spasm of the ciliary where a temporary myopia is produced; this is not very frequent, and is usually met with in children and young persons. It must be mentioned simply to be kept in mind as a condition occasionally met with; in relieving these cases a cycloplegic is necessary.

The relative frequency of the errors of refraction mentioned may be of interest. Most people are hyperopic, and of these most have astigmatism associated. Myopia at birth is rare, though in young children occasionally met with. It is, however, after the age of from ten to fourteen has been reached that many cases of myopia show themselves; here the condition is probably an acquired one, from excessive or improper use of the eyes. Astigmatism is fairly common with myopia.

In concluding this paper it must be mentioned that, while the retinoscope is an accurate test of the refractive conditions of the eye, with but slight exceptions, and while it is possible to measure the amount of error with the mirror and the plus and minus lenses, neutralizing lenses, it must never be the sole test for the prescribing of correcting lenses, but must be taken in combination with the other tests, with the ophthalmoscope, the ophthalmometer, the retinoscope, and the test lenses; if these four tests agree, glasses may be prescribed with a certainty of affording relief of asthenopia.

The purpose of the paper is to draw attention to the fact that in retinoscopy the physician who is not a specialist in ocular conditions has a test that with some patience and more practice he can acquire skill enough to determine the refractive error present in the case under examination. By so doing he can always save the patient the discomfort and in many instances the harmful results caused by the wearing of improperly and ignorantly fitted glasses.

Medicine may not be an exact science, nor does the worker in the medical sciences "know it all." There are some things that have come to us through work and study; of these, retinoscopy should be only in the hands of those qualified by study and knowledge of the anatomy and physiology of the eye; it should not be possible for any to ignorantly vaunt themselves as having the required knowledge and skill to determine and correct the errors of refractions of so delicately formed and adjusted an organ of the body as the eye. Many and glaring are the so common examples. The jeweller thinks himself competent, and so puts "Eyes tested here" on his show window. The "refracting optician" abounds; in most of our large cities his signs are sure to catch the eyes of passers by. The positiveness of his statements is alluring; his ignorance and lack of skill, however, are frequently laid bare in the office of the oculist.

The purpose of the paper is to present to the general practitioner a test for the refractive conditions of the eye, also to call attention to its abuse in the hands of those unskilled and ignorant, a class outside of the medical profession that seems to be on the increase.

162 EAST FORTY-SIXTH STREET.

ON THE GENERAL CHARACTERISTICS OF CORNEAL ASTIGMATISM.*

By H. DAVISON SARIL, A. M., M. D.,
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By reason of its predominating influence on the causation of asthenopia, kindred neuralgias, and various sequelæ, astigmatism merits early recognition and correction. The defect is largely congenital, and as a factor in its perpetuation, heredity plays an important rôle; it is to a considerable extent aggravated by persistent ocular effort, but may be modified by reverse conditions prevailing. The optical error under consideration, even in its lowest forms, is frequently the cause of eye strain; this assertion bears with particular emphasis on anisometropic cases. In these there may be a difference in the nature of the refraction of the eyes,

* Read at the November (1901) meeting of the Medical Association of the Greater City of New York.

or a non-coincidence of the astigmatic axes, or both; their detection and rectification constitute the *finesse* of practical optics. The amount of innocuous accommodation possible for the human eye to perform is a personal equation; the greater the optical error, as a rule, the less the physical inconvenience, but in direct ratio is to be found the diminution of visual acuity.

Astigmatism exists in all human eyes to a greater or lesser degree; usually, the latter represents an appreciable and clinically demonstrable amount and but rarely a theoretical quantity only; the term "physiological" as applied in this relation, is an arbitrary one; by some observers, 1 D. is considered its limit, while others place it as high as 1.5 D; both of these, however, appear to me to come within the scope of the pathological.

Examination of my record books shows that $+0.25$ D., axis 90° , is the cylindrical glass which I have most frequently prescribed for students, bookkeepers, and others whose vision was practically normal, but who complained of eye strain. These cases are cited to indicate that even this low degree of ametropia is not tolerated by many. The annoyance caused by an uncorrected, or reversely by a forcibly selfcorrected astigmatism depends upon the occupation of the individual, as well as the power of personal resistance. The burden will consequently bear heavily upon those engaged in scholastic or clerical work, and will be almost *nil* for the robust day laborer: it is evident, therefore, that while one may be afflicted with headache, conjunctivitis, neuralgia, blepharitis ciliaris, singly or collectively, another may remain immune.

The pupil is an important factor in regulating the configuration of the astigmatic pencil, and upon its size being favorable to the prevention of diffusion circles, depends much of the natural correction of ametropia in general.

Hyperopes and hyperopic astigmatics in whom the pupils are naturally large and the ciliary muscles correlative adynamic, are particularly prone to suffer from asthenopia, even when the optical error is but slight and the ocular exertion mild.¹

Astigmatism is a variable condition, manifesting itself thus more with regard to the quantity than the character of the refraction, however. This statement refers only in passing to the differences noticed during ophthalmometric measurements due to lid pressure on the cornea; although of a temporary character, they form nevertheless the first step in the demonstration. These evolutions toward rela-

tive permanency have been noted by me in eyes re-examined at intervals of several years by the same tests. The anomalies mentioned, sometimes progressive and again the reverse at others, not apparently following any rule, are observed with greatest frequency during childhood and adolescence. The feature of interest lies, not so much in the quantitative or qualitative change in a given meridian, as in the axial transition often seen.

In these latter cases a principal meridian to within any degree of a quadrant presents the same or a similar degree of astigmatism as its congener. The resulting condition is that, from being with the rule in certain cases, it becomes against the rule, and in others oblique. All varieties of optical vagaries are possible under these circumstances. The cause is to be attributed to general abuse of the eyes, including poor illumination, attempted self-correction of the optical error, reading in a recumbent position, or on the other hand, looking downward at an approximate angle of 75° when sitting up; in brief, all conditions which induce an extreme extrinsic muscular effort.

Partial closure of the lids is a voluntary means frequently utilized by the patient for attempted correction of astigmatism, and the desired result is obtained thereby mainly through thus forming a stenopæic opening; the first unfavorable symptom complained of, dependent thereupon, is referable to the prolonged palpebral pressure on the sensitive cornea, and a subsequent one is due to the altered corneal curve which it produces if too long continued; this may be prevented from becoming permanent if the exciting factor is eliminated at a sufficiently early stage, primarily through the correction of the dioptric error.

As a rule, relative stability of refraction belongs to early middle age; as presbyopia develops, and particularly after it has been well established, the tendency of astigmatism with the rule (direct) to become against the rule (perverse) is very marked. If in the latter state primarily, its amount is increased. These phenomena are due to progressing senile changes in the extrinsic muscular action. The advancement toward a final permanency is, according to my own views, owing to a synchronous sclerosis of the cornea.

This essay being limited, in conformity with the title, to a discussion of generalities, I have perforce described but briefly some of the salient features of regular ophthalmometric (primary) astigmatism, ignoring the traumatic and postoperative variety; this, if regular, belongs *ipso facto* to the forms described, and if irregular, cannot be considered here as its study would lead us to a dissociated subject.

¹ The writer has called attention to this circumstance in an essay entitled, On the Efficacy of Non-operative Treatment in Certain Varieties of Refractive Strabismus. *New York Medical Journal*, May 22, 1897.

In order, however, not to leave a void, a few words are in order relevant to the deformities of the posterior concave surface of the cornea, and the lens itself. The astigmatism produced by the former is generally against the rule, and, on account of the small differences in the indices of refraction of the media, is low in degree. During relative quiescence the principal meridians of the lens, of its anterior as well as those of the posterior surface, differ slightly in refraction. The former is most generally with the rule, and the latter against the rule. The slight dioptric variations produced thereby in the two structures mentioned, are of importance practically, only in determining the total subjective amount of astigmatism, as they exist most frequently in combination with an appreciable degree of anterior corneal malcurvature. They explain in the main the differences between ophthalmometric findings and glasses accepted.

The reference made to the alteration in the lenticular curvature *per se*, must not be confounded with the adaptive effort of selective accommodation producing a similar result; this latter is one of the autogenous ways in which an astigmatic error may be partly or totally corrected.

The subjective symptoms of astigmatism are those of asthenopia in general, which comprise principally neuralgic and cephalalgic elements. They are too well known to require any elaboration on my part.

The detection of astigmatism is not difficult; the incorrect reading of certain characters of the Snellen types due to their apparent distortion, as well as the patient's statement that the radii of the stellate figure do not appear uniform, are fairly pathognomonic.

As to the instruments of precision required for the objective tests, the time-honored ophthalmoscope and retinoscope may always be used to advantage; the latter is particularly useful in rapidly determining the character, quantity, and axis of a simple, compound, or mixed astigmatism. The Javal ophthalmometer is of prime value clinically in the diagnosis of the corneal error, establishing the identity of the principal meridians at variance with marked accuracy, although it is less precise in indicating the exact amount of astigmatism present. The reasons are to be inferred from the tenets of former paragraphs.² A small degree of differing corneal refraction will occasion as much strain as a considerably higher accommodative spherical error, *i. e.*, hyperopia; when coexisting; the correction of the former should therefore be the first

step. Should the vision, however, be not sufficiently raised by this alone, a spherical lens in addition may become necessary.

My personal preference and practice is to regard astigmatism symptomatically and prescribe glasses accordingly. If the error is a cause of marked indistinctness of vision, or is productive of regularly attendant asthenopia, the lenses should be worn constantly. Should there be inconvenience principally when studying, reading, or using the eyes for near work with approximately normal vision, glasses should be used only at such times. For intermediate cases careful judgment is required, and this should dictate the proper course to pursue.

As to the strength of the lens to be prescribed, that which appeals most strongly to me as a cardinal rule is to consult the patient's ocular comfort.

Whenever a hyperope refers to the large size and distinctness of the characters read, and a myope describes them as being small but distinctly clear, there is a positive indication in both cases that the border line of under correction is being overstepped. A full correction always hovers on the side of danger, with the result that the intended improvement proves as fatiguing as did the error uncorrected.

The most desirable effect, therefore, is obtained by considerably under correcting the myopic forms, and avoiding the full correction of the manifest error in the hyperopic variety. The future is sufficiently long to permit of strengthening a lens should it become necessary subsequently to do so.

2020 BROADWAY.

Therapeutical Notes.

Aqueous Solutions of Menthol.—M. de Cresanignes (*Nouveaux remèdes*, January 8th; *American Druggist*, March 9th) says that while very soluble in alcohol, ether, chloroform, oils, and fats, menthol does not dissolve in water, or even in water mixed with a considerable amount of alcohol. In order to make a permanent solution only a very small amount of water must be added to the alcoholic solution, and a mixture of this kind could not be taken internally without danger.

The author does not know that there has ever been published a procedure for preparing aqueous solutions of menthol. This may be the reason why many physicians do not ordinarily employ this substance, and such a neglect he considers deplorable, for menthol is endowed with interesting properties, being, for example, a most efficient antiemetic.

M. Chauffard has communicated the following fact to the author: Having administered to a patient a potion of ipecac aromatized with syrup of mint, he found that the remedy remained without effect. Hence menthol possesses a powerful ant-

² In a monograph entitled *Sur l'Importance des Mensurages Ophthalmométriques* (*Recueil d'ophtalmologie*. Paris, February, 1896) the writer has discussed this subject at some length.

emetic effect, which is far more efficient than that of Rivière's potion or ice.

M. de Cresantignes has been able to obtain very good aqueous solutions of menthol by the use of the tincture of quillaja (soap bark), a tincture very frequently employed in the manufacture of emulsions. The following is one formula for such a solution:

[illegible]

M. Dissolve the menthol in the tincture; add the glycerin and then the water in small quantities, shaking after each addition. Sig.: Dose, one tablespoonful.

In this is obtained an emulsion-like solution, of a light amber color, which keeps well even without shaking. The glycerin is not indispensable, but it appears to add to the action of the tincture.

The amount of menthol which enters into the composition of this solution may seem small. The author advises, however, that it be not increased. It is better to give several spoonfuls of the medicine, for in higher concentrations menthol water produces a sense of burning.

The following preparation used externally is of value in frontal headache in patients with or without fever :

℞ Menthol...0.15 to 0.30 grammes (225 to 450 grains);
Tincture of quillaja...10.0 cub. cents. (150 minims);
Distilled water, enough to make } 155 cub. cents. (4¾ ounces).

M. S. For external use.

This preparation is used by soaking a compress folded in four, which is applied to the forehead. At the end of from three to five minutes a pricking sensation is felt on the forehead, which would be painful if it were prolonged. The application is then replaced by one of pure water, and then again the menthol compress is applied, and so on.

For use as a mouth wash, or as a gargle, the author recommends the following solution :

℞ Menthol...0.10 to 0.20 grammes (150 to 300 grains);
Tincture of quillaja...20.0 cub. cents. (300 minims);
Distilled water, or saturated solution of boric acid,
enough to make...1,000 cub. cents. (31¼ ounces).

M. S. Mouthwash.

The Treatment of Puerperal Convulsions.—Dr. G. Rothwell Adams (*Intercolonial Medical Journal of Australasia*, December 20th) says that in choosing the measures to be adopted when convulsions have already set in, three principles should ever guide our practice: (1) Aid elimination, and if possible, dilute the toxine. (2) Control the convulsions. (3) Empty the uterus.

To accomplish the first indication, Jardine, of Glasgow, has advocated the instillation of saline solution, either by high enemata, intercellular or intravenous transfusion. The effect is to dilute the toxine and aid its elimination through the kidneys and skin. In many instances it is of undoubted value.

In order to control the convulsions, one may find some guide by noting the condition of the pulse.

In cases where the tension is extreme, nothing in the author's experience acts so rapidly as venesection, but it must be admitted that its effects are transient, and can only be looked upon as affording time for other and more lasting means. Of these, *veratrum viride* enjoys a high reputation in American obstetrics, while chloral, nitroglycerin, chloroform inhalation, and subcutaneous injection of morphine are extolled by British and Continental authorities. Pilocarpine has been condemned by most who have had extended experience of it, for although an undoubted cardiac depressant, its effects on the bronchial secretion lead to pulmonary œdema, often with disastrous results. To control the frequency of the convulsions, nothing perhaps affords more satisfaction than the administration of chloroform, but it has the disadvantage of increasing the tendency to œdema of the lungs. Here, the administration of morphine has proved of signal benefit, and, although, on theoretical grounds, it might be supposed to interfere with the all-important elimination, practically, this is not the case. When given, it should be in good doses $\frac{1}{2}$ grain hypodermically, and repeated at suitable intervals until the convulsions are brought under control. A contraindication may be where there is evidence of chronic nephritis, commonly seen in multiparæ.

The question of emptying of the uterus when eclampsia has set in has given rise to much discussion, and the problem is not yet settled on a satisfactory basis. If labor has set in, the practitioner's course is fairly well marked out for him, the indications being to control the fits, and facilitate delivery in every way compatible with as little injury to the parturient canal as possible. For it cannot be too strongly pointed out that, owing in all probability to their defective eliminating capacity, these patients are particularly liable to sepsis.

But if labor has not set in, should the uterus be emptied, or should our efforts be confined to the endeavor to control the fits, and aid elimination? At the present time, obstetric opinion is divided on the question. One school, headed by illustrious names such as G. Herman (*Lancet*, April, 1902), advocates the latter policy, asserting that all efforts at dilatation of the cervix tend to increase the fits; that *accouchement forcé* is unjustifiable, and that nature will solve the question by initiating labor. The advocates of this school can undoubtedly adduce a formidable array of successful cases in evidence to support their argument. And it may be admitted that in a large number of cases recovery will take place under almost any plan of treatment, provided the uterus does empty itself.

The author's experience is in favor of getting the uterus evacuated as soon as possible in such cases. And with our present knowledge of the causes of disaster following the so called *accouchement forcé*, as practised in former times, it does not appear asking too much that the relief which undoubtedly follows evacuation of the uterus should not be denied to such desperate cases. If these efforts are made under anæsthesia, he does not believe the fits are aggravated. As a matter of fact, he does not recollect a patient dying where the uterus was rapidly emptied, but he has, unfortunately, seen many die before nature effected delivery.

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THE SERUM TREATMENT OF TYPHOID FEVER.

At first glance typhoid fever would seem to be the disease *par excellence* in which serum treatment would be efficacious. The bacillus that is the cause of the disease is known, and its various characteristics and properties have been thoroughly studied. The clinical course of the disease itself is favorable; early diagnosis is relatively easy, the onset is gradual, and an overwhelmingly virulent infection early in the disease, such as occurs in diphtheria, is rare. No wonder, then, that, encouraged by the marked and undoubted success of serum treatment in diphtheria, laboratory workers and clinicians have hopefully prosecuted their search for a serum which would cut short typhoid fever, or at least mitigate its severity. The latest contribution to the subject comes in the form of an announcement in the daily press that Dr. A. Macfadyen, of the Jenner Institute of Preventive Medicine, of England, has evolved an efficient prophylactic and curative treatment for typhoid fever. He finds that by crushing typhoid bacilli in liquid air the intracellular juices can be obtained apart from the living organism, and that these juices are highly toxic, and when they are injected into a susceptible animal, its blood becomes highly antitoxic and bactericidal. The rationale of the method is that the intense cold of liquid air freezes the bacteria, which become brittle and, notwithstanding their inconceivable minuteness, are completely broken up by trituration. Dr. Macfadyen's article has not yet been published, but it is difficult to see how he has accomplished more than Buchner, who attained the same end by triturating typhoid bacilli with diatomaceous earth.

The difficulties in connection with the production of a serum for typhoid fever are threefold: 1. Typhoid toxine with which to inject the susceptible serum-producing animal is obtained with relatively great difficulty, for the reason that it is almost insoluble in water and is confined within the bodies of the bacilli. 2. Typhoid fever is a septicæmia rather than a toxæmia; its symptoms are caused by the presence in the body of living typhoid bacilli and their toxins. Consequently what is needed is a bacteriolytic rather than an antitoxic serum. 3. When such a bacteriolytic serum has been produced, there remains the fact that it is powerless to kill the typhoid bacilli, except in the presence of a third body—the so called complementary body of Ehrlich. Now, nothing whatever is known as to the nature of these complementary bodies or as to how they are produced. So that even if, by the method of Macfadyen or that of Buchner, such a bacteriolytic serum can be produced, we are brought abruptly to a standstill.

But there is hope in two directions; either the requisite knowledge of these bodies will be obtained or (may the lightning be averted) Ehrlich's famous "side chain theory" may fall to the ground and be replaced by some other more susceptible of proof and (let us hope) simpler. It is not for us to speak for or against this theory, the universal acceptance of which by the scientific world is remarkable, to say the least. It has been so accepted because it affords the only way out of the Cimmerian darkness which envelopes the subject. It is called a "working theory"—one to be tried and tested and by the aid of which increased knowledge is to be gained. Care should be taken lest it change from servant to master and bar the way to better things, simply because the hoped for results would not agree with its postulates.

MOSQUITOES AND THE HOusetop TANKS.

We may reasonably look forward to two months or more of freedom from mosquitoes in New York, but it is none too early to begin in earnest the work of ridding the city of those insects, prejudicial as they are to the general health of the inhabitants by the irritation and loss of sleep to which they give rise, and direct bearers as many of them are of the malarial germ. It is satisfactory, therefore,

to note a number of indications of a systematic campaign for their extermination, even signs of a coming rivalry between New Jersey and Long Island as to which of them shall lead the other in affording the New York business man a dwelling place free from mosquitoes and consequently free from malaria. It is to be hoped from all this that we shall soon see a decided abatement of the nuisance in so far as it can be accomplished by doing away with ditches, puddles, and artificial receptacles that give lodgment to rain water. It is to be feared, however, that attention will practically be restricted to surface accumulations of water, and that the housetop tanks will be neglected.

Some months ago we asked the commissioner of water supply, gas, and electricity for information concerning these tanks. The commissioner courteously informed us that there were about 50,000 tanks on roofs and on top floors of houses, with a capacity of 50,000,000 gallons. "The greater number of these tanks," says the commissioner, "are used in connection with fire service, but generally combine said service with the regular water supply to the upper stories." Virtually, we may class the tanks on top stories with roof tanks. In view of the uses to which the water stored in them is put, it is obvious that that water must not be treated with kerosene, and it is doubtful if any other measure than screening the tanks with close netting, preferably of wire, would prove practicable and efficient in excluding the larvæ. That, we believe, should be insisted upon.

There is, to be sure, a very widespread impression to the effect that the mosquito does not "fly high." Doubtless it does not under ordinary circumstances, but when the surface breeding places have been done away with, the mosquito will find the circumstances extraordinary. What will it do? Writing of another feature of its circumstances, a very competent sanitary engineer, Dr. George A. Soper (*Medical News*, March 7th), says: "The sordid mosquito is seldom observed in New York in the daytime, but at twilight it emerges from its hiding place. If an entrance to a dwelling cannot immediately be effected, it flies upward, searching diligently along the sides of the houses for an opening. I have observed *Culex pungens* in considerable numbers, night after night, beating upon

the screens of windows at a height of over a hundred feet from the ground. Failing to get in, they would disappear over the top of the house." We hold it reasonable to suppose that if mosquitoes will fly to the height of over a hundred feet for the sake of a meal, they will, in case of need, do the same thing in order to deposit their eggs; we believe it important, therefore, that the housetop tanks should be screened.

THE MEDICAL DEPARTMENTS OF THE ARMY AND NAVY IN THE FIFTY-SEVENTH CONGRESS.

The session of Congress which has just closed has shown itself distinctly favorable to the medical services of the army and navy. The brilliant work in preventive medicine performed by the medical department of the army in discovering the method of transmission of yellow fever and stamping out that disease in Cuba was recognized in the closing days of the session by the passage of the bill granting a special pension of \$125 a month to the widow of the lamented Major Walter Reed, a surgeon in the army. Congress also passed a bill promoting to the grade of assistant surgeon general with the rank of colonel Major William C. Gorgas, a surgeon in the army, who, as sanitary officer of Havana, made practical application on a large scale of the discovery of the Yellow Fever Commission and was thus the administrative agent in the carrying out of this great work.

This is the first recognition by the Secretary of War in his report and by Congress, since the civil war, of brilliant work performed by medical officers of the army in their own department and profession, although it has on several occasions happened that surgeons have been promoted to the grade of general officers for work not connected with their profession. Examples in point are the cases of General Crawford, General Myer, General Ainsworth, and General Wood.

The Secretary of War in his report said, in part, as follows: "Especial credit is due also to the medical department of the army, and particularly to Major Walter Reed and Major William C. Gorgas, for their extraordinary service in ridding the island of yellow fever, described in my last report; and to Dr. Jefferson R. Kean and Dr. James Carroll

for their share in that work. The brilliant character of this scientific achievement, its inestimable value to mankind, the saving of thousands of lives, and the deliverance of the Atlantic seacoast from constant apprehension, demand special recognition from the government of the United States."

Congress also passed an act incorporating the Association of Military Surgeons, thus giving it a national and official character, with an advisory board composed of the Secretaries of War, of the Navy, and of the Treasury, together with the president of the association.

The hospital corps of the army has also been reorganized, and the obsolete and inappropriate titles of hospital steward and acting hospital steward have been abolished. The hospital corps, as now organized, is constituted of sergeants, first class; sergeants; corporals; privates, first class; and privates.

The medical department of the navy also received a substantial and much needed increase to its personnel by the addition of five medical inspectors, twenty-five surgeons with the rank of lieutenant commander, and one hundred and twenty additional passed assistant and assistant surgeons with the rank respectively of lieutenant and lieutenant junior, thus nearly doubling the commissioned force of the medical corps. It is provided that this increase shall extend over several years by the specification that not more than 25 per cent. in the higher grades and not more than twenty-five assistant surgeons shall be appointed in one year.

An appropriation of \$125,000 for the construction of a naval hospital in Washington was also made, but a similar bill for the purchase of a site for a general hospital for the army failed. An item for the appropriation of \$100,000 for new buildings at the Army Sanatorium for Tuberculosis at Ford Bayard, New Mexico, in order that provision might be made to extend the benefits of this valuable institution to officers and enlisted men of the navy, also failed. It is hoped, however, that the next Congress will recognize the justice and wisdom of an appropriation for this purpose. The bill for the organization of a corps of trained female nurses for the navy, corresponding to the army nurse corps, also failed to pass.

It is of interest to the medical profession to

note that among the numerous retirements with the increased grade of brigadier general for colonels who served during the civil war, although almost every other staff corps has received one or more of these coveted promotions, the medical corps, which is by no means lacking in officers of proved ability and devotion to duty, has so far been overlooked. This discrimination against the medical department becomes all the more noticeable when it is remembered that in point of numbers the medical corps is far larger than any other staff corps.

THE GERMAN HOSPITAL OF THE CITY OF PHILADELPHIA.

The fifty-third annual report, for the year 1902, makes us aware that increased expenses and lower rates of interest on investments rendered it necessary for the trustees to exert themselves more than at any other time in the history of the institution. "Nevertheless," they say, "we have held our own, and the German Hospital has lost none of its prestige and stands to-day a leader in all its departments." We congratulate the trustees on this success under unusual difficulties and predict for them still greater triumphs in years to come.

THE HEALTH OF CHICAGO.

It is to be inferred from the health commissioner's *Bulletin* for the week ending March 14th that pollution of the drinking water is still having an unfavorable effect on the health of the city. The death rate for the week was nearly 10 per cent. higher than for the corresponding week in 1902, and this increase was chiefly attributable to typhoid fever and acute intestinal diseases, though influenza, which was virtually epidemic, carried off a great many chronic invalids and aged persons.

INVOLUNTARY GYMNASTICS ON THE ELEVATED RAILWAY.

A generation or two ago many of the victims of dyspepsia sought confidently for alleviation of their ailment in the process of jolting themselves rhythmically up and down in a mechanical chair contrived for the purpose. It is probable that the benefit derived from this treatment was not great, though it possessed the advantage that the sufferer was obliged to use his arms actively in working the mechanism. But tame indeed were the thumps of that old chair in comparison with the quakes that the passenger has now to encounter on the

Manhattan Elevated Railway. Even those who are fortunate enough to be seated are hurled against their neighbors (unless they are on one of the few transverse seats) and have to endure the impact of their neighbors against themselves whenever the train starts or stops—such is the impetuosity with which it disports itself. As to those who have no other support than is afforded by the straps generously provided by the company, they are twisted and torn almost uninterruptedly. And all alike, when they reach a station at which they wish to emerge, have to battle with a stuttering stop. Even after the train has apparently subsided into full quiescence, it often gives a final angry plunge ahead, and woe to him or her who has not hold of a strap! We have not heard that any old dyspeptic has found relief by reason of these buffetings, and we are wondering what the effect might possibly be on the subject of an ill supported hernia, a young and vascular abdominal band of fibrinous exudate, or an extrauterine gestation sac.

THE ABUSE OF LAVAGE OF THE STOMACH.

New therapeutic measures that in the least answer the purposes they are alleged to serve are too apt to be carried to extremes, and it is well when moderation in their employment is advised. This may be said, we think, of lavage of the stomach. It is not always the innocent procedure that it passes for, as it occasionally gives rise to collapse. In our opinion, it should be resorted to only on definite indications and employed in moderation.

RELAPSES OF TYPHOID FEVER AND ABSENCE OF THE AGGLUTINATION REACTION.

If certain observations by Roque and Bancel (*Lyon médical*, February 15th) are confirmed, it may be confidently assumed that in a large proportion of the cases of typhoid fever in which the clinical diagnosis is certain, although the confirmation of the Widal test is lacking, a relapse may be expected. At a recent meeting of the Medical Society of the Lyons Hospitals they reported that the reaction had been absent in nineteen out of thirty-five relapsing cases that had come under their observation.

CODEINE IN INSANITY.

In a recent Paris thesis by Jules Clause, a brief summary of which is to be found in the *Zentralblatt für innere Medizin* for January 3d, the author sets forth the great advantages of the employment of codeine as a calmative in cases of melancholia and in those of any psychical disturbance characterized by derangement of the general sensibility, by anxiety,

and by moral suffering. Its effect, he says, is soon manifested in the improved facial expression and the subsidence of the feelings of moral anguish. For melancholiacs it is the hypnotic *par excellence*, since it overcomes the causes of their sleeplessness. Moreover, it is devoid of the unpleasant after-effects of opium and morphine. It does not diminish the secretions or cause constipation or the impairment of appetite or the unpleasant sensations on waking that opium and morphine are prone to give rise to. The dose, however, must be scrupulously regulated to suit the case, and the drug is positively contraindicated in cases of intense excitement and in maniacal conditions.

THE TREATMENT OF ACUTE SEPTICÆMIA BY INTRAVENOUS FORMALDEHYDE INJECTIONS.

As we go to press, too late for its insertion in the department of Letters to the Editor, we have received from Dr. Charles Clifford Barrows the following important communication:

"Since the report of the treatment of a case of acute septicæmia by the intravenous injections of formaldehyde in solution was made by me, in January, before the New York Obstetrical Society, the plan of treatment there suggested has been very extensively discussed, both in the lay and medical journals, and many conclusions have been reached by many men, *pro* and *con*. Some of these conclusions have been based upon experiments carried on by competent bacteriologists; many others, however, have had their origin in certain pseudoscientific investigations, of but little value. I have refrained purposely from discussing the matter for several reasons: First, because I am extremely anxious that the uncalled-for and undesired publicity which has been given my name in connection with the matter, as seen in the daily prints, should subside, and the whole question should be left to those whose business it is to discuss such matters, that is, the medical profession. Another reason why I have waited is because I wished to be able to offer to the profession such clinical evidences as would enable them to form an opinion of their own, as to the merits of the suggestion for treatment made by me. Loath as I am as yet to say anything in regard to the matter, I feel it my duty to correct two errors which have crept into a paper printed in your *Journal* of March 21st, under the heading 'The Intravenous Injection of Formaldehyde,' by William L. Baner, M. D. I am quite sure that my friend Dr. Baner would not willingly misquote me, but, as before stated, there are two errors in his paper which ought not to be permitted to stand. In giving a brief résumé of my paper, one is led to believe that the patient's high temperature immediately followed the delivery of a dead and macerated fetus, the woman at the time having a foetid and bloody vaginal discharge, and that then the intravenous injection was soon made. It will be seen, however, by referring to my article, that the woman's highest point of temperature was not reached until six days after this time, and that all of the local symptoms

had entirely disappeared, which was my basis for believing that the woman had at that time a general blood infection, and not a sapræmia, as Dr. Baner suggests might have existed. In another place in the article appears the following quotation: 'For instance, in the Bellevue case itself the blood cultures, if I am correctly informed, did not indicate a severe bacteraemia, as a majority of the culture tubes did not show any growth.'

"This is absolutely incorrect, if the case was reported properly to me by those who undertook the bacteriological work. The report made to me was that all the tubes contained growths in great number and that the case was undoubtedly one of profound general septic infection.

"When time has given me an opportunity to accumulate such clinical evidences as will be of value in the discussion of this question, I shall offer them to the profession through the *New York Medical Journal*."

News Items

Society Meetings for the Coming Week:

TUESDAY, *March 31st*.—Rome, N. Y., Medical Society; Boston Society of Medical Sciences (private).

WEDNESDAY, *April 1st*.—New York Academy of Medicine (Section in Public Health); Society of Alumni of Bellevue Hospital; Harlem Medical Association of the City of New York; New York Genitourinary Society; Medical Microscopical Society of Brooklyn; Medical Society of the County of Richmond, N. Y. (New Brighton); Penobscot, Me., County Medical Society (Bangor); Bridgeport, Conn., Medical Association.

THURSDAY, *April 2d*.—New York Academy of Medicine; Brooklyn Surgical Society; Society of Physicians of the Village of Canandaigua, N. Y.; Boston Medico-psychological Association; Obstetrical Society of Philadelphia; United States Naval Medical Society (Washington); Medical Society of City Hospital Alumni, St. Louis; Atlanta Society of Medicine; Obstetrical Society of Philadelphia.

FRIDAY, *April 3d*.—Practitioners' Society of New York (private); Clinical Society of the New York Post-graduate Medical School and Hospital; Baltimore Clinical Society; Manhattan Clinical Society.

SATURDAY, *April 4th*.—Manhattan Medical and Surgical Society, New York (private); Miller's River, Mass., Medical Society.

Dr. Lorenz to Return to the United States.—

It is reported in the daily press that Dr. Lorenz expects to return to the United States on a visit at some time during the month of April.

Kansas City School Merger.—According to the newspapers of Kansas City, Mo., a consolidation of the Kansas City Medical College and the University Medical College will be effected in a short time, unless some unforeseen and insurmountable difficulties are encountered in arranging the details of the plan.

The Tri-State Medical Society of Iowa, Illinois and Missouri will hold its eleventh annual meeting at Hannibal, Mo., on April 2nd and 3rd. The programme includes a large number of valuable papers, and it is confidently expected that the meeting will prove interesting and profitable to those who attend.

Robert Safford Newton, M.D.—We regret to have to announce the death, at the comparatively early age of forty-six, of Dr. Newton, who was a neurologist of much promise and an accomplished and genial gentleman. His death, which occurred on March 25th, is said to have been due to cerebrospinal meningitis.

Dr. Koch a Member of the French Academy.—

Dr. Koch has been elected a foreign member of the French Academy of Sciences to replace the late Professor Virchow. Dr. Koch received twenty-eight votes, Professor Agassiz, of Harvard, eighteen, Professor S. P. Langley, of the Smithsonian Institution, eleven, and Professor Van der Vaals, of Amsterdam, one vote.

Changes in the Health Department.—

Mr. Caspar Golderman, secretary of the health department of the city of New York, and Dr. Frederick H. Dillingham, assistant sanitary superintendent, have resigned from the department. Eugene W. Scheffer, at present acting secretary, has been appointed to succeed Mr. Golderman, and Dr. Walter Benschel, a medical inspector in the department, has been appointed assistant sanitary superintendent to succeed Dr. Dillingham.

University Extension in Germany.—

Plans have been adopted by the German Department of Education for carrying on a kind of university extension work, in the way of post-graduate medical lectures in all the large towns. The course of post-graduate lectures will be brief, will be delivered by the leaders of the profession, and the country practitioners will be enabled to attend these lectures without the payment of any fees.

Sued for Reporting Smallpox.—

Suit has been begun in Saginaw, Mich., against Dr. Robert B. Bennett, of Marion, for \$5,000 damages on the charge that the doctor "falsely and wickedly gave it out" that the members of the plaintiff's family were afflicted with smallpox, and that as a result of this statement and of a report made by the defendant to the board of health the plaintiff was quarantined for a period of seventy-one days.

A Tuberculosis Serum.—

According to a cable despatch from Vienna to the *New York Sun*, Professor Behring has announced the discovery of a serum by the use of which cattle can be made immune from tuberculosis. He also stated that the children treated with the serum would be immune from tuberculosis for life, and that tuberculosis in young children could be cured by the use of the serum, though it is not effective in adults.

The Registration of Nurses.—

At a hearing before the Assembly Committee on Public Health in Albany, on March 18th, the suggestion was offered that the bill be amended so as to provide for an examining board composed of two physicians and three nurses. Dr. Frank Van Fleet opposed the proposed change on the ground that there

is no necessity for having physicians members of the examining board, which should be composed entirely of expert nurses.

Graduate Nurses from Distinguished Families.

—Among the class of seventeen graduates who received their diplomas from Pennsylvania Hospital Training School for Nurses, in Philadelphia, on March 11th, were Miss Anna M. W. Pennypacker, a daughter of the governor of the State of Pennsylvania; Miss Ethel Lucas, daughter of the late John Lucas, a man prominent in commercial life in Philadelphia; and Miss Biggar, a daughter of Dr. Biggar, of Cleveland.

The Florida Medical Association will hold its annual meeting at St. Augustine on April 8th, 9th and 10th. One of the features of the meeting will be an address on Thursday, April 9th, at 10 o'clock by Dr. J. M. McCormack on The Reorganization of the Profession. Physicians attending the meeting should secure association certificates when they purchase tickets to St. Augustine. Provided at least fifty are in attendance, a reduced fare will be granted for return tickets.

A Banquet to Four St. Louis Veteran Physicians.—Early in April a banquet is to be given by the physicians of St. Louis to four of the oldest physicians in that city, Dr. Simon Pollack, Dr. William Johnston, Dr. William McPheeters and Dr. J. B. Johnson, all of whom have been engaged in active practice for more than sixty years. Dr. Pollack is the oldest physician in the city of St. Louis, being eighty-nine years of age. Dr. Johnson, the youngest of the four, is eighty-five years old.

A Sixteen Thousand Dollar Fee.—Suit has been entered against Dr. J. J. Lawrence, of New York, formerly of St. Louis, by Dr. J. P. Morrell, of St. Louis, for \$16,000 for medical attendance upon Frank Lawrence, son of Dr. Lawrence, who was president of Rio Chemical Co., and who died recently in New York City, at the age of forty-two. In the course of the trial, Dr. Walter Fleming, who had practised thirty-eight years in New York City, testified that he was in the habit of charging \$10 an hour for his services when he went out of the city.

A City Tuberculosis Camp.—The health commissioner of the city of New York has communicated to the mayor a letter urging the establishment of a sanitarium for the treatment of tuberculosis on a tract of twenty acres located in Orange County, the use of which has been offered to the city free of rent for two years. The commissioner asks for an appropriation of \$35,000, which he says will be sufficient to establish, and operate a camp for sixty patients from May 1st to December 31st next. He proposes to erect merely temporary structures in the form of tents or canvas-covered houses.

Legislation in Florida.—A bill is now being prepared by the committee on legislation of the Florida Medical Association providing for a general medical examining board and an earnest effort will be made to secure the passage of the measure. Cir-

cular letters have been sent to all the members of the association throughout the State requesting their active co-operation and support in the effort to substitute a central State board of examiners for the district boards provided for under the present system, which has proved to be unsatisfactory in its operation. A similar measure was defeated at the last session of the Florida Legislature largely through the efforts of an irregular so called medical institute.

The Pan-American Medical Congress.—The fourth Pan-American Medical Congress, which was to have been held the second week in August next, at Buenos Ayres, Argentine Republic, will not be held in that country, owing to some local complications. The International Executive Commission, composed of Dr. Charles A. L. Reed, of Cincinnati; Dr. Albert Van der Veer, Albany; Dr. H. L. E. Johnson, of Washington, D. C., and Dr. Ramon Guiteras, of New York City, will, under the constitution, have to decide the place of meeting and make arrangements for the congress. They have decided it shall be held in Toronto, Canada, in September next. The previous congresses were held in Washington, D. C.; Mexico City, Mexico, and Havana, Cuba.

The Conditions at Cornell.—Dr. George A. Soper, who has been studying the sanitary situation at Ithaca, has recently returned to this city. In a newspaper interview he is quoted as saying that so far as typhoid fever is concerned the outlook is greatly improved. In order to avoid any further outbreaks he says that careful and continuous work must be done. The new water supply will greatly improve matters as soon as it is available. Dr. Soper says, however, that much hard and conscientious work will be required to put the town into ideal sanitary condition. A bill has been introduced into the senate of the legislature of the State of New York, providing for the taking over of the plants of the Ithaca Light and Power Company, and the Ithaca Water Supply Company so far as they concern the water supply by city water commission of six persons, appointed by the mayor. If a price cannot be agreed upon the city is to take the plants by right of eminent domain.

Is This a New Swindle.—What appears to be a wholly new form of swindling physicians has recently come to light in this city, the scheme being operated in the following manner: A gentlemanly fellow presents himself to the physician with a card bearing his name and the name of some person against whom the physician holds a judgment with the amount of the judgment as taken from the records of the county clerk's office. The applicant states that he has learned that the defendant has recently come into some money and that he is in a position to secure the collection of the judgment with interest. He wants 6 per cent. of the amount collected as payment for his services, and incidentally wants \$1.12 or \$2.12 to pay certain clerical fees required in the case. In one case the investigation proved that the address and telephone number given on the card were both fictitious.

Croup in Brooklyn.—A large number of cases of croup has developed in Brooklyn, some 800 cases having been reported during a period when under normal conditions only 25 cases would ordinarily be reported. No special reason is assigned for the sudden increase in the number of cases.

A Prize of Twelve Hundred Dollars is offered by the trustees of the Samuel D. Gross prize fund for the best original essay, not exceeding one hundred and fifty printed pages, octavo, in length, illustrative of some subject in surgical pathology or surgical practice, founded upon original investigations, submitted by an American citizen. The essays, which must be written by a single author in the English language, should be sent to the Trustees of the Samuel D. Gross Prize of the Philadelphia Academy of Surgery, care of the College of Physicians, 219 South Thirteenth Street, Philadelphia, on or before January 1, 1905. Each essay must be distinguished by a motto, and accompanied by a sealed envelope bearing the same motto, and containing the name and address of the writer. No envelope will be opened except that which accompanies the successful essay. The committee will return the unsuccessful essays if reclaimed by their respective writers, or their agents, within one year.

The International Medical Congress.—Dr. John H. Huddleston, of this city, secretary of the American Committee of the Fourteenth International Medical Congress, requests us to publish the fact that the French railroads have made their rate reductions for the members of the International Medical Congress depend on a special certificate, and on the use of the same route for going and returning. Any member of the congress to whom this is of interest should therefore write immediately to the secretary general at Madrid, stating at what port he expects to land and what route he will take. The secretary general will send to him at the port named under the address *poste restante* the necessary certificate. Arrangements have been perfected for train service from Chicago to New York. The western members of the Madrid party are invited to meet Dr. C. W. Fassett at the Wabash Station, Chicago, Thursday morning, April 9th, at 10 o'clock. The train departs at 11 a. m., arriving in New York at 3:30 p. m., April 10th. It is hoped that a sufficient number will be obtained to secure reduced railway rates. Sleeper reservations should be made at once. The New York headquarters will be at the Grand Union Hotel, Forty-second Street and Fourth Avenue.

The New Orleans Meeting of the American Medical Association will take place on May 5th to 8th. The Southern Railway announces that it will sell tickets for the round trip limited to ten days for one fare. From the trunk line territory the rates will be based on regular fares to Washington or trunk line Western terminus, added to one first class fare limited therefrom. The tickets will be placed on sale on May 1st, 2nd and 3rd, and will be good for continuous passage with a final limit of ten days from date of sale. By deposit of ticket by original purchaser and payment of fifty cents,

to the joint agent, at New Orleans, not later than May 12th, an extension of the final limit may be obtained to enable the purchaser to reach original starting point not later than May 30th, 1903. The Southern Railway operates three trains daily from New York, carrying Pullman sleeping, dining and observation cars. At the request of members of the American Medical Association, in the east, special service has been arranged to leave New York at 4.25 p. m., on Saturday, May 2nd, via Washington, Atlanta and Montgomery. Those desiring Pullman reservation should send in their names to the eastern passenger agent of the Southern Railway, at 1195 Broadway, as soon as possible. The time from New York to New Orleans is thirty-nine hours. A special train has also been provided on the Norfolk & Western Railway going over the Allegheny Mountains via Chattanooga, particulars of which can be obtained from William Mange, 290 Broadway.

The Abolition of the Coroners.—A joint note signed by Dr. Stephen Smith, Dr. Alexander Lambert, and Dr. Frederick Holme Wiggin, members of the committee of the New York County Medical Association, upon the abolition of the coroner's office has been published in the daily press explaining in full the reasons for the proposed change, and the advantages which the system of examining into the deaths which require such examination will offer over the present system.

Another coroner's bill has been introduced in the legislature of the State of New York, by Assemblyman Fitzpatrick. The bill amends the law providing for the election of coroners for Greater New York so that there shall be one coroner for each of the city boroughs. They must be residents of the city and must be lawyers of at least ten years' practice. They will be elected as at present, at general elections, for a term of four years. The bill declares them to be magistrates with full powers. Their salary is not to exceed \$10,000 per year in the boroughs of Manhattan and Brooklyn, or \$5,000 in Bronx, Queens and Richmond. Coroners' physicians are to be termed "medical examiners." There are to be six for Manhattan, four for Brooklyn, three for Queens and two each for Bronx and Richmond. The maximum salary for medical examiners is \$5,000. At the same time Mr. Fitzpatrick introduced a bill abolishing coroners' juries.

Kiss You by the Law?—The *Edinburgh Medical Journal* for February comments as follows on the Virginia emendation of the proverb "Kissing goes by favor"—of the legislature: "If a certain bill, recently introduced into the Virginian legislature, and by a doctor, too, becomes law, what a sad time of it the Romeos will have there! What sad disappointments the Juliets! No male to kiss if he be unprovided with a medical certificate bearing that he is clean enough to practise, and strong enough to bear, the art. The female, it seems, may kiss as often as she please, however, 'smittle' her lips, or dangerous her health.

"One may picture a Juliet, already supplied by her old nurse with the necessary rope-ladder, leaning over her balcony as Romeo, her Romeo, ap-

proaches, and anxiously inquiring of him if he had brought his legal permit to apose his lips against hers in osculation, ere she dare let fall the ropen rungs to 'low ascent.' Romeo's words in the play, had he no certificate, were pat: 'Sin from my lips? . . . Give me my sin again.' Juliet's 'You kiss by the book' would read, 'Kiss you by the law?'

"The complications which would arise from such a bill made law were as many as ludicrous. For instance, how long would the certificates of 'propriety for osculation' hold good? And for how many kisses would each run for? Would a fresh permit be required each day, or week, or year? Could a male infant kiss his mother?

"If not, should he be allowed the breast? The obtainal of evidence as to who the kisser, who kissee, would also be a matter of peculiar difficulty."

Official News.

Infectious Diseases in New York:

We are indebted to the Sanitary Bureau of the Health Department for the following statement of cases and deaths reported for the two weeks ending March 21, 1903:

DISEASES.	Week end'g Mar. 14.		Week end'g Mar. 21	
	Cases.	Deaths.	Cases.	Deaths.
Measles.....	290	13	247	10
Diphtheria and Croup.....	376	39	364	42
Scarlet fever.....	319	17	304	17
Small-pox.....	2	0	1	0
Chicken-pox.....	120	0	123	0
Tuberculosis.....	279	152	341	164
Typhoid fever.....	63	8	70	13
Cerebro-spinal meningitis....	0	0	0	6

Army Intelligence:

Official List of Changes in the Station and Duties of Officers serving in the Medical Department of the United States Army for the week ending March 21, 1903:

Promotions.

GORGAS, WILLIAM C., Lieutenant-Colonel and Deputy Surgeon-General. To rank as Colonel and Assistant Surgeon-General from March 9, 1903.

LIPPITT, WILLIAM F., Captain and Assistant Surgeon To rank as Major and Surgeon from March 18, 1903.

Naval Intelligence:

Official List of Changes in the Medical Corps of the United States Navy for the week ending March 21, 1903:

BENTON, F. L., Passed Assistant Surgeon. Ordered to the Naval Station, Cavite, P. I.

COOKE, P. L., Acting Assistant Surgeon. Ordered to the Naval Academy, Annapolis, Md.

KAINES, A. W., Acting Assistant Surgeon. Appointment revoked to take effect upon reporting of relief.

LUNG, G. A., Surgeon. Detached from the Bureau of Medicine and Surgery and ordered to the Naval Hospital, Philadelphia, Pa.

STAPP, J., Assistant Surgeon. Detached from the *Isla de Luzon* and ordered home to wait orders.

Public Health and Marine-Hospital Service:

Official List of Changes in the Station and Duties of Commissioned and Non-Commissioned Officers of the Public Health and Marine-Hospital Service for the seven days ending March 19, 1903:

WILLIAMS, L. L., Assistant Surgeon-General. To proceed to New York as inspector of the Purveying Depot.

WICKES, H. W., Passed Assistant Surgeon. Relieved from duty at Cincinnati, Ohio, and directed to proceed to Reedy Island quarantine and assume command of the service at that port, relieving Assistant Surgeon T. F. Richardson.

DECKER, C. E., Assistant Surgeon. Granted extension of leave of absence, on account of sickness, for 14 days from March 7.

RUSSELL, H. C., Assistant Surgeon. To proceed to New York and report to Surgeon G. W. STONER, Immigration Depot, for temporary duty.

FRICKS, L. D., Assistant Surgeon. Upon being relieved from duty at Cape Fear quarantine, to proceed to New York and report to Surgeon G. W. Stoner, Immigration Depot, for duty.

KERR, J. W., Assistant Surgeon. Relieved from duty at New Orleans, La., and directed to proceed to Cincinnati, Ohio, and assume temporary command of the service at that port.

RICHARDSON, T. F., Assistant Surgeon. Upon being relieved from duty at Reedy Island quarantine by Passed Assistant Surgeon H. W. WICKES, to report to him for temporary duty; upon expiration of said temporary duty, to proceed to New Orleans, La., and report to medical officer in command for duty and assignment to quarters.

KORN, W. A., Assistant Surgeon. To report to medical officer in command at Philadelphia, Pa., for assignment to special duty.

SCHERESCHEWSKY, J. W., Assistant Surgeon. Relieved from duty at New Orleans, La., and directed to report to Surgeon G. W. STONER, Immigration Depot, New York, N. Y., for duty.

GLOVER, M. W., Assistant Surgeon. Relieved from duty at the Immigration Depot, New York, and directed to proceed to Baltimore, Md., and report to medical officer in command for assignment to special duty.

WARREN, B. S., Assistant Surgeon. Upon expiration of leave of absence, relieved from duty at Washington, D. C., and directed to proceed to Cape Fear quarantine, relieving Assistant Surgeon L. D. Fricks, and assume command of the service at that port.

STIMSON, A. M., Assistant Surgeon. Relieved from duty at the Immigration Depot, New York, and directed to proceed to New Orleans, La., and report to medical officer in command for assignment to special duty.

ALEMAN, FERNANDO, Acting Assistant Surgeon. Granted leave of absence for seven days from March 8, 1903, under provisions of paragraph 191 of the Regulations.

PATRIE, W. E., Acting Assistant Surgeon. Granted extension of leave of absence for seven days from March 13.

GIBSON, R. H., Pharmacist. Granted leave of absence for 23 days from March 9. Relieved from duty at the Gulf quarantine station, and directed to proceed to Vineyard Haven, Mass., and report to medical officer in command for duty and assignment to quarters, relieving Pharmacist L. P. Hall.

BROWN, F. L., Pharmacist. Upon being relieved from duty at Cape Charles quarantine, to proceed to Pittsburg, Pa., and report to medical officer in command for duty.

STEPHENSON, C. W., Pharmacist. To report to chairman of board of examiners at Chicago, Illinois, for the purpose of determining his fitness for promotion to the grade of Pharmacist of the second class.

HALL, L. P., Pharmacist. Upon being relieved from duty at Vineyard Haven, Mass., to proceed to Cape Charles quarantine and report to medical officer in command for duty and assignment to quarters, relieving Pharmacist F. L. BROWN.

SPANGLER, L. C., Pharmacist. Granted leave of absence for 25 days from March 4.

Board Convened.

Board convened to meet at Chicago, Illinois, March 31, 1903, for the purpose of examining C. W. STEPHENSON, Pharmacist of the third class, to determine his fitness for promotion to the grade of Pharmacist of the second class. Detail for the board: Surgeon C. E. BANKS, chairman; Assistant Surgeon L. P. H. BAHRENBURG, recorder.

Public Health and Marine-Hospital Service Health Reports:

The following cases of smallpox, yellow fever, cholera, and plague, have been reported to the surgeon-general, Public Health and Marine-Hospital Service, during the week ending March 21, 1903:

Smallpox—United States.

Places.	Date.	Cases.	Deaths.
Alabama—Mobile	Mar. 7-14	4	
California—Berkeley	Mar. 4-11	1	
California—Los Angeles	Feb. 28-Mar. 7 ..	5	
California—Sacramento	Feb. 28-Mar. 7 ..	1	
California—San Francisco	Mar. 1-8	8	
Colorado—Denver	Feb. 28-Mar. 7 ..	17	
District of Columbia—Washington	Mar. 7-14	2	
Illinois—Chicago	Mar. 7-14	8	2
Indiana—Elwood	Mar. 8-15	1	
Indiana—Evansville	Mar. 7-14	2	
Iowa—Davenport	Mar. 7-14	8	
Iowa—Dubuque	Mar. 7-14	1	
Kansas—Douglas County	Feb. 1-28	1	
Maine—Biddeford	Feb. 28-Mar. 14 ..	8	
Maryland—Baltimore	Mar. 7-14	5	
Massachusetts—Boston	Mar. 7-14	1	
Massachusetts—Fall River	Mar. 7-14	3	
Massachusetts—New Bedford	Mar. 6	1	
Massachusetts—New Bedford	Mar. 7-14	1	
Michigan—Detroit	Mar. 7-14	17	
Michigan—Grand Rapids	Feb. 28-Mar. 14 ..	24	1
Michigan—Port Huron	Mar. 7-14	3	
Missouri—St. Louis	Mar. 8-15	4	
Nebraska—Omaha	Mar. 7-14	2	
New Hampshire—Manchester	Feb. 28-Mar. 14 ..	16	
New Jersey—Camden	Mar. 7-14	1	
New Jersey—Jersey City	Mar. 8-15	3	
New Jersey—Newark	Mar. 7-14	1	
New York—Buffalo	Mar. 7-14	2	
New York—New York	Mar. 7-14	2	
Ohio—Cincinnati	Mar. 6-13	10	
Ohio—Cleveland	Mar. 7-14	1	
Ohio—Dayton	Mar. 7-14	7	2
Pennsylvania—Altoona	Mar. 7-14	1	
Pennsylvania—Philadelphia	Mar. 7-14	44	5
Pennsylvania—Pittsburg	Mar. 7-14	48	2
South Carolina—Charleston	Mar. 7-14	3	
South Carolina—Greenville	Feb. 28-Mar. 7 ..	2	
Tennessee—Johnson City	Feb. 28-Mar. 7 ..	14	
Tennessee—Memphis	Mar. 7-14	2	
Tennessee—Nashville	Mar. 7-14	1	
Washington—Colfax	Mar. 1	present.	
Wisconsin—Greenbay	Mar. 8-15	3	
Wisconsin—Milwaukee	Mar. 7-14	2	

Smallpox—Insular.

Philippine Islands—Manila	Jan. 3	2	
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Smallpox—Foreign.

Austria—Prague	Feb. 14-28	20	
Belgium—Brussels	Feb. 14-28	9	
Brazil—Pernambuco	Jan. 15-31	10	
Brazil—Rio de Janeiro	Feb. 5-12	8	
Canada—St. John, N. B.	Mar. 13	1	
Chile—Antofagasta	Jan. 1-31	13	
Ecuador—Guayaquil	Feb. 7-21	1	
France—Rheims	Feb. 8-15	2	
France—Roubaix	Feb. 1-28	6	
Great Britain—Birmingham	Feb. 21-28	11	
Great Britain—Cardiff	Jan. 25-31	1	
Great Britain—Glasgow	Feb. 27-Mar. 6 ..	1	
Great Britain—Leeds	Feb. 21-28	9	
Great Britain—Liverpool	To Feb. 28	60	7
Great Britain—Nottingham	Feb. 14-21	4	
Great Britain—Sheffield	Feb. 28-Mar. 7 ..	2	
India—Bombay	Feb. 10-17	36	
India—Calcutta	Feb. 7-14	2	
India—Karachi	Feb. 8-15	1	
India—Madras	Jan. 31-Feb. 6 ..	1	
Italy—Palermo	Feb. 21-28	5	
Mexico—City of Mexico	Feb. 22-Mar. 1 ..	7	
Mexico—Vera Cruz	Feb. 28-Mar. 7 ..	1	
Russia—Moscow	Feb. 7-21	11	2
Russia—Odessa	Feb. 14-28	4	
Russia—St. Petersburg	Feb. 14-28	100	9
Straits Settlements—Singapore	Jan. 17-31	10	

Yellow Fever.

Brazil—Rio de Janeiro	Feb. 5-12	40	
Colombia—Panama	Feb. 26-Mar. 5 ..	2	
Mexico—Vera Cruz	Feb. 28-Mar. 14 ..	7	

Cholera—Insular.

Philippine Islands—Manila	Dec. 27-Jan. 31 ..	6	4
Philippine Islands—Provinces	Dec. 27-Jan. 31 ..	1,983	1,436

Plague—Insular.

Philippine Islands—Manila	Dec. 27-Jan. 3 ..	3	
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Plague—Foreign.

India—Bombay	Feb. 10-17	888	
India—Calcutta	Feb. 7-14	171	
India—Karachi	Feb. 8-15	23	19
Mexico—Mazatlan	To Mar. 13	313	255
Mexico—Oso	To Feb. 15	1	

Births, Marriages, and Deaths.

Born.

PAYNE.—In San Francisco, California, on Thursday, March 12th, to Dr. and Mrs. Clyde Payne, a daughter.

Married.

CARLEY—CAMPBELL.—In St. Louis, Missouri, on Tuesday, March 10th, Dr. H. D. Carley and Miss Maxey Campbell.

HERRICK—SLAVIN.—In Jersey City, N. J., on Thursday, March 19th, Dr. Clinton B. Herrick and Mary Slavin.

KECK—BURKHARD.—In Lawrenceburg, Indiana, on Wednesday, March 18th, Dr. Peter A. Keck and Miss Regina Burkhard.

KLEYKAMP—REINEKE.—In St. Louis, Missouri, on Thursday, March 12th, Dr. A. F. Kleykamp and Miss Sophia Reineke.

SCHENCK—YORKSTON.—In Brooklyn, N. Y., on Wednesday, March 18th, Dr. Garrett R. W. Schenck and Miss Phoebe Minerva Yorkston.

ROWE—STRANG.—In Houston, Texas, on Monday, March 16th, Dr. Norman L. Rowe, of Jersey City, and Miss Alfareta Strang.

Died.

BASS.—In Tarboro, North Carolina, on Monday, March 16th, Dr. H. T. Bass, in the fifty-first year of his age.

BEAVER.—In Vincennes, Indiana, on Sunday, March 15th, Dr. John C. Beaver, in the eightieth year of his age.

BRILL.—In Cincinnati, Ohio, on Friday, March 20th, Dr. Andrew Jacob Brill, in the fifty-sixth year of his age.

CARNCROSS.—In Philadelphia, Pa., on Thursday, March 19th, Dr. J. Augustus Carncross, in the fifty-eighth year of his age.

CLARKSON.—In Butte, Montana, on Tuesday, March 17th, Dr. William F. Clarkson, in the thirty-fourth year of his age.

CILLEY.—In Brooklyn, N. Y., on Thursday, March 19th, Dr. Jonathan L. Cilley, in the sixty-fifth year of his age.

GILES.—In Brockville, Ontario, Canada, on Thursday, March 12th, Dr. Giles, of Athens, in the sixty-ninth year of his age.

HEATH.—In Kansas City, Missouri, on Tuesday, March 17th, Mrs. Carrie Heath, wife of Dr. E. R. Heath, in the fifty-first year of her age.

HESLER.—On board the U. S. S. *Wilmington*, en route to Yokohama, Japan, from Cavite, P. I., on Wednesday, March 11th, Surgeon Frederick A. Hesler, of the United States Navy.

JENKS.—In Detroit, Michigan, on Wednesday, March 18th, Dr. Edward W. Jenks, in the seventieth year of his age.

KLEIN.—In Detroit, Michigan, on Sunday, March 15th, Dr. Peter Klein in the ninetieth year of his age.

LANGENBECK.—In Cincinnati, Ohio, on Saturday, March 14th, Dr. Frederick Langenbeck, in the sixty-eighth year of his age.

MCCAULEY.—In Joliet, Illinois, on Tuesday, March 24th, Dr. H. H. McCauley.

MCLEAN.—In Lincoln, Illinois, on Wednesday, March 18th, Dr. Samuel H. McLean, in the fifty-third year of his age.

MERRITT.—In Charlotte, Michigan, on Monday, March 16th, Dr. Frank Merritt.

MILLER.—In Buffalo, N. Y., on Thursday, March 19th, Dr. John Miller, in the eightieth year of his age.

ROBERTS.—In Scranton, Pa., on Saturday, March 21st, Dr. Charles W. Roberts.

TURNER.—In Pueblo, Colorado, on Sunday, March 15th, Dr. J. H. Turner, in the twenty-sixth year of his age.

MUNN.—In Denver, Colorado, on Friday, March 13th, Dr. William P. Munn.

UDELL.—In Denver, Colorado, on Friday, March 6th, Dr. Nathan Udell, in the eighty-sixth year of his age.

VAN SICKLE.—In Newark, N. J., on Sunday, March 15th, Dr. Benjamin Miller Van Sickle, in the forty-sixth year of his age.

Pith of Current Literature.

PRACTICE OF MEDICINE.

Remarks on Achylia Gastrica and Pernicious Anæmia. By Max Einhorn, M. D. (*Medical Record*, February 28th).—Achylia gastrica is what was formerly called atrophy of the stomach. As is well known, it has generally been held that atrophy of the stomach is the causative factor in bringing about pernicious anæmia. Dr. Einhorn writes to show that the reasons for this belief are not conclusive. His paper is divided into three parts. In the first he studies achylia gastrica; in the second, pernicious anæmia; and in the third he asks: "Is there any connection between achylia gastrica and pernicious anæmia?" He does not believe that the relation of cause and effect exists and for two reasons. (1) In most cases of achylia gastrica a nearly normal condition of the blood is found. (2) We occasionally observe the presence of gastric juices in cases of pernicious anæmia, sometimes even in an increased amount. If pernicious anæmia were caused by an atrophy of the gastric mucous membrane, the achylia would have to be well marked, as soon as the symptoms of the blood disease were apparent. It is not to be denied that the two diseases may occur together. These cases are, however, in the minority and it probably means that there is a common cause for both affections, or that pernicious anæmia finds a ready soil in cases of achylia.

Thoughts and Observations Regarding Appendicitis, Especially when Appearing in its Acutest Forms. By Dr. J. A. MacDougall. (*Lancet*, February 21st).—The author is convinced that while appendicitis is no new disease, it is largely on the increase, both as regards the number of its victims and its severity. Relapses have also greatly increased in frequency, and it is this tendency and the surgical intervention it demands that make the number of operations on the appendix so much more numerous. Further, in many instances appendicitis is found to be a family disease. The author is however still absolutely averse to the assertion that the diagnosis of the malady carries with it inevitable surgical intervention. In the very large majority of cases, the prognosis, when the case is under careful medical supervision, is a favorable one. But there are exceptional cases of great severity where the fate of the patient rests with the surgeon—hence the value of early and accurate diagnosis. It is a fairly safe rule that the acuter the initial symptoms, the greater is the gravity of the case. This is especially so if a rigor occurs accompanying or immediately preceding the acute abdominal pain. Such a rigor is usually associated with gangrene of the appendix. The pain in ultra-acute appendicitis is usually most severe, but it may begin remote from the appendicular region. Muscular rigidity is present in the right iliac region, soon spreading to the whole abdominal wall causing the hard, flat, board-like abdomen which is an indication of grave significance. A quick small pulse with a high, or worse still, a low temperature, should attract immediate attention. Very high temperature in the beginning

with a rapid small pulse and notable local conditions, portend a state demanding speedy intervention. To watch and record every few hours the pulse and temperature ratio is a *sine qua non* in all cases of appendicitis. Vomiting, common in many acute cases, is not always present in the ultra-acute. The author attaches little significance to the presence of a tumor in the right iliac fossa—alone, such a tumor does not call for operation. As regards the "period of repose," that cessation of symptoms which occurs in acute appendicitis, and gives false hopes of improvement, there is generally to be found in local conditions sufficient to put one on the right track. The absence of peristalsis as shown by the use of the stethoscope, and the presence of a marked leucocytosis are indications of value in this regard. Rectal touch is of the highest value in cases of peritoneal inflammation, and in appendicitis it should never be neglected. Among the conditions which may simulate acute appendicitis are the following—colic of the appendix due to the presence of a foreign body in the appendix, renal and hepatic colic, intestinal obstruction, inflammations of the right annexa of the uterus, pelvic peritonitis associated with gonorrhœa in the female, and lesions of the cæcum. Perforated gastric or duodenal ulcer often closely simulates lethal appendicitis. The use of opium should be avoided, if possible, as it masks the guiding symptoms; it is best given in the form of an opium suppository or rectal injection of laudanum. If movement of the bowels is called for, enemata must be relied on; aperients given by the mouth are dangerous.

A Venous Hum Heard over the Hepatic Area in a Case of Ordinary Cirrhosis of the Liver.—Dr. Vito Gambarati (*Riforma medica*, February 11th) relates a case of cirrhosis of the liver in which a distinct venous hum was heard over the area of the liver. Cases of this kind are very rare. The first was reported by Leopold, in 1876, who found a venous hum in the neighborhood of the umbilicus in a woman with a tumor of the liver, and a few other cases have been reported since then; but in none was the cause referable to cirrhosis of the liver. The patient was a man aged forty-nine years, who had been growing weaker for a year; he complained of evening chills, sweats at night, and headaches. He had noticed a distinct loss of flesh and a slight enlargement of the abdomen recently. On examination he was found to be suffering from cirrhosis of the liver. A distinct enlargement of the superficial veins of the abdomen was noted; the epigastrium was slightly tense and prominent, the spleen was somewhat enlarged, and the abdomen contained some fluid. The liver was atrophic. A blowing murmur was heard over the sternum, resembling the venous hum heard in the neck in chlorosis. This murmur was also heard over the hepatic area and consisted of two phases; the first part of the murmur was louder and coincided with the diastole, though not with absolute regularity. The murmur was most intense at the ensiform cartilage and was rendered louder by exaggerating the movements of respiration. The quality of the murmur and its superficial character showed that it was of

venous origin. The author believes that it was due to a constriction of the inferior vena cava in its transit through the liver, as the result of the process of atrophy which was going on in that organ.

Clinical Results with Antistreptococcus Serum in Scarlet Fever. By Louis Fischer, M. D. (*Medical Record*, March 7th).—Dr. Fischer reports the results of the experience of Professor Baginsky, of Berlin, with antistreptococcus serum, and adds the record of two of his own cases. In 1896, Baginsky conducted a series of experiments with Marmorek's serum. The results did not justify its further employment and the use of serum in scarlet fever was discontinued by him. Baginsky and Sommerfeld, in a study of 701 cases of scarlet fever, found the streptococcus in 696 cases, and concluded that the streptococcus was a distinct ætiological factor in scarlet fever. They determined, therefore, to produce a more powerful serum than any then available. This task was assigned to Dr. Hans Aronson, who obtained the streptococci for the inoculations from scarlet fever patients, and succeeded in producing a very active and efficient immunizing serum for white mice. Baginsky then tried the serum in 58 cases of scarlet fever and had a mortality of 4.2 per cent. In another series of cases in which the serum was not used, there was a mortality of 17.3 per cent. in a total of 63 cases. In both the cases reported by Dr. Fischer recovery took place. While the number of cases reported is small, yet the results so far with this new serum are sufficiently good to warrant its further trial.

Family Hæmoglobinuria in Malarial Patients.—Dr. M. Luzzatto (*Riforma medica*, February 11th) reports two cases of hæmoglobinuria which occurred in members of the same family, both of whom were affected with malaria. The author emphasizes the fact that in these cases the hæmoglobinuria occurred in two sisters, and believes that such a coincidence has not been recorded, as yet, in literature. Hæmoglobinuria is quite frequent in Maremma, and yet cases occurring in the same family have not been observed until now. The first patient was a girl, aged nineteen years, who stated that her father had died three years previously after an attack of malarial infection of a severe type, and that he had suffered from hæmoglobinuria after having taken quinine. The patient had suffered from malaria for two years and had not had any blood in the urine, although she had taken large doses of quinine. Hæmoglobinuria appeared on the day before admission and disappeared on the following day. The patient passed through a period of quartan fever, followed by another period of tertian æstivoautumnal, and was discharged cured, the fever having abated under the influence of quinine. The last few days of her stay at the hospital were characterized by a second attack of hæmoglobinuria following the administration of one gramme of quinine. The second patient was a woman aged twenty-two years, sister of the preceding, who had been suffering for some time from malaria. On the day of admission she was seized

with violent chills and was admitted in a comatose condition. A few minutes after an injection of quinine the urine drawn by a catheter was found to contain hæmoglobin. The blood contained many rings of the æstivoautumnal parasite, and the patient continued in the comatose condition for a number of hours until she died. Injections of quinine, administered at intervals, had cleared up the urine, so that shortly before death it was normal in appearance. In the father of these two women the hæmoglobinuria was due to the action of quinine, but in these two patients the quinine did not cause the hæmoglobinuria, and this phenomenon was directly due to the pernicious type of malaria from which they were suffering. According to the author, there exists in countries where malaria assumes a grave type an individual congenital and hereditary predisposition to hæmoglobinuria, which sometimes shows itself as the result of a parasitic invasion and sometimes after the administration of quinine.

The Gelatin Treatment of Hæmoptysis. By Dr. H. M. Tickell. (*Lancet*, February 28th).—In the treatment by means of the rectal injection of a solution of gelatin we have a method of checking hæmoptysis which promises exceedingly well. Hypodermic injections of the gelatin solution have been used with excellent results as regards the checking of hæmorrhage, but unfortunately it is associated with a series of unpleasant effects. These are: (a) The exceeding painfulness of the injection; (b) occurrence of necrosis of the skin; (c) occasional presence of tetanus spores in the gelatin causing tetanus in the patient; and (d) elevation of the body temperature. Every one of these effects is avoided if the gelatin solution is given by rectal injection, and the hæmorrhage is as efficiently checked. The injection is given in the ordinary way, about nine ounces of the solution being passed into the rectum three times a day until the sputum ceases to show any trace of blood. When the hæmorrhage has been completely stopped the patient must be kept quiet in bed for several days on a light diet. The solution is prepared as follows: One ounce and three quarters of gelatin are dissolved in two pints three and three quarter ounces of boiling water and boiled very gently for an hour until the volume is reduced by evaporation one fifth. It is then cooled down to the body temperature and is ready for use.

SURGERY AND ANATOMY.

Cases Simulating Acute Appendicitis. By A. E. Barker, F. R. C. S. (*British Medical Journal*, February 28th).—The author reports a series of cases which simulated acute appendicitis, and in which the true nature of the trouble was not ascertained until the operation. The cases were: (1) ruptured pyosalpinx; (2) ovarian cyst strangled by twisted pedicle; (3) twist and strangulation of omentum; (4) perforated gastric ulcer; (5) retro-cæcal hernia; (6) broken-down caseating glands; (7) ileocæcal cancer with abscess; (8) hæmatoma of broad ligament; (9) reduction of hernia *en masse*; (10) intussusception.

Case of Dilatation of the Pylorus for Simple Stricture. By H. P. Symonds, F. R. C. S. (*British Medical Journal*, February 28th).—The author reports the case of a man, forty-five years of age, who had suffered for eleven years from flatulent distention of the stomach. Vomiting was infrequent, the vomitus being great in amount and of a putrid smell. No tumor could be felt and there was no history of hæmatemesis, and no emaciation. These facts appeared to exclude malignant disease and to point to a simple stricture of the pylorus. On opening the abdomen the stomach was found to be markedly distended. A portion of the anterior wall of the stomach was invaginated with the index and middle fingers of the right hand through the pyloric orifice, and dilatation of the latter was carefully accomplished. The anterior wall of the stomach was then drawn out through the abdominal wound, and a longitudinal tuck was run in it by a continuous suture of the peritoneal coats. The patient made an uneventful recovery and returned to work, and his condition has been improved in every way. That part of the stomach used in the invagination manipulation was included in the tuck.

Septicæmia of Buccal and Dental Origin.—M. Julien and M. Camille Tellier (*Lyon médical*, February 15th) report eight cases of this character. They divide these septic cases into the following groups: (1) Chronic sepsis bordering on a dental or buccal cachexia; (2) acute septicæmia without localization; (3) acute lymphatic septicæmia; (4) phlebitic septicæmia; (5) septicopyæmia; (6) true pyæmia, a purulent infection with the production of metastatic abscesses. The prognosis is always grave and most of the patients die. While the course of the symptoms is usually sufficiently slow to permit of heroic measures proving successful, the gravity of a chronic sepsis of buccal or dental origin is often overlooked by physicians and dentists. Doubtless a general infection from an alveolar pyorrhœa is rare, but it may cause an enfeeblement of the entire organism and organic disturbance, or may even become permanent. These cases, which seem so insignificant, should, therefore, be more carefully watched and treated to prevent serious or even fatal results.

A Case of Penetrating Wounds of the Abdomen with Prolapse of a Loop of the Small Intestines; Wounds of the Liver, the Small and the Large Intestines, and the Mesentery. Laparotomy, Recovery.—Dr. Carlo Tonarelli (*Riforma medica*, February 11th) reports a case of unusually extensive injuries to the abdominal organs in which laparotomy and the repair of the wounds was followed by recovery. The patient was a young man, aged twenty-four years, who was severely wounded in the abdomen in a street brawl. On admission, his condition approached collapse. One wound was found to be in the upper left quadrant of the abdomen, and a loop of small intestines protruded through it. A second wound extended for three centimetres below the ensiform cartilage and a number of stab wounds were found in the arm, the glutei, and the back. The patient was immediately operated upon, the wounds cleaned and

the principal abdominal wound enlarged. The prolapsed intestine was replaced, a wounded vessel in the mesentery ligated, and the whole intestinal tract searched for injuries. Two wounds of the mesentery were found and closed with fine silk; four wounds of the small intestines varying in size were sutured with Lembert's sutures. Beneath the wound extending from the ensiform cartilage, the liver was found incised for a distance of about 2 centimetres. This wound was plugged with gauze, so as to arrest the hæmorrhage. The peritonæum was then taken care of in the usual way, and a wound now found in the descending colon was closed. A drainage tube was introduced and the abdominal walls were sutured. The patient continued to be in a very grave condition for four days, but after that his recovery progressed rapidly. This result is noteworthy in view of the fact that an average mortality of 17 per cent. is given by Giordano in cases of penetrating incised wounds of the liver.

A Contribution to the Surgical Deviation of the Blood of the Portal Vein in Cirrhosis of the Liver.—Dr. Eugenio Arcoleo (*Riforma medica*, February 11th) reports eight cases in which he performed the operation first attempted by Talma for the relief of the congestion of the portal circulation in cirrhosis of the liver. His results were not very encouraging. Of eight patients operated upon, three died shortly after the operation and the author admits that their deaths were due to, or at least hastened by, the surgical intervention, although the operations were of short duration, averaging scarcely twenty minutes. But if it is remembered that in poorly nourished patients the resistance to shock is lowered as the result of the loss of the functions of the liver, of alcoholism, or of malaria, it can be readily understood that such a surgical operation would cause or hasten a fatal termination. In four cases the operation proved neither injurious nor useless, for a temporary relief from the symptoms of the disease followed. In two cases of hypertrophic cirrhosis there was a marked improvement, which could also be attributed to the fact that the disease in this form is less malignant than in the atrophic type. In general, the author's results did not differ markedly from those obtained by other observers. Thus, Mori found that of thirty-seven patients operated upon, thirteen died (45 per cent.); thirteen were cured (45 per cent.); ten remained stationary (27 per cent.); and one improved (2 per cent.). Other surgeons do not give more encouraging statistics. Thus, Mongour states that the immediate mortality is 35 per cent., and Fieschi gives it as 45 per cent. The author believes that, as yet, the statistics of this operation do not give a basis for concrete conclusions; for the period in the disease at which the operation is performed and the method of operating must always be considered. All surgeons agree that the operation should be performed early, as soon as ascites appears, and that patients who are already markedly cachectic should not be operated upon. Further data and a larger number of cases must be obtained before the importance and value of this operation can be determined.

Periduodenal Abscess Secondary to Ulcer of the Duodenum. By William Seaman Bainbridge, M. S., M. D. (*Medical News*, March 7th).—Perforating ulcers of the alimentary canal involving the peritoneal cavity have recently received much attention, but as a rule the diagnosis must yet be one of general peritonitis with the site of the perforation undetermined. Very little attention has so far been given to cases of perforating ulcer of the duodenum which do not involve the general peritoneal cavity. There have been so far only twenty-six such cases recorded in medical literature, and in these twenty-two deaths have occurred without the diagnosis being made. The object of the author's paper is to call attention to the condition and to review its literature to date. Of the twenty-six reported cases, only eleven are recorded with sufficient accuracy to be of scientific value. The author gives an abstract of all the useful cases, and adds the history of a case of his own. A list of possible complications is given and also the general considerations on which a diagnosis is to be made. A complete bibliography concludes the article.

Are Antiseptics of any Value in Hand Disinfection? By Edgar R. McGuire, M. D. (*American Medicine*, February 28th).—Dr. McGuire has undertaken about 200 experiments to prove the relative value of mechanical and chemical disinfection of the skin. The paper reviews also the opinions of some of the most noted German surgeons on this important subject. Dr. McGuire reaches the following conclusions: (1) Absolute sterility of the hands is impossible by any method. (2) There is no royal road to sterilizing the skin—nothing takes the place of long and vigorous mechanical scrubbing. (3) The longer the hands are scrubbed under aseptic precautions the nearer the approach to sterility. (4) The use of antiseptics on the skin is at least questionable; under the usual conditions, it is distinctly harmful. (5) When the true value of antiseptics is understood we shall have cleaner hands, due to more conscientious scrubbing. (6) The use of rubber gloves, while not ideal, is the nearest approach to it. (7) The operator whose hands perspire freely ought to wear gloves in every case, regardless of all objections to them.

Gastroenterostomy and its Uses, with a Description of the Operation as Performed by the Author. By A. W. M. Robson, F. R. C. S. (*Lancet*, February 28th).—Gastroenterostomy is an operation of comparative safety; for the last three years the mortality of the author's cases has been under 5 per cent. He follows von Hacker's method, in which the anastomosis is effected between the jejunum and the posterior wall of the stomach. There are fewer after-effects, free drainage is afforded, and there is no loop of bowel constricting the colon. The author describes his method of operation in detail, beginning with the preparation of the patient. Among the special complications that may follow the operation are the following: (1) Regurgitant vomiting. This is more frequent in simple than in malignant disease. The author

thinks it to be due to obstruction to the passage of the intestinal contents. (2) Contraction of the new orifice between the stomach and intestine. (3) Pneumonia or pleurisy is said to follow stomach operations very frequently, but the author's experience does not bear this out. (4) Peptic ulcer in the jejunum. (5) Adhesions causing intestinal obstruction. (6) Want of union in the newly joined viscera. This almost universally fatal accident is rarely seen at the present day, except when the Murphy button has been used. (7) Passage of small intestine through the loop formed by the junction of the jejunum and stomach. This is probably only possible after the anterior operation. The different indications for gastroenterostomy must be stated in two categories: *A.* Cases in which the indications for the operation are absolute as soon as the diagnosis is established: (1) Simple stenosis of the pylorus. (2) Malignant stenosis of the pylorus. (3) Congenital stenosis. (4) Congenital atresia. (5) Chronic gastric ulcer with tumor of doubtful character, too extensive or adherent for effectual removal, not necessarily associated with stenosis. (6) Duodenal cancer or tumor causing obstructive symptoms. (7) Hour-glass contraction of the stomach not favorable for gastropasty. (8) Perigastritis with adhesions around the pylorus producing obstructive symptoms or pain and too extensive for gastrolisis. (9) Dilatation of the stomach dependent on pressure outside the pylorus from tumor of pancreas, liver, or gall bladder, incapable of removal. *B.* Cases in which the indications for the operation apply only after failure of general medical treatment. (10) Acute or chronic gastric ulcer. (11) Duodenal ulcer. (12) Hæmorrhage from gastric or duodenal ulcer. (13) Persistent spasm of the pylorus, or Reichmann's disease, with dilatation of the stomach. (14) Hyperchlorhydria. (15) Persistent gastralgia. (16) Tetany of gastric origin. (17) Acute gastric dilatation not yielding to lavage and general treatment. (18) Pancreatitis secondary to gastric ulcer. (19) Certain cases of jaundice dependent upon gastric or duodenal ulcer leading to thickening around the common bile duct. (20) Simple atonic dilatation of the stomach after failure of lavage and general treatment.

The Treatment of Fæcal Fistulæ. An Unusual Effect of Complete Exclusion of the Intestine.—Dr. I. I. Griekoff (*Roussky Vrach*, January 18th) discusses the various methods of treating fæcal fistulæ and expresses a strong preference for Maisonneuve's operation. It is simpler and less traumatic than other forms of the operation of exclusion of the intestine. The latter is an operation of emergency, which is indicated in cases in which a resection of the intestine is impossible, owing to the weakness of the patient, the presence of suppurating foci in the neighborhood of the fistula, extensive adhesions of the intestines, etc. Hence the simplest and quickest method should always be chosen in all exclusions of the intestine, *i. e.*, Maisonneuve's operation. The operation of complete exclusion is more complex and more tedious than simple anastomosis of the intestines. Mucous fistulæ, moreover, are very slow to heal and are very

uncomfortable to bear, and often a second operation is insisted on by the patient, and if they heal too early, they may cause obstruction. Maisonneuve's operation has the advantage of allowing the excluded portion of intestine to remain in communication with the lumen of the rest of the canal, and so no fear need be entertained as regards the occurrence of an obstruction if the fistula heals too quickly. This enables one to take all the necessary local measures, such as cauterization, suturing the edges of the fistula, etc., to secure its early healing. In this manner it is possible to obtain perfect results in all cases with Maisonneuve's operation. The only drawback to this method is the fact that the excluded portions of gut are thereby converted, after the closure of the fistula, into two blind sacs adherent to the abdominal wall, which may act as weights and cause intestinal obstruction, or may be the seat of intestinal concretions, as the appendix veriformis often is. These dangers are so far purely theoretical, however, and the complete exclusion of the portion of gut included in the fæcal fistula is followed sometimes by far more serious complications.

The author reports a case in which a fæcal fistula was operated upon by total exclusion, and some time later the fistula reopened and a portion of gut turned inside out protruded. The entire excluded portion of intestine was then resected and the abdominal cavity closed by suturing the gut left after excising the fistulous tract. Such a result could not have been obtained with Maisonneuve's operation.

A Simple Method of Operating on Piles. By A. B. Mitchell, M. B. (*British Medical Journal*, February 28th).—The author's method of operating on hæmorrhoids is as follows: The sphincter having been dilated and the piles brought fully into view, the mucous membrane is sponged with a solution of corrosive sublimate, 1 in 1,000. A pile is then clamped in a long, narrow-bladed artery forceps, and the redundant mucous membrane and pile are cut away by scissors. A curved needle threaded with catgut hardened in formalin is then inserted immediately above the clamp and the end of the catgut secured by a knot. A continuous suture is next rapidly applied around the clamp, the clamp is withdrawn (this can be done without the slightest difficulty), and the suture tightened, leaving a vertical line of sutures within the rectum. Each pile should be similarly treated in turn.

The operation is rapid, there is no loss of blood, no raw surface is left, and the bowels are encouraged to act regularly from the first. The catgut is absorbed in eight or ten days and does not require removal.

OBSTETRICS AND DISEASES OF WOMEN.

The Technics of the Operation of Cœliotomy as Practised at the Gynæcean Hospital, with the Report of Ninety-three Consecutive Cœliotomies Without a Death. By Henry D. Beyea, M. D. (*American Medicine*, March 7th).—The author takes up in succession all the points connected with an operation that have any bearing on the outcome,

if one considers the surgical intervention purely from the mechanical point of view. The paper, therefore, necessarily deals largely with matters of detail, and is of value chiefly to those who have the opportunity of conducting an operating room according to the highest ideals of aseptic surgery. The following subjects are considered: (1) The preparation of the patient. (2) Preparation of dressings, towels, etc. (3) Preparation of ligatures and sutures. (4) The water. (5) Sterilization of instruments. (6) Apparatus. (7) The operating room. (8) Operator, assistant, and nurses. (9) The treatment after cœliotomy. In general the author's practice may be said to resemble that of most careful operators. Of course there are some few special points. As an example: The night before an operation the operating room is first washed with a hose and sapolio, all the furniture is treated in the same way; following this the whole room and its contents are wiped down with bichloride solution. The room is then locked and is only entered in the morning by those that are directly to be connected with the operation. If a case of contagious disease is so much as suspected of having been in the room, then the room is at once closed and subjected to fumigation with formalin.

NERVOUS AND MENTAL DISEASES.

The Treatment of Epileptics. By Dr. F. Beach. (*Lancet*, February 28th).—Among the author's observations on this subject are as follows: Errors of refraction are often causative of epilepsy; by correcting the errors of refraction in one hundred consecutive cases of epilepsy, forty-nine were cured or relieved. A toxic cause of epilepsy has not yet been proved; in most cases there is neurotic inheritance and an exciting cause is only necessary to produce a fit. So that all exciting causes—indigestion, constipation, late hours, use of alcohol, tape worms, etc., should as far as possible, be removed. The amount of meat eaten should be limited, and in some cases meat should be forbidden altogether. As regards drug treatment, the author favors large doses of bromide, in the form of the combination of ammonium, sodium, and potassium. Where the fits occur at night a double dose should be taken at bed time. Bromide should be administered for two years after the last fit, in ordinary cases, and for three years in a few cases where circumstances render it necessary. Iron tonics and cod liver oil should be taken together with the bromide. The result of colony treatment is most gratifying. The general health is improved, the fits are diminished, and the colonists help to furnish a variety of food which is desirable in the treatment of the affection. Employment is particularly necessary, to keep the patient in the sunshine and to prevent his brooding over his ailment.

Alterations in the Tactile Sensation and in the Sense of Heat and Pain as the Result of Lesions of the Ulnar Nerve.—Dr. Armoldo Veneziani (*Gazzetta degli ospedali e delle cliniche*, December 21st) has found that lesions in the ulnar nerve, as a result of injury, are followed by changes in the tactile sense which extend over a larger area than

the changes in the thermal sensibility which are caused by the same injury. The patient whose case he cites in support of this statement was a man who had suffered an accidental gunshot injury to the ulnar nerve of the right arm a year before admission. The author found that the tactile sensibility and the sense of heat and pain of the entire right forearm did not differ from those of the left forearm, and that only in the hand were alterations perceptible. If an imaginary line was drawn over the fourth metacarpal and continued over the ring finger, it was noted that the ulnar side of the hand presented an area in which the tactile sensation was dulled, but not completely abolished. Within this region of lowered tactile sensibility was included another in which there was a diminished sense of heat and sense of pain. This latter region was well defined and included on the dorsum of the hand only the little finger down to the base, and on the palm, in addition to the anterior surface of the little finger, also the ulnar side of the hand up to the fifth intermetacarpal space. The author concludes that this difference between the extent of the areas of lowered tactile sensibility and lowered sensibility to heat and pain shows that the extent of an anæsthetic zone does not depend upon intrinsic conditions of the skin, such as the greater diffusion of the thermal stimuli or the greater facility of the terminal organs to lose the sense of heat rather than the tactile sense, but upon extrinsic conditions; in other words, upon the varying number of fibrils which are specific for these various sensibilities and which have been injured in the affected nerve.

Notes upon a Case where Symptoms of Early General Paralysis of the Insane Followed a Head Injury; Trephining; Removal of Depressed Bone; Disappearance of the Symptoms. By A. M. Sheild, M. B., and Dr. T. C. Shaw, (*Lancet* February 14th).—The authors report the case of a man, aged thirty years, who had been thrown from a dog-cart and had sustained a scalp wound in the left frontal region, below the frontal eminence. The bone was apparently uninjured. About a month later he began to suffer from headache, loss of memory, violent outbursts of passion, etc. When examined three months after the injury, he exhibited many of the early signs of general paralysis of the insane—confused expression, general and facial tremor, asymmetry of the pupils, slight ataxia, weakness of knee-jerks, etc. The prominent mental condition was one of dementia. Operation was determined on, and on trephining the skull at the site of the old injury, it was found that the inner table of the skull had been fractured and two small pieces of bone depressed deeply upon the dura mater, which was uninjured. Within a day or two of the operation the most marked and gratifying change occurred in the patient's mental condition. He became intelligent and lively, and every one of his bad symptoms soon disappeared. Epileptiform fits, severe head pains, and mental disturbances are all found in these cases. In some the bone is merely thickened—in others a previously unsuspected depressed fracture. The bone should be freely removed, but, unless there is a definite reason, the dura

mater should not be incised. Should there be any suspicion of cerebral abscess, the brain beneath should be explored in the usual manner.

MATERIA MEDICA, PHARMACY, AND THERAPEUTICS.

On a New Portable Apparatus for the Generation of a Continuous Current Lasting for Considerable Periods of Time.—Dr. N. P. Domashnieff (*Roussky Vrach*, January 18th) suggests the use of a portable electric battery for the continuous administration of electric currents for a number of hours at a time. Very many patients are unable to purchase the more expensive and cumbersome batteries, or to pay for frequent treatment by electricity at the physician's office. Such patients can carry the author's apparatus in their pockets and the electrodes can be so arranged that they will transmit the current to the body for a continuous period during a number of hours, according to the necessities of each case. The current of these batteries is, of course, weaker than that of the larger instruments. The batteries consist of two miniature dry Leclanché cells which have a capacity of 1.5 volts tension (the same as the larger instruments in common use) and 1.5 ampères intensity, *i. e.*, about one third of the strength of the current developed by the larger batteries. The weaker current is needed on account of the prolonged application, which would irritate the skin if the current were too strong. The length of time required to obtain the effect of the usual séances with the stronger instruments can be calculated, the author says, from these data, and the battery can be used in such a way as to obtain in the end the same results as with repeated short sittings with the larger apparatus. The dry cells last several months and can be renewed at small cost, and the whole apparatus is very inexpensive.

GENITOURINARY DISEASES.

The Treatment of Suppurative Inflammation of the Kidneys. By Frank Warner, M. D. (*American Medicine*, March 7th).—Inflammations of the kidney are either plain, catarrhal or infectious. In these last cases the infection occurs, either by way of the blood, or it takes place by extension from some part of the genitourinary tract. The most frequent cause of the primary irritation that makes the subsequent inflammation possible is calculus. So far as treatment is concerned it is always desirable if possible to determine the exact location of the infected area and definitely to fix the cause. This is not always possible, but by carefully studying one's cases an approximation to the truth will be reached. (1) The urine. Careful microscopical examination of the urinary sediment will often enable one to say what part of the urinary tract is affected. (2) One must not rely too much on laboratory findings. The history of the case is important. (3) The Röntgen ray will sometimes show the presence of a stone. Some kinds of stone, however, do not cast a shadow. An absolute diagnosis is often difficult, and it may be impossible to say whether the kidneys are affected or not. The treatment should be both general and special. (1) *General.*

A general tonic treatment is always called for. Urinary antiseptics, such as salol, should be given routinely. All complicating inflammations, such as a cystitis due to stricture or enlarged prostate, must receive appropriate medication. (2) *Special treatment.* This must be directed to the kidneys themselves. When the suppurative process about the kidneys has lasted so long that it has produced emaciation, hectic, and the symptoms of septic absorption, operation on the kidneys is imperatively demanded. Stones in the kidney must be removed when found. Tuberculous kidneys must have the diseased areas removed, and they must be drained. If they are so far diseased that nothing short of nephrectomy is likely to be of any avail, then this procedure should be resorted to, provided that the remaining kidney is not diseased and that one is satisfied that two kidneys actually exist. In cases in which the kidney is treated by drainage alone one must make sure that the ureter is free of all obstruction.

CUTANEOUS MEDICINE AND SURGERY.

Pellagra.—As this disease has not yet found its way into general medical literature, the very complete description of the condition offered by A. Porras (*Revista de Medicina y Cirugía Prácticas*, January 28th) representing, as it does, a wide experience with the affection, is of more than usual interest. The author says in part: "This is a diathetic disease, essentially chronic, characterized by erythematous manifestations, chiefly upon the dorsum of the hands, which leave permanent scars, and by gastrointestinal and nervous disorders." The author thus describes the course of the disease: "In the beginning of spring in hot climates, and later in cooler regions, there appears, chiefly upon the dorsum of the hands, but also upon the forehead, neck, and feet, a redness which disappears on pressure, lasts from twenty to thirty days, and terminates in desquamation. This phenomenon is repeated once or twice in the spring season. When the erythema is intense, it is accompanied by tumefaction, burning, smarting pain, and itching, these symptoms being most troublesome in the sun or before a fire. Vesicles may form and by their coalition bullæ develop, which emit a non-purulent fluid. The loss of tissue following these eruptions results in permanent cicatrices. The patient improves much during the summer and remainder of the year till spring approaches, when the same symptoms reappear; and as the disease progresses, the patient becomes melancholic, irritable, taciturn, and suicidal tendency may develop. The appetite is completely lost, there is a bitter or sometimes salty taste in the mouth, aphthous sores appear on the tongue, cheeks, and fauces, and the lips crack and peel so that the entire epithelium may be lost. Diarrhœa is sometimes severe and pain is intense in the spine, extending to the lower extremities. Loss of muscular control appears, so that in walking the patient feels as though impelled forward and would fall if not supported. Progressive loss of strength ensues, and vertigo and tinnitus, as well as other symptoms, be-

come more intense. Paralysis or semiparalysis sets in and with it involuntary emission of fæces and urine and a condition similar to that seen in typhoid develops; the patient finally succumbing to the disease if suicidal mania does not carry him off." Little is known of the ætiology of the affection, save that these patients are generally alcoholics. Treatment is unsatisfactory, being limited to the symptomatic and prophylactic; the latter being directed toward building up the system through good food and hygienic measures, as the disease occurs most frequently in those who are in poor condition.

LARYNGOLOGY, RHINOLOGY, AND OTOTOLOGY.

The Presence of Diphtheria Bacilli in Atrophic Rhinitis. By Dr. J. O. Symes. (*British Medical Journal*, February 28th).—The author has made bacteriological examinations of the nose in twenty-three cases of atrophic rhinitis. The ages varied from nine to fifty-seven years, the average duration of the disease was seven years, and ozæna was noticeable in every case but one. In twenty cases (87 per cent.) a bacillus was found resembling in morphological and cultural characteristics the Klebs-Löffler bacillus. In seventeen, the organism was described as the "long," and in three as the "short" variety of the diphtheria bacillus. Two questions then arose: (1) Are these bacilli present in healthy throats; and (2) are they true diphtheria bacilli? To settle the first question a series of cultures was taken from the noses of healthy children: in no instance were any long diphtheria-like bacilli found, but in 58 per cent. a short pseudo-diphtheritic type of bacillus was present. A series of cultures was also taken from the noses of persons suffering from ozæna secondary to congenital or acquired syphilis, rhinitis sicca, and lesions other than atrophic rhinitis. In none of these were diphtheria-like bacilli found. As regards the second question, a bacillus can only be positively identified as the diphtheria bacillus by inoculation experiments on animals. Such tests for virulence could only be performed twice in the series of twenty cases: in both, however, the organism proved to be a virulent diphtheria bacillus.

So that, if the foregoing facts can be substantiated and the identity of this bacillus with the Klebs-Löffler bacillus can be established, then we may regard atrophic rhinitis as a chronic form of nasal diphtheria. In addition to the bacteriological evidence, the following points seem to support this theory: (1) The accessory sinuses of the nose are constantly infected in diphtheria. (2) Chronic sinus suppuration is looked on as the direct exciting cause of atrophic rhinitis. (3) Multiple cases of atrophic rhinitis exist in the same household from time to time. (4) An attack of diphtheria may be the starting point of atrophic rhinitis. (5) Atrophic rhinitis, like diphtheria, attacks females more than males, and is a disease of early life. (6) Atrophic rhinitis has been successfully treated by diphtheria antitoxine. (7) In atrophic rhinitis the type of diphtheria bacillus does not alter.

OPHTHALMOLOGY.

The Use of X Rays in Ophthalmic Surgery. By M. S. Mayou, F. R. C. S. (*Lancet*, February 28th).—In this paper the author discusses the uses of x rays in ophthalmic surgery in connection with (1) the localization and treatment of metallic foreign bodies in the globe; (2) rodent ulcer of the eyelids; and (3) the treatment of trachoma-granular ophthalmia. (1) It is of the greatest importance immediately to localize and remove foreign bodies in the globe of the eye as they are the most frequent source of sympathetic ophthalmia, they usually give rise to suppuration, and if left for a day or two they become rapidly encapsulated and often defy extraction with the electromagnet. Skiagraphy is invaluable in these cases. The salient points in connection with localization are: (a) immediate localization, to be repeated if the foreign body is not found; (b) the use of separate plates; (c) care to be taken not to let the cross wires fall within the shadow of the orbit; (d) localization and estimation of size; and (e) the use of the stereoscope for the estimation of shape. In operating for these foreign bodies the best method is to use a small electromagnet. (2) The eyelids, especially the lower, are a common site for rodent ulcer, and, as elsewhere, application of the x rays can bring about a cure. The author holds that they act by producing a local leucocytosis; the leucocytes remove all irritating cells or substances, or encapsule them and prevent their spread. A 5 per cent. solution of carbolic acid is used to dress the ulcers; it keeps them aseptically and accelerates primary reaction. (3) At the present time trachoma is treated by applying some form of irritant, either chemical or mechanical, to the eyelid, producing a leucocytosis. In the x rays we have a method of setting up a leucocytosis with the absolute minimum of destruction to epithelial and other tissues. In this way excessive scar formation is avoided. Further, the effect produced, from a slight leucocytosis to actual gangrene, is under almost perfect control. There is much less deformity in the lid after treatment, the procedure is practically painless, and pannus clears up quickly and thoroughly.

Plastic Artificial Vitreous in Mules's Operation. By E. L. Oatman, M. D. (*Medical Record*, March 7th).—Three cases are reported in which paraffin was used in place of a glass ball. The results on the whole have been encouraging. Dr. Oatman draws the following tentative conclusions from his experience with this new method: (1) When fistula follows the Mules's operation it will close spontaneously if a sufficient quantity of the artificial vitreous can be removed. That which remains will form a good support for an artificial eye. (2) Paraffin used for this purpose is prone to produce fistula by softening and getting between the lips of the wound, or into the track of a suture. These accidents can usually be overcome by proper care. (3) A plastic material, like paraffin, will adapt itself to the inequalities on the surface of the glass shell, and ulceration from pressure is not apt to occur. (4) Paraffin beads are easily prepared, and may be used in special cases in which glass beads of the proper shape or size are not obtainable.

PHYSIOLOGY AND PATHOLOGY.

Abscess of the Liver Following a Simple Ulcer of the Stomach.—M. Leclerc and M. Fanernier (*Lyon médical*, January 4th) report such a case with autopsy findings. They found a large abscess of the liver due to a transportation through the portal vein or lymphatics into the liver substance of the septic products of a simple ulcer of the stomach. There was no direct propagation with the successive steps of perigastritis and suppurative perihepatitis, as may be the case in a hepatic abscess secondary to gastric disease. Rendu, Murchison, Nothnagel, and Andral have reported similar cases. The ante mortem diagnosis in this case, based mainly on the cachexia and the pain, was a gastric neoplasm not causing pyloric stenosis.

On the Thermotactic Movements of the White Blood Cells.—Dr. M. E. Mendelson (*Roussky Vrach*, January 25th) has studied the effect of heat upon the direction movements (*Richtungsbe-wegungen*) of the white blood cells. Hitherto, the movements of these cells have only been studied with reference to the effect of chemical irritants, and, thanks to the numerous researches on this subject, the significance of chemiotaxis in various pathological processes has been fairly well determined. The influence of thermal irritation upon the white cells has a deep significance, however, in view of the changes which variations of temperature produce in the organism. In previous investigations the author had obtained a number of experimental results that show that there exists a thermotactic effect produced on unicellular organisms by variations of temperature. The study of thermotaxis is much more difficult in white blood cells than in the ordinary unicellular organisms. It is very difficult, in fact, sometimes impossible, to produce variations of temperature that can be expected to yield results in small quantities of lymph containing white cells. The experiments also very often fail because the white blood cells very quickly perish outside of their accustomed media, the lymph and blood in the vessels of the body. The author's conclusions from this preliminary study are as follows: The white blood cells possess thermotactic properties, thanks to which they are attracted by high temperature, in other words they are positively thermotactic. This positive thermotaxis is manifest in these cells with temperatures as low as 20° C to 25° C., but only very slightly. It is more marked between 25° C. and 30° C., and reaches its maximum at 39° C. to 39.5° C. No thermotactic influence was noted at temperatures over 40° C., but the cells seemed to move very slightly towards lower temperatures, although not enough to say that there was negative thermotaxis. The positive thermotactic properties of the white cells are of importance in the various pathological processes accompanied by considerable elevations of temperature. It is probable that the leucocytes are attracted to a focus of inflammation by virtue of both chemiotaxis and thermotaxis. Future investigations will show which of these two factors acts more powerfully in the self-defense of the organism.

Proceedings of Societies.

WESTERN SURGICAL AND GYNÆCOLOGICAL ASSOCIATION.

Twelfth Annual Meeting, held in St. Joseph, Mo., on December 29 and 30, 1902.

The President, Dr. JAMES E. MOORE, of Minneapolis, in the chair.

The Evolution of the Treatment of Cancer of the Rectum.—Dr. C. H. MAYO, of Rochester, Minn., read a paper on this subject in which he said that certain definite results were desired in operations for cancer of the rectum, namely, permanent cure, low operative mortality, and a controllable anus or its best substitute. These results were modified by location, stage of progress, and the age and condition of the patient. Previous to 1870 operative treatment had been almost limited to palliation and lumbar colostomy. From 1870 to 1880 there had been a marked advance in all surgery. Drainage methods were developed. Kocher exposed the rectum by the removal of the coccyx, and several perineal operations were advocated. From 1880 to 1890 the development of the germ theory revolutionized surgery, and this period was marked by antisepsis and drainage. More extensive perineal and vaginal operations were advocated, and Kraske made his great advance by resecting the sacrum. The modern surgical treatment was the removal of the rectum, glands, and gland tissue from below, in some cases, but more often by a combined abdominal and perineal method. Through an abdominal incision a low section of the sigmoid was made, this portion of the colon being saved as a faecal container, and the cut ends of the bowel were inverted and closed by a circular suture, rendering the remainder of the operation aseptic. The rectum was separated laterally and below by a peritoneal incision and pushed down with the glands and fat by blunt dissection, the separation being carried as low as possible beneath the bladder, the remainder of its removal being completed through the perinaeum. The sigmoid was freed sufficiently to bring the cut end out of an inguinal McBurney muscle separation opening, the skin incision of which was an inch and a half to one side, to which the end of the sigmoid was sutured. The bowel was also sutured within the abdomen to prevent prolapse, and a pad compression of the skin-covered sigmoid loop gave a fairly controllable anus.

To sum up the main objections of the past, the author said we had: 1, Ineffectual removal with local recurrence, so common in the perineal type. 2, The extensive mutilating character of the Kraske operation before operative conditions were known. 3, The frequent failure of all methods of union of proximal and distal portions of the bowel, which, when united with the destruction of the levator ani and internal sphincter, and the anus saved, represented but one third of the controlling apparatus of the bowel. 4, The frequent formation of stricture, either cicatricial or cancerous, after operation, necessitating inguinal colostomy. 5, The loss of the faecal container in straightening the sigmoid. Sen-

timent, and not chance, had proved the main reason for continuing to place an uncontrollable anus in an inaccessible situation. The gain in the combined operation had been in a selection of the operation appropriate to the case, radical removal *en masse*, with all glands, fat, and connective tissue, or colostomy for palliation and the retention of the sigmoid as a faecal container, the peculiar formation of the anus, giving a fair control in an accessible situation.

Carcinoma Uteri.—Dr. H. C. CROWELL, of Kansas City, Mo., in a paper on this subject, stated that unless the disease was very early discovered, he believed nothing was gained by hysterectomy for carcinoma of the cervix. Later operations might avail in carcinoma of the body of the uterus. The diagnosis should be confirmed by the microscope in the hands of a competent pathologist. The uterus must be freely movable, capable of being dragged down to the vulva. If not, it was quite probable that the disease had involved the uterosacral ligaments and adjacent tissue, making an operation of doubtful utility. If the disease was clearly made out by touch, appearance, and clinical history, it was rarely possible to secure a radical cure by hysterectomy, if the fatal termination was not accelerated. In cases well advanced, his individual experience led him to believe that more days or months, as the case might be, were added to the life of the patient than by any attempt at extirpation, by cutting and scraping away the necrotic tissue down to solid tissue, burning that surface with the thermocautery, and treating subsequently by touching the surface occasionally with 4 per cent. formalin solution. By this treatment disintegration was retarded and hæmorrhage and discharges were checked, enabling the patient to recover strength sometimes to a remarkable degree. Suffering was lessened, and the patient was relieved of the shock and dangers attending more radical procedures. The essayist urged more frequent early examinations of parous women, who should be advised of the expediency of such examinations as a routine safeguard after the age of thirty-six.

Dr. M. L. HARRIS, of Chicago, pointed out the necessity of doing a laparotomy previous to the operation in all cases in which the disease extended high, and the surgeon was not perfectly sure from his examinations that it was limited to the lower part of the bowel. His remarks had reference to Dr. Mayo's paper. This preliminary laparotomy should be resorted to for three purposes: First, for examination, in order to determine whether or not the case was "operable." Second, to facilitate operation, provided one was necessary. The surgeon could decide if it was a case for complete operation by the combined method referred to by the essayist. Third, to perform a colostomy if the case was "inoperable." He thought colostomy was a very valuable operative procedure in many cases.

Dr. HENRY T. BYFORD, of Chicago, thought the author of the second paper (Dr. Crowell) was too pessimistic. Dr. Byford narrated the case of a woman upon whom he had operated more than ten years before for cancer which had involved the entire cervix. The woman was still alive and had not

had a recurrence of the disease. He mentioned a number of cases of carcinoma of the cervix that had recovered following operation.

Dr. H. D. NILES, of Salt Lake City, Utah, said he had recently had a case in which he was in doubt as to whether the stricture of the bowel was syphilitic or malignant. He resorted to such measures as were available, and was still in doubt. He thought in such a case it would be wise to do a colostomy and at the same time explore parts of the bowel. In this case an excellent result was obtained so far as the sphincter was concerned. The patient had excellent control of the bowels. The gridiron incision and the advisability of doing a colostomy, when in doubt, were the points in Dr. Mayo's paper that had impressed him forcibly.

Dr. A. C. BERNAYS, of St. Louis, stated that he had had the opportunity of seeing Dr. Mayo perform the combined operation he had described. The case was one of hard carcinoma, confined to the last portion of the rectum, about an inch above the sphincter. The operation, as executed by Dr. William J. Mayo and Dr. C. H. Mayo, was a beautiful piece of surgery, and anyone who had the opportunity of seeing this operation performed would thereafter resort to it in preference to any other.

Dr. D. S. FAIRCHILD, of Clinton, Iowa, stated that, after having had some experience in operating for cancer of the rectum by the sacral route, and having had but one permanent recovery, he was interested in the combined operation that had been described by the essayist. He was thoroughly convinced that surgeons, after seeing this method of operating, would conclude that it was the procedure which would be adopted hereafter.

Disarticulation of the Hip for Sarcoma of the Femur.—Dr. A. E. HALSTEAD, of Chicago, read a paper on this subject and reported a case, after which he made extended remarks on the diagnosis and prognosis of sarcoma of the femur.

Dr. B. B. DAVIS, of Omaha, called attention to elevation of temperature in cases of sarcoma of the femur. Several years ago he had had a case of sarcoma of the femur, although his first diagnosis was of osteomyelitis of a chronic form rather than sarcoma, simply because of the elevation of temperature at the time, but he soon found out his mistake. In consulting standard textbooks he found no mention was made of elevation of temperature in these cases. It was a symptom which should be remembered.

Dr. JOHN P. LORD, of Omaha, mentioned a case of carcinoma of the neck of the femur. Six or eight months previously, a stationary engineer, forty-five years of age, while pursuing his occupation, sustained a fracture of the neck of the femur from a slight violence. There was a history of alleged rheumatic pains or sciatica prior to this time. After the injury, the patient was taken to his home, was attended by other physicians, who saw him a number of times, and he was treated for this fracture, so that when Dr. Lord saw him it was too late to do the patient any good, on account of marked cachexia. While in a fleshy individual he thought it would be impossible to distinguish this condition by ordinary manipulative

methods, yet with the aid of the x ray, in cases of fracture sustained from comparatively slight violence, the surgeon might be led to suspect the condition and secure the advantage of an x ray examination to detect the early existence of the disease.

Dr. WILLIAM JEPSON, of Sioux City, Iowa, mentioned six cases of sarcoma of the femur, two of which had developed at the upper end of the femur. These two were not subjected to operative intervention. In four cases the disease involved the lower end of the femur, one of which began directly in the tibia, involving the knee joint and then the femur. The three others were of the periosteal type. Three of the four cases were subjected to amputation at the junction of the upper with the middle third. The other one was subjected to primary hip joint amputation. Of the three patients subjected to amputation through the thigh, two died. In other words, two of the three were subjected to secondary disarticulation of the femur at the hip joint. One of these two died, also one not subjected to this operation. Out of six patients there were only two living.

Dr. HALSTEAD said he had seen two cases of spontaneous fracture of the humerus with central sarcoma. Pathological fracture was the first evidence. In the case reported of central giant cell sarcoma, Coley's toxins were used for six months continuously, yet the tumor grew as fast as it did before their use. The patient was also treated by the x ray for six months, without any benefit. In all of his cases of sarcoma the use of Coley's toxins had not been followed by success.

Oblique Inguinal Hernia.—Dr. A. E. BENJAMIN, of Minneapolis, read a paper with this title. He spoke of the treatment of hernia by the early practitioners, saying it was painful, unsatisfactory, and harmful. The present method of operating for hernia, however, was a notable example of the evolution of surgery.

Surgeons had reached a point in hernia operations where a permanent cure was quite certain; still, there were too many methods and a larger percentage of relapses than surgeons should have. Some of the causes of imperfect results were pointed out.

An operation that was not altogether new, but worthy of consideration, was described by him as follows: "The patient is prepared by having the parts shaved the morning of the operation. In doing so infected areas or vessels are avoided, which may result when the shaving is done the previous evening or before the parts have been thoroughly cleansed. The time intervening between the evening and morning of the operation favors a greater multiplication of microorganisms. The bowels are emptied and subsequently kept free from gas accumulation, which lessens the internal pressure. An ordinary incision for a Bassini operation is made. The aponeurosis of the external oblique is slit up to a point opposite the internal ring. The fibres of the internal oblique and transversalis muscles are divided by blunt dissection, thus opening the inguinal canal. The internal oblique and transversalis muscles are found closely connected. They are not separated, but the aponeurosis of the external oblique is carefully and thoroughly removed from the in-

ternal oblique. The lower portion is dissected down to Poupart's ligament, and the transversalis separated from the peritoneum. Such careful dissection and positive identification of structures are an important aid in securing direct apposition and firm union. It corrects all defects of nature in this region. The cord is now raised and silkworm gut sutures introduced, passing through the skin, Poupart's ligament, internal oblique, and transversalis. The loop is made on the lower side of the transversalis. The needle, reentering the transversalis and internal oblique, passes through the skin to the outer and lower side of the cut, near the point of entrance. From three to five sutures are similarly introduced. These sutures pull the internal oblique and transversalis below the shelving edge of Poupart's ligament, and are observed to make a firm barrier against any internal force. The sutures are then tied over rolls of sterilized gauze. The spermatic cord rests upon the internal oblique. The external oblique is then closed over the cord. Interrupted figure of eight sutures are introduced, bringing the external oblique in apposition with Poupart's ligament. This also approximates the skin, and the sutures are tied over a roll of sterilized gauze. The sutures are usually left two weeks."

The author drew the following conclusions from this operation: "1. There are no sutures for the tissues to absorb. 2. There are no additional culture media in which infectious microorganisms may grow and cause deep abscesses. 3. There are no buried, non-absorbable sutures left to irritate the tissues and cause further trouble. 4. There is no necrosis from tight sutures, therefore few, if any, stitch abscesses. 5. The gauze rolls act as elastic cushions, which prevent scars from the sutures. 6. The operation completely closes the breach, and makes a firm wall. 7. All sutures, after serving their purpose, are removed, leaving only the natural supports."

Rupture of the Gall Bladder or Duct from Vomiting, with Rupture of the Appendix in the Same Patient.—Dr. W. W. GRANT, of Denver, reported this case. He also reported two recent cases of appendicular disease, because of the interest connected with drainage and phagocytosis. In connection with these cases, he stated that he was satisfied that he had saved lives after peritoneal extravasation by the liberal use of gauze for drainage. In abdominal operations drainage imperiled the integrity of the abdominal wall, thereby predisposing to hernia. It should consequently be dispensed with as soon as possible. But in the enthusiasm for new theories and facts, in a justifiable belief in the efficacy of hyperleucocytosis, he believed it was not wise to hastily discard surgical procedures which had stood the test of abundant experience.

Acute Yellow Atrophy of the Liver.—Dr. GRANT reported a case. Whether the condition was primarily a general infectious disease of a rare and unusual nature or primarily a local infectious disease of the liver, was not known. The suggestion of an intestinal origin had no distinct foundation. The resemblance to phosphorus poisoning was striking, although the two differed in important particulars. While the urine of both affections might contain

leucine and tyrosine, they were more constant in the former disease. Evidently the disease was rapidly diffused through the circulation, and he stated that future investigations would probably disclose a bacterial origin and nature.

Chronic Pancreatitis and Pancreatic Cyst.—In a paper on this subject Dr. B. B. DAVIS, of Omaha, reported two cases, one of pancreatic cyst, the other of chronic pancreatitis, both of which had previously been subjected to exploratory abdominal section, and the diagnosis of malignant disease of the pancreas made.

In discussing the etiology of pancreatitis, the author stated that infection was considered the determining factor in most cases, the infection being secondary to gall stones, cholecystitis, gastritis, duodenitis, and zymotic diseases, particularly typhoid fever and influenza. It was thought probable that syphilis, alcoholism, and general arteriosclerosis might also cause a small percentage of the cases.

With reference to the diagnosis, great dependence must be placed on the clinical symptoms. Glycosuria, fatty stools, and muscle fibres in the stools, which theoretically ought to be diagnostic factors in pancreatic disease, practically were usually found absent. In cases in which glycosuria was present, destruction of the islands of Langerhans had been found to exist. In all cases in which infection was the causative factor, prolonged drainage of the gall bladder was recommended.

Dr. M. L. HARRIS emphasized the frequency with which stomach troubles preceded chronic pancreatitis. It was possible that stomach troubles, cases of ulcer of the duodenum, were undoubtedly instances of chronic pancreatitis, and might be the result of infection.

Gunshot Wounds of the Stomach.—A paper with this title was read by Dr. J. W. ANDREWS, of Mankato, Minn. The author reported a case of gunshot wound of the stomach in a boy, eleven years of age, upon whom he had operated. The little patient rallied from the shock and did well for the first three days after the operation, when he began to fail, and died on the eighth day. A post mortem examination showed that death was due to septic peritonitis.

In commenting on this and other cases of gunshot wounds of the stomach, the speaker stated that since surgeons of international reputation did not agree as to an immediate operation, he preferred to accept that which might seem less conservative, namely, an immediate operation in all cases where it was reasonably certain that the stomach had been perforated.

Fowler's Position in Abdominal Surgery.—Dr. VAN BUREN KNOTT, of Sioux City, Iowa, contributed a paper with this title. Since this position had been brought to his notice, he had employed it in the treatment of cases of septic peritonitis. He reported five recoveries from diffuse septic peritonitis. These successes were not consecutive, however, no two of them having occurred without an intervening failure. Brief histories of the five successful cases were given, as these were the only instances of diffuse septic peritonitis in which the author had

operated successfully. The Fowler position was maintained for twenty-four hours, unless some special reason for continuing it was present. The head of the bed should be raised from eighteen to twenty inches from the floor. He urged those present, who had not employed the Fowler position, to do so, for he believed that it could do no harm, but in many cases would prove of much value.

(To be concluded.)

Letters to the Editor.

A NEW SERUM TREATMENT FOR TUBERCULOUS DISEASES.

BOSTON, March 12, 1903.

To the Editor of the NEW YORK MEDICAL JOURNAL:

Sir: In the *Progrès médical belge* of February 15th appears an article entitled Contribution à l'étude du traitement de la tuberculose, in the form of a letter addressed to Dr. Charles Jacobs, of Brussels, in which the writer details his successful test of the fluid submitted to him by Dr. Jacobs, who after several years of persistent research has now succeeded in perfecting a remedy which is destructive to the bacillus of Koch without reacting unfavorably in any way on the human system.

Samples of this serum ("biological fluid of a special character") prepared in the laboratory of his private hospital, the Institut Sainte-Anne, were placed in the hands of the writer for test purposes by Dr. Jacobs, and the results are minutely detailed in this eight page, double column communication which well deserves careful perusal.

The subject is a most important one, but I especially desire to call the attention of your readers to the new remedy and the results achieved, as the personality of the discoverer is to me a guarantee of good faith.

Dr. Jacobs himself has used the serum successfully in all forms of localized tuberculous disease of the larynx, lungs, intestines, peritonæum, bones, and glands. He does not present his own results, fearing that he may not be deemed altogether impartial, but disinterested colleagues are asked to make the tests in glandular, dermal, pulmonary, laryngeal, and other tuberculous lesions, seriatim, the results to be published as received.

The first of this series is the report of Dr. Lespine, of Brussels, on the use of the serum in tuberculous lesions in and under the skin, based on the observation of ten cases, four of which are recorded step by step: these dermal lesions he terms "lupus vulgaire, lupus tuberculeux, scrofulo-tuberculeuses dermiques et hypodermiques, et tuberculoses ganglionnaires"—all due to the bacillus of Koch. The cases cited appear to be mainly those of tuberculous glands, especially about the neck, in several instances complicated by large tuberculous abscesses about the trochanter or on the thigh—the old scrofulous, or cold, abscess.

He thinks it to be quite possible that the attenuated virulence of tuberculosis, when localized in the skin, may be unfavorable to the test of a virus intended directly to act on the bacillus of Koch,

and that it will prove more effective in other forms of tuberculosis, in which the bacilli are more active, believing that the curative action is determined by the bacilli in the tissue and correspondent to their number and activity. He observes that under the treatment, latent foci, quiescent indurated nodules, are aroused to activity as by no other agent, and then rapidly reduced; old fibrous nodules are transformed into active inflammatory tumefactions, which soon soften and then cicatrize, disappearing in the space of three weeks, with two injections a week, and that without either local or general disturbance.

The treatment consists of injections of always 2 cubic centimetres of the fluid, with a glass syringe and platinum needle, 5 centimetres in length, under the usual antiseptic precautions, into the subcutaneous cellular tissue, preferably at the lower angle of the scapula, the buttocks, or the abdominal wall; no reaction of any kind, local or general, has followed, neither urticaria nor rise of temperature, and the occupation of the patient has been in no way interfered with.

After the third or fourth injection the outline of gland or tumefaction is more clearly defined on account of the disappearance of the surrounding lymphangitis or œdema, ulcerated surfaces become healthier and cleaner, tuberculous nodules grow brighter, more red, and no longer bleed with every slight friction; the appetite increases, sleep is better, the eye brighter, and the general condition decidedly improved; yet a slight loss of weight is always observed.

After the fourth injection diminution in size is noticeable in some; in others fluctuation appears, and when this is the case a hypodermic needle or aspirator is resorted to for the removal of pus. As much as 6 cubic centimetres was taken from one tumor. Large subdermic abscesses about the knee or on the hip were freely incised.

With about the eighth injection the previous weight has been regained, the general condition is excellent, no more pus is formed, open nodules are cicatrizing, and others are disappearing.

Large tuberculous abscesses yield to the same treatment, though more slowly—requiring attention for many months; whereas tuberculous nodules of the skin and diseased glands, even when single tumors, reaching to a size of 3 × 6 centimetres disappear in from six weeks to three months; when the tumors soften and fluctuation becomes apparent, the contents are promptly evacuated as above described.

A striking indication of the efficiency of the serum is the activity engendered in latent, indolent indurations, which are aroused to intense activity by the injection, inflame, and then take the same course as the more recent ones, terminating either in absorption or in suppuration—if the latter, the pus is evacuated and they soon disappear. The most rapid and satisfactory result is in tumors of recent development, which fade away and disappear without any reaction whatsoever. The treatment is continued until all traces of morbid structure have passed away; sixty and more injections have been used, and a much larger number when the case was complicated by a large abscess.

Dr. Lespine, in conclusion, summarizes the most important points as follows: the injection causes no

unfavorable symptoms whatsoever, either local or general, no urticaria, no pain, no induration, no rise of temperature.

Loss of weight with increase of appetite and general well being follow the second or third injection. Within three weeks the previous weight is regained.

Old lesions which seem to have been cured and remain as indolent tumefactions rapidly react and disappear.

Old lesions, torpid, previously latent, which do not appear cured at once develop a healthy activity with a tendency to disappear with cicatrization in a manner possible by no other treatment.

Recent lesions usually respond promptly at once, enter upon a retrograde metamorphosis, and disappear.

Such are the astonishing results of the new serum treatment, and if further investigation bears them out the conquest of the dreaded bacillus of Koch is assured.

GEORGE J. ENGELMANN, M. D.

EDUCATIONAL MATTERS IN THE STATE OF NEW YORK.

LITTLE FALLS, N. Y., March 16, 1903.

To the Editor of the NEW YORK MEDICAL JOURNAL:

Sir: I was much interested in your leading editorial in last week's *Journal*, entitled, Educational Matters in the State of New York. Will you permit me to state that I totally disagree with you in your conclusions "that it would be best to do away with the present dual system of control, by substituting for it the regents, etc.?" I have no particular fault to find with the regents, Mr. Editor, though many do question their usefulness, but I believe it is the opinion of many of the very best educators in this State that during the quarter of a century's existence of the department of public instruction greater advance has taken place in educational matters, greater improvements in the methods and standard of the teaching force of the State, from the elementary schools upward, than had been made during the whole preceding century under the regents alone.

Twenty-five years ago I heard directly from the lips of so good a man as Dr. Anderson, then president of Rochester University, an opinion of the usefulness of the regents. Then as now the controversy between these departments was raging. Dr. Anderson said in my presence that the regents reminded him of the "paps on a male." "They are excellent as ornaments, but of no use whatever."

Bishops of the Church, railroad presidents, aged and retired editors may be, and we know they are, excellent citizens, but they are as far removed from any knowledge of the educational requirements of this State as is the Czar of Russia. They do not themselves claim to have any close relationship, but they select a secretary who does all the work. It is notorious that the secretary of the regents has never been a prominent educator. You may retaliate by stating "Neither has the superintendent of public instruction." I grant you that. "Two wrongs cannot make a right." But I return to my original statement, that the department of public in-

struction has been a blessing to the educational interests of this State, and it ought never to be *abolished*. I agree with you that dual control must inevitably lead to friction, and the compromise suggested by some, that the regents should have the power of appointment of the superintendent, might be excellent. I should also suggest that the law should define the qualifications of the superintendent, in order that the office may no longer be considered a plum for scheming politicians or given as a reward for political services.

The superintendent should be ex-officio chancellor of the regents. He should be a man of experience in executive positions. He should be an educator above everything else. I do not know why a bishop of the Church might not have many of these qualifications, but he should also be young, vigorous, and progressive.

In any effort to consolidate the two departments, and so avoid strife and friction, every physician, as well as all good citizens should be willing to assist, but I am opposed to abolishing the department of public instruction simply to please the regents. In other words, the plan you propose or advocate is, in my opinion, a decided step backward.

CHARLES H. GLIDDEN, M. D.

Miscellany.

Smallpox and Vaccination.—Dr. Henry Barnes, in his presidential address at the sixty-fourth annual meeting of the British Medical Association, said: "The mortality from smallpox at the end of the last [eighteenth] century was extraordinary. It accounted for nearly one out of every seven deaths in Carlisle. Now [1896] the disease is almost entirely unknown. During the last twenty years, out of 15,664 deaths registered in Carlisle, only four were due to smallpox, or one in 3,916."

The Physiological Importance of Plenty of Light.—The habit of keeping the window shades down, which is so common a practice, even when there is no direct sun glare on the window, is a direct setting at naught of physiological principles, which teach us the importance to health of both body and mind, of an abundance of light. Sir James Crichton-Browne, in an address on Light and Sanitation, delivered at the Jubilee Conference of the Manchester and Salford Sanitary Association, says: "I have spoken of light as purifying our atmospheric environment and as freeing us from certain superficial parasitic distempers, and I wish now to remind you that it has still more deep and intimate human relations of a sanitary nature; for light is a necessary condition of mental and bodily well-being. Its tonic psychical effects are everywhere recognized. All properly organized men and women love the light, and it is not merely to children that darkness brings with it a sense of powerlessness, danger, and alarm. Essential for all the purposes of life, for the supply of oxygen on which existence depends, light is a universal stimulus. Falling on the eye, it sets up in the brain functional activities, associated with intel-

lectual and emotional states, and attempts have been made to discriminate the psychical effects of its different elements, and to employ colored light in the treatment of mental disorders. These attempts cannot be said to have been hitherto very successful, but still it is curious to note that many independent observers—indeed, I believe, all observers who have written on the subject—have arrived at the same conclusion, that the blue rays have a depressing, and the red rays an exciting effect on the brain. . . . But whatever the therapeutic values of the different rays of light may be, white light, Heaven's own mixture, is the normal psychical atmosphere, and variations in its intensity have probably widely diffused constitutional effects."

Corneal Tattooing for Opacities.—Dr. J. L. Borsch (*Pennsylvania Medical Journal*, November), in a paper read before the Medical Society of the State of Pennsylvania, says that with reference to the technics of the operation, some writers advise mixing India ink and water into a thick paste and rubbing some of this on the cornea; into this, needle pricks with a bundle of from four to eight tattooing needles are made, and the epithelium is destroyed. This pricking process is to be continued until the opacity has disappeared. That is the way not to tattoo. To disguise the deformity resulting from a marked corneal opacity requires the operator to be somewhat of an artist; for, in order to tattoo an iris and pupil on a complete leucoma, one must proceed in the same manner as in drawing a pen picture. No one in drawing such a picture would take from four to eight pens and unite them in a bundle, but would select a single pen; so in tattooing one ordinary sharp needle should be used. Again, in order to make a picture, one would not first smear ink all over the paper and then endeavor to draw the object with a pen devoid of ink; therefore, in tattooing a leucoma of the cornea, the opacity should not be covered with ink and the needle thrust blindly in through it.

A complete opacity of the cornea is tattooed as follows: The coloring matter is made from the finest quality of Chinese ink in stick (preferably that made at the Imperial manufactory at Pekin or Shanghai). This is to be rubbed up with a solution of sublimate, 1 to 5,000, until a liquid, the consistence of which is a little thicker than ordinary black ink, is obtained. The instruments required are a needle in a holder, a small metal spatula from which to take the coloring matter, an eye speculum, and a conjunctival forceps. A fine rat-toothed forceps and a pair of small curved scissors may also be sterilized, in order to excise any tattoo spot which may accidentally be made in the conjunctiva.

Anæsthetize the eye, let the patient look straight ahead and make a needle point at the exact spot that is to correspond to the centre of the pupil. Dip the point of the prepared needle in the liquid Chinese ink and make a number of thrusts, in a circle, around the central guide point straight into the leucoma, until a uniformly black pupil is obtained, equal in size to that of the other eye in an ordinary light. This may be all that can be accomplished at one sitting, if the patient becomes nervous or

bleeding is abundant. Remove excess of ink by allowing boric acid solution to flow over the eye—never rub tattooing.

Next the diameter of the iris of the sound eye is measured and guide points corresponding thereto are made on the leucoma to outline the new iris; then a circle, which is to represent the limbus, or outer margin of the iris, is tattooed around the pupil. One must be guided by the color of the iris of the sound eye; if it is gray or blue, the limbus is made light; if the sound eye is dark gray or brown, the limbus must be made heavier.

Imitate the striations of the iris of the sound eye by making needle-thrusts obliquely into the leucoma, radiating from the pupil, stopping from time to time to observe the effect of the tattooing (which is best judged from a distance of about thirty inches). The darker tint of the iris is obtained by making perpendicular thrusts with the needle between the striations; the more closely the needle-pricks are grouped, the darker will be the iris, and the more disseminated they are, the lighter it will be. In this way the eye can be made to appear to assume the color of the iris covered by the leucoma. In many cases it is impossible, except on closest scrutiny, to determine that the eye is tattooed and not natural. What a boon this is to a person whose living depends upon appearance, or to a young lady whose future happiness may depend upon the dissimulation of an unsightly spot on the eye.

Optical tattooing is performed in cases of leucomas or nebulae, which, by their interference with the proper formation of the retinal image and the dazzling they cause, reduce visual acuity. If the leucoma is small and covers the pupil, a sphincterectomy is made opposite a clear space in the cornea and the portion of the opacity that encroaches upon the new pupil is tattooed. The operative field is illuminated and a condensing lens is used to enable the operator to see better the border of the opacity, which is carefully circumscribed by tattooing a line around it, and then the outlined area is made intensively and uniformly black with a series of fine tattoo points.

Remarkable improvement in the vision follows this procedure. In cases where an iridectomy has been performed for a corneal opacity, and where the gain in sight is slight, de Wecker has seen the vision improved from $\frac{1}{8}$ and $\frac{1}{6}$ to $\frac{1}{3}$, to $\frac{2}{3}$, and even to normal after tattooing the opacity in this manner.

During the years that the author was connected with the de Wecker clinic, where more tattooing was done than in any other that he has seen, it has never been his lot to observe a single case of sympathetic or even severe inflammation following this operation, such as one or two authors have mentioned. It is true that the technics differed from that of other operators. Many a patient who is wearing an artificial eye could have retained his natural one and not been a slave to a prothesis (which is so prejudicial in many ways) if the possibilities of tattooing were more generally known. Many eyes that are now rendered useless by corneal opacities could be made useful by a sphincterectomy and proper tattooing.

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TERMINAL COMA IN DIABETES.*

By ARTHUR R. ELLIOTT, M. D.,
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PROFESSOR OF MEDICINE, POST-GRADUATE MEDICAL SCHOOL.

Mr. Chairman and Gentlemen:

In accepting your secretary's kind invitation to be with you this evening and to take part in the proceedings of your meeting by discussing the subject of diabetes, I found myself in somewhat of a quandary to know which aspect of this very inclusive subject I should select to present for discussion. After some thought I have selected for the subject of my rather hastily prepared paper, the question of the terminal coma of diabetes, my choice being determined by some unusual cases which have recently come under my observation.

First, let me say a word or two regarding the toxæmia of diabetes mellitus. I think it may be said that the peculiar symptom, glycosuria, has fascinated the attention of clinicians entirely too much and, as a result, the management of the diabetic state has become largely a question simply of the suppression of the glycosuria, unmindful of the fact that this is only one manifestation of the disease, and that the glycosuria *per se* is not the most important factor, but that the depraved nutrition which precedes and causes the glycosuria is the threatening element.

The work of physiological chemists shows that the diabetic converts just as much potential energy into living force as a healthy individual, there being in this respect no difference between them. The great loss of sugar, a valuable heat and energy producing material, places the diabetic, however, at a distinct disadvantage in a nutritive way, and its loss must be compensated for by destruction of the albumin of the body to an excessive degree, thus causing the emaciation and acid toxæmia so characteristic of the diabetic state.

Among the toxins in the blood in diabetes we include the superfluous amount of sugar and the products of organic disassimilation, among which appear prominently the free fatty acids, acetone, and diacetic and oxybutyric acids. In mild cases of the disease,

sugar is probably the only one of these bodies present in distinctly pathological amount. Its importance as an noxious agent may be easily over-rated. Its worst effect may be that, by its constant presence in the nutritive fluids, it may interfere somewhat with the nutrition and functional power of the tissues, and so operate to cause lowered power of resistance to toxic and infectious agencies. Of itself it is powerless to produce coma or other grave toxæmic manifestation. The real danger of the disease exists in the presence in the blood of the acid toxins already mentioned, where they accumulate and produce finally the peculiar form of coma first described by Kussmaul and now known as diabetic coma.

I have to present to you this evening reports of four fatal cases of the disease which have recently occurred in my practice, and which, I think, illustrate in an interesting manner some of the different varieties of the terminal coma that may close the scene in diabetes of the severe grade. My descriptions will be short, merely sufficient to develop the points which I wish to illustrate.

CASE I.—D. L., a young man of English parentage and birth, who had lived a part of his adult life in Hong Kong, China. Until he reached the age of thirty-three years, he enjoyed good health, and although not exceptionally temperate, was more given to excess at the table than with alcoholics. His weight, when in good health, was 160 lbs. He was referred to me during the fall of 1900 by a professional colleague and gave a history of diabetes of two years' standing, its onset dating from soon after an obscure febrile attack of uncertain origin. His weight was 129 lbs., a net loss of 31 lbs. since the disease began. There existed polyuria, thirst, excessive appetite, dryness of skin, constipation, morning puffiness of the face, and some œdema of the feet at the end of the day, which latter symptoms, taken in conjunction with a faint character of the cardiac sounds, a small, compressible, fast pulse, and evidence of cardiac embarrassment upon exertion, were interpreted as indicating the presence of a weak heart. The urine contained four per cent. of glucose, a trace of albumin, and a few renal casts; it was strongly acid and gave a marked ferric chloride reaction for diacetic acid, smelled strongly of acetone, as did also the patient's breath, and had a specific gravity of 1040. Under treatment, the glycosuria fell to 2 per cent. and fluctuated for some weeks between 2 and 3 per cent., the acetonuria and diaceturia continuing and the patient's general condition changing but little. Strychnine was administered in a routine way, and a single dose of codeine each night at bedtime, to relieve the nervous insomnia.

* Read before the Grundy County Medical Society at Morris, Illinois, February 10, 1903.

Tonic doses of digitalis were afterwards introduced as an additional safeguard to the heart, because of the acceleration of its beat and other evidence of inadequacy. Early in the following April, after having been under observation for a period of five months, with slow but steady failure in flesh and strength, the patient, contrary to my orders, indulged in a long and somewhat fatiguing drive on a day when the wind was strong, and afterward walked up two flights of stairs to his apartment. He seemed greatly exhausted and complained somewhat of shortness of breath. Shortly afterward, and during the momentary absence of the nurse, he fell into a deeply comatose condition, with barely perceptible radial pulse, cold extremities, and almost inaudible heart sounds. No blowing dyspnoea was present, as is the case in diabetic coma. The patient died in about two hours after the commencement of the attack.

This was a well-marked case of diabetic collapse, the diabetic heart coma of Von Schmitz, induced by myocardial degenerative change, probably fatty in character, under the influence of the depraved diabetic nutrition. It is not to be confounded with coma diabeticum, from which it differs in the absence of blowing dyspnoea—its short duration, the profound cardiac symptoms, and the preceding history of weak circulation. Deaths from this cause are not uncommon in diabetes, but are seldom distinguished from true diabetic coma. This is especially difficult to do when, as in this case, the acid toxines (acetone, diacetic and oxybutyric acids) are present in the urine. The previous history, however, will usually give the hint. This accident is the supreme effect of the weak diabetic heart.

CASE II.—Patient was an able lawyer, forty-five years of age, who had been diabetic for some time before consultation with the writer. He attributed the disease to worry and there was not lacking as contributory factor a tendency to overindulgence in alcohol. His urine contained 2 per cent. of sugar, a marked trace of albumin, and frequent hyaline and granular casts; no ferric chloride reaction was present. The urea and other urinary solids were not as high as I expected to find them, and there was a decided arterial fibrosis with some cardiac hypertrophy. Evidently, a nephritis complicated the diabetes and might easily become the more threatening condition. The patient remained under observation but a few days when I lost track of him, and upon inquiry learned that he had fallen into the hands of a "graduated tenotomy" specialist, who had him in prisms and had told him to tear up his diet forms. Three months later I was called one morning early, to find my former patient deeply comatose, the face suffused, pupils contracted, pulse one of tension, though of comparatively small volume. There was slight oedema of the extremities, and the urine drawn by catheter was full of albumin. He was having convulsive seizures rapidly following each other and soon after my arrival died in the midst of one of these paroxysms. No ferric chloride reaction was

present in the urine, which contained but a trace of sugar, and the patient was not acetonaemic.

This case illustrates very beautifully what may happen in any case of associated glycosuria and granular kidney if the dietetic and other hygienic precautions are neglected. The uncontrolled character of this patient's habits under the liberal policy of the prism specialist had thoroughly irritated the kidneys and started into activity a latent nephritis, which, under the influence of further congestion, induced probably by catching cold, speedily gave rise to profound uraemia.

CASE III. of my series is essentially different from either of the preceding ones. Patient was a man aged seventy-six years, who had been under my observation more or less constantly for a period of ten years. He had become diabetic at about the age of fifty-five, the glycosuria at first being of low grade and intermittent in character. At the time when he first came under my observation his glycosuria was constant. There was no ferric chloride reaction and the urine, in addition to the sugar, contained minute traces of albumin and a few scattered hyaline casts. The glycosuria proved amenable to dietetic treatment and the patient soon learned so well the exact limits of his assimilative power, that he was able without any particular professional supervision to maintain the urine in an almost sugar-free state. As the years passed, however, the glycosuria gradually proved less controllable and the signs of nephritis increased. Arteriosclerosis advanced with some rapidity and the heart presented indications of a secondary hypertrophy. The summer of 1901 was spent by the patient at an Eastern sanitarium, where he received the nursing and care necessitated by his increasing invalidism, and notwithstanding a slight dry gangrene of the tip of both great toes, he returned to Chicago in surprisingly good general condition, and so remained until March of 1902. On March 19th, his urine was found to contain $2\frac{1}{2}$ per cent. bulk of albumin, nearly 4 per cent. of sugar, a large number of casts, and with ferric chloride a faint brownish red reaction was apparent. A week later the patient began to manifest signs of diabetic toxæmia, became somnolent and difficult to arouse, was obstinately constipated, and his breath smelled perceptibly of acetone as did the urine, which now presented more typically the Gerhard reaction for diacetic acid. The glycosuria underwent some abatement and the coma gradually deepened until there were but two or three lucid intervals in the twenty-four hours. On March 29th, three full days after the onset of the coma symptoms, the urine measured 70 ounces for the day and contained a total of 301 grains of urea; there was a glycosuria of 2 per cent., one per cent. of albumin, and marked reactions for acetone and diacetic acid. Under the influence of cathartics, colonic irrigations with normal saline solutions, and large quantities of sodium bicarbonate, both by mouth and per rectum, the coma gradually improved, and by April 6th the patient was able to sit up for two or three hours each day, was taking nourishment nicely, and was entirely free of his acetonaemia.

and diaceturia. This astonishing improvement in the face of all indications was another and an unusual tribute to the endurance of the aged diabetic, a fact with which I had been impressed on former occasions. I may mention here that throughout this severe toxæmia the heart's action was good at all times, the pulse being slow and of high tension. My patient's progress was most satisfactory for a few days but only for a few days. On April 15th, an increase in the albuminuria was observed and also a fall in the amount of urine, which had previously ranged high. Headache and loss of appetite was complained of and the tongue was coated. The patient quickly lapsed again into toxæmia, but this time there was no acetone or diacetic acid in the urine, the sugar underwent no increase, but the albumin increased to 5 per cent. bulk, and instead of coma there were repeated convulsive seizures of light grade, obstinate hiccough, contracted pupils, and marked oliguria. The pulse remained slow, but became increasingly tense and the blowing systolic murmur of relative mitral insufficiency was faintly heard over the heart. Despite our treatment the patient died on the third day after the onset of these symptoms—a typical death from uræmic toxæmia, not a vestige of the former diabetic toxæmia being manifest during its progress.

So far as I am aware, no case similar to this one in its associated toxæmias is recorded in medical literature, and it is but another verification of the old saying that there is no end to the surprises met with in the progress of the chronic degenerations.

CASE IV.—A retired business man of ample means had been for a period of two years under the care of my friend, Dr. D. W. Rogers, of Chicago, for diabetes. The patient's age was fifty years and the disease was apparently of nervous origin, having arisen at the end of a season of great business responsibility and worry.

The glycosuria was persistent but moderate in grade, thirst, emaciation, and other dystrophic symptoms being present in light degree. Dr. Rogers stated that he found his patient faithful in his co-operation, and that with a moderately strict diet and the administration of jambul the disease was held well in check. On December 2nd last, the patient was thrown from a moving street car, his head coming sharply in contact with the ground. There was slight epistaxis and the patient was conveyed in an insensible condition to his home, a condition from which he did not recover for some hours.

The recovery at that time was only partial, the patient remaining for the most part in a lightly comatose condition from which he was easily aroused and answered questions shortly but intelligently, complaining considerably of frontal headache. Pulse and temperature were somewhat elevated, the pupils slightly contracted but equal in size and reacting to light. Polyuria existed and the cupric oxide test showed sugar to be present in the urine. No paralytic symptoms existed and the patient swallowed liquid nourishment without difficulty. On the day following the accident, the patient was examined by Dr. D. R. Brower, who, in the absence of all pressure

symptoms and signs of external injury, was unable to arrive at an exact estimate of the cranial injury and, in view of the diabetic history, was in some doubt as to the cause of the coma. On December 5th, the seventh day of his illness, I saw the patient in consultation with Dr. Rogers and Dr. Brower. For three days previously the patient's mental condition had undergone some improvement. He slept a good deal but was easily aroused, answered questions clearly but impatiently, and had developed no signs of cerebral pressure. At the time of our examination the patient's memory and intelligence were excellent, but he lapsed immediately into a lightly comatose condition as soon as his attention was not solicited.

The reflexes, with the exception of the patellar, were normal. Pulse was 116, soft and compressible, and the heart sounds were feeble but not otherwise impaired. The bowels were obstinately sluggish, and the patient had vomited several times during the preceding twenty-four hours and hiccough was troublesome. The urine secured at the time of visit reached a total of 128 ounces for the preceding twenty-four hours, had a density of 1025, and contained a total excretion of 716 grains of urea. There was 2.6 per cent. of sugar, a marked acetone reaction and typical red coloration with ferric chloride; a trace of albumin was also present and numerous hyaline casts in the microscopic sediment. Evidently, the injury to the central nervous system had served so to aggravate the diabetes as to convert a previously rather mild disease into a severe and threatening danger.

The possibility of the coma having a diabetic element was considered and rejected, although such an eventuality was kept in mind. A guarded prognosis was given. Some general improvement resulted from free intestinal evacuation and, for three days following, the mental condition remained practically unchanged. On the morning of December 9th, the eleventh day of illness, severe left hemiplegic convulsions developed, death following in about two hours and a half; no autopsy was obtainable. Twenty ounces of urine, drawn by catheter, shortly before the patient's death, presented the same general character as former analysis, already detailed.

Such a case as this is full of interest as one of the accidental forms of coma in diabetes and is of special interest from a medicolegal view point, for, without external marks of injury and the element of traumatism being unknown, the clinical diagnosis would in all probability have been that of diabetic coma.

I might, to accentuate the contrast, present to you in addition to the above irregular types of coma in diabetes, the history of a typical case of coma diabeticum, but the picture of that well-known and minutely described condition is probably vividly familiar to you and I should like to reserve my few remaining minutes for some remarks upon the treatment of coma in diabetes. As a final comment on the above series of cases, I need not emphasize how clearly they demonstrate how various in origin may be the terminal coma of this disease. In the severe

forms of the disease, which last as a rule but two years or even less, and in which the denutrition is great and progressive and the toxæmia of exceedingly high grade, the coma which usually closes the scene is almost always truly diabetic. Occasionally it may be of the character of Case I, a cardiac collapse, induced by overtaking a weak and badly degenerated heart. The possibility of such an accident renders it important to make repeated examinations of the heart and take measures to support that organ on the appearance of symptoms of inadequacy. Of the mild prolonged cases of the disease, those of the gouty and obese types, a large proportion develop renal complications as a result of the prolonged irritation of the kidneys. Seldom do these patients die of diabetic coma, but many of them do succumb to uræmic coma and many to cerebral accidents produced by arteriosclerosis. These are facts that it is well for us to bear in mind in framing our estimate of any case of diabetes.

In the treatment of diabetic coma, prophylaxis is of the first importance. It is far easier to anticipate coma than to cure it when once it has arisen. It is not a condition which develops insidiously, but is heralded by obvious signs, days, weeks, even months before it develops. The earliest indication of the trend of events is the appearance in the urine of the acid toxins. The first of these to appear is usually acetone, which is readily detected by the sweet chloroformic odor it imparts to the breath and urine of the patient. Subsequently, diacetic acid and β oxybutyric acids make their appearance and occasion the beautiful burgundy red coloration which follows the addition of a solution of perchloride of iron to the urine, and which is known as Gerhardt's reaction. To the careful observer the appearance of this reaction intensifies the conviction previously awakened by the presence of acetone, that the patient is drifting towards toxæmic coma.

I should like to diverge for one moment to emphasize the clinical importance of these reactions, and especially the ferric chloride reaction. In all cases of diabetes this test should be applied regularly to the urine and should invariably comprise part of every analysis. It indicates that albumin disassimilation has begun, and marks the dividing line between the mild and severe types. As carbohydrate disassimilation is the essential characteristic of diabetes mild, so albumin disassimilation is the essential element of diabetes grave. The appearance of this reaction is of the gravest import and its persistence points to the early probability of coma. It becomes our duty to prevent this complication as long as possible.

First of all, I would say with the deepest conviction that the rigidity of the diet should be relaxed. We may no longer hope to overcome the glycosuria

by dieting because the carbohydrate molecule of the breaking down albumin will perpetuate it. The patient may have as much bread, green vegetables, and potatoes as he likes, providing his wants be not too immoderate. He should be protected against all disturbing nervous influences, from fatigue and cold. Our next paramount duty is to stimulate elimination so as to promote the excretion of toxins and by this means prevent their accumulation to a dangerous degree. The patient is encouraged to drink as much water as possible, laxatives are administered, and copious colonic irrigations with normal saline solution should be given daily. Meanwhile if any sedative or narcotic drug is being taken, it should be at once discontinued. I believe in the administration at this stage of simple alkalies such as sodium bicarbonate in doses which do not interfere with gastric digestion.

When the prodromes of coma appear, the patient must be immediately put to bed, a stimulant given, and if the heart is weak, a good sized dose of digitalin had better be administered subcutaneously. If the bowels have not been previously well evacuated, a laxative is given and a high soap suds enema for cleansing purposes. Alkalies which are the physiological antidotes of the acid toxins, should be at once begun in enormous doses, as much as it is possible to get the patient to take, and normal salt solution charged with sodium bicarbonate may be used freely by bowel and subcutaneously. In desperate cases the alkaline solution. (Lépine dissolves 7 grammes of sodium chloride and 10 grammes of sodium bicarbonate to the litre of water) may be directly injected into a vein, but this method offers little advantage over the digestive and subcutaneous routes. Oxygen may meanwhile be administered freely by inhalation.

By means of such measures as these, if we are to believe the reports of excellent authorities, a few cases have been benefited, and even temporarily rescued from the deepening coma. Such an outcome is unfortunately too rare to justify any modification of the unqualifiedly bad prognosis in such cases.

103 STATE STREET.

The Urinary Relations of Formaldehyde.—Dr. Walter G. Smith (*Practitioner*, February) in Notes on Urinary Chemistry says that to the clinical physician the relationship of formaldehyde to urine presents three points of practical interest: (1) It yields with urea a white precipitate (probably methylene-urea), which might easily be mistaken for leucin. (2) If present in urine, formaldehyde will reduce the copper test, and so introduces a fallacy in testing for sugar. (3) Formaldehyde interferes with the detection of small amounts of albumin by means of heat and acetic acid.

SYPHILITIC PSEUDOTABES.
REPORT OF A CASE;
THE DIFFERENTIAL DIAGNOSIS OF
TABES.*

By JOSEPH COLLINS, M. D.,
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(*Concluded from p. 539.*)

When we come to the interpretation of the clinical side of the case, few difficulties are encountered. From the patient's standpoint his disease antedated his death about eighteen months. Although he had suffered previously from shooting pains in the legs and loss of sexual desire and capacity, it was not until incontinence of urine and weakness of the legs set in, that he considered himself ill. The cause of the incontinence and the weakness of the legs is very apparent when we look at sections of the cord in the lumbar and sacral regions. The degeneration of the blood vessels impaired the integrity of the entire central part (sensory and motor) of the reflex and motor mechanism of the bladder, the spino-vesical centre in the lumbosacral cord.

Later, when the disease of the vessels had become more profound and more extensive, the centre which presides over the rectal sphincters became unable to perform its function, and incontinence of *fæces* was added to the clinical picture. The weakness of the lower extremities, the giving way of the knees, in short the conditions which interfered with locomotion, were not the result of disorder upon the sensory side of the spinal cord alone, as the ataxia and impairment of locomotion is in tabes, but were the result of this, plus disease of the ventral horn cells secondary to the pathological changes in the blood vessels. In other words, there was motor impairment due to involvement of the primary motor neurone as well as motor impairment secondary to deficient sensorial conduction through the posterior root nerves to the beginning of the peripheral motor neurone. The only explanation that can be offered for the absence of atrophy is that the changes in the cells of the anterior horns were not sufficiently advanced to cause trophic changes at the periphery. They were, however, of sufficient severity to condition functional disturbance. A similar explanation holds for the ataxia and uncertainty of the upper extremities, while the disease of the blood vessels, which has been described as occurring in the oblongata, especially around the seventh, ninth and tenth cranial nerve nuclei is sufficient to explain the impairment of speech which the patient had.

The sensory disturbances during the last eighteen months of life, and the paræsthesias and pain before that time, were the direct result of the pathological process in the posterior columns of the cord which crowding between and encroaching upon the posterior roots interfered with the performance of their function or destroyed them. It is quite possible that there was degeneration of the peripheral vessels of the body also, which may have had something to do with the production of the sensory disturbances.

Why the pupils do not respond to light in tabes has never been satisfactorily explained. Many theories have been propounded, but none of them is adequate or entirely satisfactory. The pupillary light reflex was lost in this patient. The most probable explanation of the Argyll Robertson pupils in this case is that it was due to irritation of the centre for contraction of the pupil in the floor of the aqueduct at the level of the anterior corpora quadrigemina. Although sections were not made through this level, those from the region just below showed distinct vascular changes similar to those that have been described in the oblongata.

The lesions in this case were more extensively distributed over the cord than they are in cases of genuine tabes, and they were entirely different from those of tabes. Nevertheless, the symptoms in this case were caused by the encroachment of the lesion in the meninges and cord upon the posterior columns and the posterior roots. The essential pathological difference between this case and one of genuine tabes, is that in the latter the posterior columns are diseased as the result of a primary decay of the posterior root fibres, which may begin within or without the cord; wherever it begins, the fibre decay of the posterior columns is segmentary, more or less symmetrical and confined to certain localities. The lesions in the case presented herewith were not symmetrical or segmentary, were not evenly distributed, and were apparently incidental to the vascular degeneration and the new tissue formation.

This case shows that it is not possible always to distinguish spinal cord syphilis from cases of genuine tabes, and that not every case in which loss of knee-jerks, disturbance of cutaneous sensibility, impairment of the sphincters, impotency, and Argyll Robertson pupils exist, is a genuine case of tabes. Very little can be said of the differential diagnosis of this condition from tabes. A case similar to the one related would be diagnosticated as tabes if encountered to-day. It may be that the prolonged duration of the paræsthesia and the pain, and the protracted period of impotency before the occurrence of other and more significant symptoms of tabes had shown themselves, taken in conjunction with the rapidity

with which loss of the capacity to walk and incontinence of urine came on, might make one doubt the correctness of the diagnosis of tabes, but it cannot be gainsaid that genuine tabes often develops in this way. The weakness of the legs was perhaps the one symptom which should have suggested that the disease was not tabes. But weakness of the legs without spasticity is not a symptom of syphilis of the spinal cord, *i. e.*, of forms of spinal cord syphilis that are recognized. The more I see of spinal cord syphilis and tabes, the more am I convinced that it is oftentimes impossible to distinguish between these two conditions, particularly in the beginning of the disease. The difficulties of diagnosis are well illustrated by the following case.

CASE II.—Mrs. X., married, thirty-eight years old, became infected with syphilis nine years ago. The local lesion was typical and she was in the care of a physician. There were no secondaries. Three years later she became what she terms “lifeless and ambitionless.” She had no particular symptoms save that she did not have energy to do anything or go anywhere; life seemed to be becoming burdensome. She went to a physician who treated her with potassium iodide, and while she was taking this, and about four years after infection, ulceration over both ankles and tibiae developed. This disappeared and she remained in fairly good health for two or three years when she again began to feel depressed and lacking in strength and energy. She went to Hot Springs, Arkansas, and took treatment there for about three months. Soon after her return she noticed for the first time difficulty in passing water. At times the stream could be started only with considerable effort, at other times there was incontinence. Later, she began to complain of easily induced fatigue of the legs, as if the feet were very heavy and it required a considerable effort to drag them along. Both symptoms were attributed to uterine trouble by her medical adviser and she was persuaded to undergo curetting. She remained in bed for a fortnight after the operation, and when she attempted to get up at the end of this time she found that she could not walk. When she attempted to walk her legs bent under her, her feet flopped around, and she described it “it seemed as if I were walking upon air, not upon the floor.” She remained in bed for the next year. A few months after the operation an ulcer developed over the lower part of the sacrum, which her physician described as a bed sore, but as there are no indications at the present time, either in its appearance or its surroundings, that it was other than an ulcer, it is probable that it was not a genuine bed sore. Since the operation the necessity of being catheterized has always existed. For the past six months symptoms paralleling those of rectal crises have been very annoying. At the present time there is slight ataxia of position; some weakness of the legs; the right knee-jerk is elicitable only on reinforcement, the left is a little more sluggish than normal; and although the pupils contract on exposure to light, the response is very sluggish and through a comparatively small arc. There are no sensory disturbances.

This is an excellent example of one of those cases in which it is impossible to say whether the lesion is genuinely syphilitic, or parasyphilitic. These cases are seen frequently; some of them improve under antisymphilitic treatment, others do not. In attempting to distinguish them we should remember that, although one clinical type of syphilis of the spinal cord has been differentiated by Erb and is commonly known by the designation “syphilitic spinal paralysis,” differentiating this type by no means exhausts the possibilities of further differentiation. It is not unlikely that soon we may be in a position to distinguish another type with perhaps the same clearness as that attending the form distinguished by Erb.

A case similar to mine from a clinical point of view has been published by Brasch. (*Neurologisches Centralblatt*, 1891.) The patient, a man, forty-nine years old, who had been infected with syphilis at twenty-eight, and treated in the customary way, fell ill about a year before his death with the following symptoms: Increasing stiffness and pains in the legs, disordered function of the vesical and rectal sphincters, and attacks of vomiting. Examination showed unsteadiness of gait, ataxia of the lower extremities, Romberg symptom, analgesia of the legs with preservation of tactile sensibility, loss of the knee-jerks and incontinence of urine. The diagnosis of tabes was made. Shortly afterward, active psychical symptoms indicative of general paresis appeared. During the two weeks that preceded death, speech disturbance characteristic of general paresis, dementia, and Argyll Robertson pupils were noted. The anatomical investigation showed diffuse and systemless degeneration of the spinal cord, which, in the upper lumbar and lower dorsal, reminded one of the degeneration found in tabes. In addition to this there were disseminated circumscribed pachymeningitis and leptomeningitis, gummatous deposit in the right and left temporal lobes, multiple encephalomalacia, and disease of the blood vessels throughout the central nervous system, more pronounced in the spinal cord than elsewhere, which corresponded to syphilitic endarteritis as depicted by Heubner. Aside from the mental symptoms, which were acute epiphenomena to the disease of the spinal cord, the case is not unlike the one that I report. The duration of the disease was briefer, but the spinal cord symptoms were quite the same, save that in my case there was no spasticity. The morbid process in the cord in Brasch's case was more intense than in mine, a fact in keeping with the difference in the duration of the two cases, and in his case there was secondary systemless degenerations. The changes in the bloodvessels in Brasch's case were those characteristic of luetic endarteritis. In my case the vas-

cular changes may have been induced by syphilis but they need not have been, for they are not pathognomonic.

DIFFERENTIAL DIAGNOSIS OF TABES.

This leads to a consideration of one of the most difficult problems in diagnosis, viz., the differentiation of syphilitic pseudotabes (see definition p. 533) from genuine tabes. This problem is the more difficult because of the fact that the majority of cases are what have been called mixed cases, *i. e.*, cases in which the lesions of tabes and exudative syphilis, especially meningitis syphilitica, exist in the same specimen.

Syphilis of the cord and meninges may display itself clinically in very different ways. The commonest syphilitic disease of the spinal cord is that now universally known as syphilitic spinal paralysis (Erb), the uncommonest guise for it to assume is that of tabes. Syphilitic pseudotabes can sometimes be diagnosticated when symptoms of tabes occur in an individual who has had syphilis, especially when they occur within a few years after the infection and when the course of the disease is atypical. The clinical picture may be considered atypical if the symptoms develop rapidly and irregularly: *i. e.* (1), if one or another symptom is of disproportionate severity, or the clinical picture changes abruptly by the displacement of one prominent symptom by another in a different part of the body, caused by disease of a different segment or system of fibres in the cord, such as third nerve symptoms, coming on suddenly after severe rhachialgia, or the occurrence of other cranial nerve symptoms with tabes. (2) If the tendon-jerks behave peculiarly, particularly the knee-jerk, *i. e.*, absence of the jerk on one side and exaggeration on the other, return of the knee-jerk on one or both sides after it has been unelicitable for a long time. (3) When there occurs the superimposition upon symptoms of tabes of symptoms bespeaking disease of the lateral portion of the cord or the simultaneous appearance of such symptoms, is suggestive of syphilitic pseudotabes. When such symptoms are associated with unilateral mydriasis and unilateral reflex iridoplegia, the suspicion of syphilitic disease should always be aroused. (4) Whenever there is considerable or permanent improvement under antisymphilitic medication. There are to be found in the literature of tabes, reports of cases in which the symptoms have been very much benefited, and the disease even cured, by the administration of mercury and iodide. These cases are to be looked upon, I think, as examples of pseudotabes syphilitica. No other explanation seems to me acceptable in such a case as that reported by Stark (*Duoedecom*, 1892, VIII 11 ja 12. P. 230 Joulukuu), which recovered under protracted treatment by potassium iodide in

large doses—180 grains a day. It is generally admitted that potassium iodide in such quantities is decidedly injurious in true tabes. Optic neuritis occurring in a patient with symptoms suggesting tabes, secondary optic atrophy, or any sort of optic nerve affection that improves under antisymphilitic medication should suggest syphilitic disease of the cord, not parasyphilitic disease. This is well shown in an article by Eisenlohr (*Arztlichen Verein Hamburg*, September 25, 1888), in which he reported the history of two patients who had what seemed to be tabes. It was demonstrated by the autopsy that there was no systemic disease of the cord: the affection of the posterior columns was secondary to specific meningitis. In one case the disease involved the posterior columns and also the root zone at certain levels of the cord. In the other case, the posterior columns were completely involved by the disease which extended along the cord only to a very limited extent. In one of Eisenlohr's cases, the optic nerve was the seat of a gummatous perineuritis, in the other case there was simple degeneration of some of the cranial nerves (*e. g.*, the acoustic), which seemed to have indicated primary parenchymatous degeneration. (5) Finally, the association of motor paralysis (save transient ocular palsies) with the symptoms of tabes, be it dependent upon lesions in the brain, oblongata, or cord, is nearly always proof that we are dealing with a genuine syphilitic disease.

The last point is well illustrated by a case recorded by Oppenheim (*Berliner klinische Wochenschrift*, 1888, No. 53). A syphilitic woman thirty-one years old had had for many years a complex of symptoms made up of ocular palsies, immobile pupils, ataxia of the lower extremities, incontinence of urine, loss of the knee-jerks, and disturbance of sensibility. In addition to these symptoms, which bespoke involvement of the spinal cord, she had tachycardia, paralysis of the vocal cords, paroxysms of coughing, dysphagia, and vomiting attacks. The diagnosis of tabes was made. After treatment by mercury and potassium iodide the ocular palsies and pupillary disturbances disappeared, and the bulbar phenomena abated. Later the clinical picture changed entirely: the lower extremities became spastic and paretic and the tendon jerks exaggerated. The patient died from cancer of the breast. The autopsy showed genuine syphilitic disease of the spinal meninges, which was most developed around the spinal cord roots, but which in many places extended around the cord. The posterior columns were neither exclusively nor predominantly affected. Instead of the expected syphilitic meningitis at the base of the brain, there was found a polioencephalitis of those nerve nuclei which in tabes are oc-

casionally diseased, and in addition a simple atrophy of the ascending vagus root.

As an example of a case in which a diagnosis of pseudotabes of syphilitic origin might legitimately have been made, the case of Valentin (*Berliner Gesellschaft für Psychiatrie und Nervenkrankheiten*, December 12, 1898) may be cited. A man, forty-six years old, who had syphilis, developed gastric crises, disturbance of gait, diplopia, retention and incontinence of urine, which were considered to indicate tabes. Later, there was made out on examination sensitiveness on pressure over the spinal column, paresis, ataxia and some loss of the sensibility of the lower extremities, loss of the left patellar reflex, and immobile pupils. The right patellar reflex was increased at first but lost later. There was reaction of degeneration in different muscles of the upper extremity. The autopsy revealed, in addition to syphilitic changes in the liver and the spleen, endarteritis syphilitica, cervical meningomyelitis, sclerosis of the lateral tracts in the dorsal cord, and beginning tabes in the lumbar cord. The ordinary symptoms of tabes plus muscular weakness, paresis, or spasticity indicates with much accuracy that the morbid condition upon which these symptoms are dependent is a syphilitic exudative lesion of the meninges and cord, predominantly of the posterior columns, with slight implication of the lateral portions of the cord. If pupillary inequality and immobility on exposure to light and in accommodation are added to this complex of symptoms, the diagnosis of syphilitic pseudotabes can be made with reasonable certainty.

Tabes may likewise be complicated by meningitis of syphilitic origin without the former being dependent upon the latter. F. Pick has reported such a case (*Festschrift zu Ehren Von Phillip Josef Pick*, 1898, ref. in *Neurologisches Centralblatt*, 1899, p. 839). A young woman, twenty-eight years old, developed gradually the clinical picture of tabes, so that at the end of five years it was typical save for a double optic neuritis. The autopsy showed basal meningitis and profound chronic meningitis of the spinal cord with deposits of caseous masses in the meninges, obliterating endarteritis, sclerosis of the posterior columns, decreasing as it was traced upward in the cord, and slight symmetrical degeneration in the middle of Burdach's column. The author regarded the meningitis as syphilitic, and believed that it was a complication of tabes. The clinical symptoms seemed to fit in with this diagnosis, as the most intense headache and disturbance of vision came on a year only before death. But then it may be said that these were merely evidences of the involvement of the basal meninges, the blood vessels and the spinal meninges having been diseased long before the basal meninges were involved.

The occurrence of exudative syphilis with what seemed to be tabes is substantiated by the cases reported by Sachs (*New York Medical Journal*, January 6, 1894) and by Dinkler (*Deutsches Zeitschrift für Nervenheilkunde*, Vol. III., 1892). The patient of Sachs was a man forty-five years old whose symptoms constituted a fairly typical clinical picture of tabes. The autopsy showed a diffuse sclerosis of the posterior columns, extending from the lower cervical to the lumbar enlargements, most marked in the cervical and dorsal segments, and not to be distinguished from that of tabes. In addition there was syphilitic leptomenigitis which invaded the cord at various levels and occasionally invaded the sclerotic area. There was also a typical syphilitic arteritis. Sachs is of the opinion that the degeneration of the posterior column preceded the leptomenigitis by a considerable interval, a syphilitic process having been superimposed upon the sclerosis; and from the appearance of the lesions this conclusion would seem to be a legitimate one. Dinkler's patient was a man forty-two years old, who, ten years after luetic infection, developed lancinating pains in the legs and chest, girdle feeling, Argyll Robertson pupil, loss of sexual power and retention of urine, analgesia and sluggishness of the tendon reflexes. The symptoms were not ameliorated by mercurial treatment and the patient died of hæmorrhage of the brain. On autopsy there were found in different localities under the pia small dissecting aneurysms, one of which had ruptured into the fossa of Sylvius; syphilitic disease of the pia and arachnoid; inflammatory and gummatous formations in the pia (submiliary gummata) and diffuse cerebrospinal hæmorrhage. In addition to these, there were the typical lesions of tabes. Such cases as that reported by Nageotte and Lenoble (*Bulletin de la Société Anatomique de Paris*, 1895, June and July) may also be considered as "mixed" forms. Aside from the ordinary findings of tabes there was a myelitic area (6-7 mm. long) at the level of the left fourth thoracic nerve, chronic meningitis, and round cell infiltration of the vessels of the cord. In the middle of the softening was a capillary thrombus. Through the focus the nerve fibres had lost their myelin, but the axis cylinders were intact (as in multiple sclerosis).

Other cases which may be put in the same category, and which seem to show that the lesions of tabes and exudative syphilis occur more frequently than has been supposed are those reported by Virchow (*Die Krankhaften Geschwülste*, Vol. II, p. 438). Duplaix (*Annales de dermatologie*, 1884, p. 219), Hoffman (quoted by Kuh, *Archiv für Psychiatrie*, Vol. XXII), and Minor (*Zeitschrift für klinische Medizin*, 1891, p. 401). It is unnecessary to cite the details of these cases here. In every one of them, and

in those whose abstracts are presented above, it is legitimate to conclude that there was genuine tabes plus exudative syphilis, *i. e.*, parasyphilitic and syphilitic lesions. But in such a case as that reported by Ewald (*Berliner klinische Wochenschrift*, No. 12, 1893), no such interpretation is justifiable: A man forty-two years old, whose history gave no indication that he had been infected by syphilis suffered for about eleven years from lancinating pains in the legs. Save for a disorder of the knee, he considered himself well. On examination, Robmberg's sign, ataxia of the lower extremities, loss of the patellar reflexes, Argyll Robertson pupils, disturbance of the pain, temperature and pressure sensibility in the lower extremities, and arthropathy of the left knee joint were made out. This knee joint underwent phlegmonous inflammation and the patient died from sepsis. On microscopical examination of the spinal cord, there was found an inflammatory, gummatous, thickening of the pia and the arachnoid in its entire circumference, thickening of the connective tissue prolongations into the cord, especially in the vicinity of the posterior columns, and an increase of the interstitial connective tissue. The neuraxones throughout the cord in transverse section had a normal appearance, save in the posterior columns in which the connective tissue overgrowth had destroyed some of them. Even here they were quite well preserved; the only place in which nerve fibres seemed to have entirely disappeared was around the normal appearing cells of Clark's column. The blood vessels were thickened and there was round cell infiltration most marked in the posterior columns. This case differs from mine particularly in the change in the meninges. Although there was distinct thickening of the pia in my case on microscopical examination, the thickening was the result of round cell infiltration and not of new tissue formation. This case of Ewald serves to show (1) that denial of syphilitic infection by the patient does not by any means prove that syphilis has not existed, and (2) that lesions of the posterior columns of the lumbar cord similar to those found in tabes secondary to syphilis of the cord, vascular and parenchymatous, are apparently not to be distinguished therefrom. This case may be looked upon as syphilitic pseudotabes. So may the cases reported by Schwarz (*Zeitschrift für Heilkunde*, Vol. XVIII, 1897), which show that visceral syphilis, syphilitic meningitis, and gray degeneration of the posterior columns may coexist. He inclines to the view that the meningitis and the degeneration of the posterior columns is not merely a coincidence, but that the meningitis was the primary process to which the root degeneration was secondary.

Moebius (*Twentieth Century Practice of Medicine*, Vol. XI) says that "the designation pseudotabes

syphilitica is to be rejected, for in the cases in which it has been employed the condition has not been a new disease, but rather tabes with meningitis syphilitica, that is a complication in which analysis not synthesis is in place." This statement, like many others of the same author, is to be taken as an expression of "temperament." The case reported herewith is an exquisite example of "pseudotabes syphilitica" in which tabes did not exist. It must therefore be admitted that there is such a disease as pseudotabes syphilitica, and that some of these cases present great difficulty in the way of differentiation from true tabes.

It should not be forgotten that the tabetic spinal cord may become the seat of other diseases which are in no way to be regarded as complications; for instance, Fischer has reported a case (*Festschrift zur Feier Nes 50 jährigen Bestehens des Stadt Krankenhauses Dresden-Friedrichstadt*) in which acute cervical myelitis developed in a patient with tabes who had been led to undertake self-suspension for the relief of pain. The trauma of this procedure was responsible for the myelitis. In fact it is quite probable that some of the foci of softening that have been described in one or more parts of a cord, that is the seat of degeneration typical of tabes, may be looked upon as accidents rather than complications of tabes.

TABES AND MULTIPLE NEURITIS.

The differentiation of tabes from other diseases and conditions than syphilitic pseudotabes offers very little difficulty, unless the tabes is atypical in its development and manifestations, particularly if the effort at differentiation is based upon a thorough physical examination. Failure to differentiate tabes from multiple neuritis and from flat feet, the disease and the condition which in my experience are most frequently mistaken for tabes by the general practitioner, is nearly always the result of failure to make a careful examination. Every case of multiple neuritis that parallels the symptoms of tabes so closely that it is liable to be confounded with it, can readily be differentiated by the elicitation of tenderness on pressure over the nerves, by the symmetry of the sensory and motor impairment, by the reaction of degeneration of the nerves and muscles if the pathological process has advanced to any considerable degree, and by the absence of the Argyll Robertson phenomenon. Even though the latter sign is absent in from 15 to 25 per cent. of all cases of tabes, it is unfortunate to make the diagnosis of tabes in any doubtful case in which it does not exist. The diagnosis of tabes may be made without hesitation when the pupils do not contract to light, and when such symptoms as those accompanying multiple neuritis are present. By this I mean to say that the Argyll Robertson phenomena plus the clinical features of multiple neuritis never occur with multiple neuritis alone.

There are some cases of diabetic polyneuritis in which the pupils are not so responsive in their reaction to light as they are normally, but the true Argyll Robertson pupil is never present in these cases. Besides, an examination of the urine, which reveals sugar, will at once put the physician on the right track to the interpretation of the symptoms, which may resemble those of tabes.

The following case may be cited as an example of pseudotabes caused by alcohol, tobacco, or both:

CASE III.—A. S., born in Italy, thirteen years of age, goes to school. He has taken beer and wine often in excess since he was two years old. For three years past he has taken snuff. Aside from these, his childhood has been normal. He learned easily and was always promoted.

The illness for which he is brought to the clinic is of about six months' duration, although it has become so severe as to incapacitate him only during the past month or so.

The initial symptom was unsteadiness of gait and station. The mother has remarked that he walks with short steps, the feet wide apart, and that he falls frequently, especially when he hurries. The next symptom to develop was ataxia of the upper extremities, which prevented him from using a pencil or a pen. In school he had to grasp the pencil with both hands in order to write or make figures legible. This came on about four months ago, the right hand was affected two or three weeks before the left. The ataxia is well indicated by the accompanying illustration. The next symptom to develop was an alteration of speech. He began to speak slowly and to articulate in a jerky fashion. Sometimes it was difficult to understand what he said. Close inquiry shows that mental symptoms preceded all of these, and that the boy (who had previously been bright and active mentally) had become dull and sluggish. He did not learn his lessons and his teacher reported that he had got stupid. At home he became quite morose and easily upset in emotion. The functions of the bowels and the bladder seemed to be performed normally, and the patient did not complain of pains.

Examination shows a fair sized, well built boy, who stands with his feet wide apart, the abdomen protruding, and the shoulders thrown back. When he attempts to pick up anything, such as a pin or a coin, to button his clothes or to perform any other purposeful act there is pronounced ataxia of the hand. With the hands extended the fingers spread there is marked tremor from seven to ten times per second. There is also some tremor of the tongue, but none of the face. When the patient attempts to stand with his feet together he falls; the fall being the result apparently of weakness of the legs rather than from loss of balance. The gait is paretic and ataxic. There is no foot-drop. The knee-jerks, as well as the ankle, elbow, and jaw-jerks are livelier than normal. The nerve trunks do not seem to be particularly tender on deep-seated pressure. The nerves of the forearm may be considered slightly tender, but they are not particularly so. The pupils are equal, of moderate size and respond very slowly to light, but respond promptly in accommodation. Examination of the sensory sphere shows that there is slight tactile

anæsthesia of the legs and arm; pain and temperature senses are undisturbed. Deep sensibility is normal.

The patient was put under treatment, consisting of enforced rest, massage, faradaic electricity, and the internal administration of iron, potassium iodide and opium in small doses. At the end of a month recovery had so far progressed that he was able to walk without much evidence of ataxia and was able to grasp a pencil in one hand. In two months' time he appeared to be quite well, and as he did not return to the clinic after that time, it may, I think, be inferred that he remained well.

In this case the symptom may be looked upon as intoxication caused by the tobacco and alcohol, more the former possibly than the latter, and the changes in the nerves did not go on so far as structural alterations.

TABES AND FLAT FEET.

Every year I see patients, both in dispensary and in private practice, who have had the diagnosis of tabes made and whose only infirmity is flat feet. Naturally, these patients do not have the pathognomonic physical accompaniments of tabes, and if the trouble is taken to demonstrate this, and to make an examination of the feet, no one can possibly confound this condition with tabes. It would not have been referred to here unless the matter had been recently forced upon my attention by the observation of two cases, a man and woman, suffering from flat feet in whom the diagnosis of tabes had been made. Nothing can safeguard the recognition of tabes save thorough, methodical examination.

TABES AND MULTIPLE SCLEROSIS.

The disease of the spinal cord which is most readily mistaken for tabes is an atypical form of multiple sclerosis. When the sclerotic patch or patches occur in the posterior columns, the symptoms that result are those of tabes, and so long as the sclerotic areas are confined to those columns, the clinical picture continues to be that of tabes. It is only when they develop in other parts of the cord, and produce characteristic symptoms such as tremor, nystagmus, speech disturbance, and possible increase of the tendon jerks in the upper and cephalic extremity (knee-jerks and ankle-jerks being lost on account of the lesion of the posterior columns), that the disease can be differentiated. Even then it requires repeated observation and considerable study.

TABES AND PARESIS.

Now and then the physician encounters cases in which the symptoms and signs point with equal directness to locomotor ataxia and general paresis, and in these cases it is quite impossible in the beginning to decide which one of these diseases is going to develop. One must await the occurrence of symptoms more typical of the one or other disease before

giving a positive opinion. It is particularly in cases of high tabes with which more or less speech disturbance is apt to come with the difficulty in making this differential diagnosis present. It may be said, that every case with symptoms and signs of tabes, in which mental symptoms occur early, is very likely to eventuate in general paresis. Still, I have amongst my histories two cases in which such symptoms occurred that remain to-day typical examples of tabes; the mental symptoms having quite disappeared.

It is stated in the books that tabes has to be differentiated from neurasthenia, hysteria, hypochondriasis and aberrant forms of exophthalmic goitre, but I do not recall having had such experience save in one instance in which periodic attacks of nausea, vomiting, and pain (gastric crises) preceded the typical symptoms of tabes by a number of years.

None of the above enumerated diseases can be confounded with tabes if diagnosis of the latter is founded upon the characteristic condition of the pupils and tendon jerks. In conclusion, it may be said again that tabes need not be mistaken often for any disease if time and care are given to a thorough physical examination.

PRACTICAL POINTS ON INTUBATION OF THE LARYNX FOR CROUP, WITH A REPORT OF THIRTY-SIX CASES.*

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Before reporting my cases I shall point out a few practical rules which I have been able to verify in my own experience. Before this audience it would be entirely superfluous to enter into the history of intubation, the development of which we owe entirely to the genius of our late member, Dr. Joseph O'Dwyer, of this city. In 1885 he published a brief account of his method, with a description of his instruments.¹ How thoroughly he had done his work can be recognized by the fact that both the instruments and technique have been but little changed for the better in the past eighteen years.

Indications for the Operation.—When in the course of laryngeal disease we note that the breathing is becoming difficult, as shown by prolonged inspiration, a pulse slowly but progressively increasing in frequency, with more or less calling into

play of the auxiliary muscles of respiration, we are face to face with signs of such importance that we must be ready to offer operative intervention should it be required.

When in addition to the above mentioned we note marked restlessness, with sinking in of the supra-clavicular and intercostal spaces and the substernal region with each inspiration, while at the same time the alæ nasi expand and contract, we have symptoms of great gravity, which, in my opinion, should be relieved to prevent exhaustion and possible death by heart failure, if not by asphyxia. If this state of things is allowed to continue, very likely soon we shall notice on auscultation of the chest that the vesicular murmur is lost over the lower parts of the lungs posteriorly. Soon moist râles will be found, for, as O'Dwyer has said, if the lungs cannot aspirate air, it will not be long before they will aspirate fluid in its stead. Moreover, this condition of congestion greatly favors the development of pneumonia.

I wish to insist here upon a point which is often overlooked by those who have had but little experience in the treatment of these cases—and thanks to the early use of antitoxine, the experience of us all is daily diminishing. This is in regard to cyanosis. In my experience, except when dyspnoea has come on very rapidly or when some pulmonary complication, such as pneumonia or œdema, exists, marked cyanosis is not the rule at that stage of laryngeal obstruction when operative interference is most likely to prove efficacious. The patients are generally pale white, and not blue, although there may be slight blueness of the lips and finger nails. He who waits for general cyanosis as the cardinal indication for operative interference in laryngeal stenosis due to diphtheria will often find that he has waited too long. It must be kept in mind that the heart is in many cases already weakened by the toxins of the disease and incapable of bearing the additional strain put upon it by the strenuous muscular activity necessary to draw air through the narrowed passage of the larynx.

The cough is croupy and there is more or less complete aphonia usually. But even hoarseness may be absent while asphyxia is imminent. The presence or absence of these symptoms probably depends upon the extent of involvement of the vocal cords themselves.

The size of the tube to be used depends upon the size of the patient, but as a general rule the size for a given case should be that number next above the age of the child. For example, a child two years old usually requires tube 3. When a tube is coughed out, the next larger tube is generally inserted, should reintubation be necessary

* Read before the Society of the Alumni of the City (Charity) Hospital, February 11, 1903.

¹ O'Dwyer, J. Intubation of the Larynx. *New York Medical Journal*, 1885, xlii, 145-147.

(Case II). When a tube has to be replaced after extraction, I have generally used the next smaller size, especially if I thought that the recurrent stenosis was due to œdema following relief of the pressure made by a too closely fitting tube. A change in the size of a tube also has the advantage of

ing to withdraw it, from its having become twisted. The double string should be as long as the handle of the introducer, and may be knotted. The majority of patients should be intubated while sitting erect on the lap of an assistant; some are in such dire extremes that raising them might prove fatal.

Number of case.	Age of patient.	Duration of disease before admin. of antitoxine.	Duration of laryngeal symptoms before intubation.	Units of antitoxine administered.	Doses of antitoxine.	Re-intubation.	Complications.	Recovered.	Died.	Tube remained in the larynx.
		days.	days							days
1	22 mos.	17	3	3,000	1	yes	bronchial diphtheria	.	1	.
2	5½ yrs.	7?	1+	3,000	1	yes	coughed out tube	1	.	5
3	5½ yrs.	7?	1	3,500	2	twice		1	.	18
4	2 yrs.	4?	4	5,500	2	twice	pneumonia	1	.	13
5	2½ yrs.	7	7	4,000	1	no		1	.	5
6	3 yrs.	6	2	3,000	1	no		1	.	4
7	4 yrs.	4	1	4,000	2	no	pneumonia	.	1	7
8	4 yrs.	4	4	4,000	1	no	paralysis	1	.	4
9	3½ yrs.	14	14	3,000	1	no		1	.	5
10	2½ yrs.	3	1	1,500	1	no		.	1	.
11	12 yrs.	14	3	9,000	3	no	severe parenchym. nephritis	1	.	2
12	3½ yrs.	2	1½	6,000	2	yes		1	.	5
13	3 yrs.	7	?	3,000	1	no		1	.	5
14	3½ yrs.	1	1	4,000	1	no	pneumonia	.	1	.
15	2½ yrs.	7+	1	12,000	2	no	bronchial diphtheria	.	1	.
16	5½ yrs.	1	1	6,000	1	twice		1	.	18
17	17 mos.	?	1½	5,000	1	once	pneumonia	1	.	12
18	3½ yrs.	2	2	2,000	1	no	coughed out tube	1	.	6
19	22 mos.	5	1	2,000	1	no		1	.	4
20	6 mos.	?	?	2,000	1	yes		1	.	5
21	38 yrs.	5	1	103,000	3	yes	bronch. diph.	.	1	.
22	4 yrs.	6	1+	4,000	1	yes	sepsis and bronch. diph.	.	1	.
23	4 yrs.	3	1	2,000	1	no	coughed out tube	1	.	3
24	3¾ yrs.	4	4	8,000	2	no		1	.	5
25	7 yrs.	4	1	3,000	1	no		1	.	5
26	1½ yrs.	?	1	6,000	1	no		1	.	5
27	2 yrs.	?	?	8,000	2	no		1	.	8
28	20 mos.	1	1	2,000	1	no	bronch. diph.	.	1	.
29	18 mos.	3	2	2,000	.	once		1	.	9
30	3 yrs.	?	1		.	no	pneumonia.	.	1	.
31	4½ yrs.	?	3	6,000	.	twice		1	.	13
32	1½ yrs.	?	?	6,000	.	yes		1	.	12
33	17 mos.	?	3	2,000	.	no	bronch. diph.	.	1	.
34	6 yrs.	5	2	6,000	2	once		1	.	6
35	5 yrs.	7	7	3,000	1	no		1	.	5
36	2 yrs.	5	5	4,000	2	no		1	.	5
								26	10	

TABLE OF DR. TAYLOR'S THIRTY-SIX CASES OF INTUBATION FOR CROUP.

changing the points of pressure in the larynx and trachea, particularly in the latter.

The string should be strong and stiff, preferably of braided silk or waxed flax. In two of my cases (IV and XXV) the string broke on attempt-

These latter had best be intubated while lying supine across the lap of the operator with the head supported so as to be partly extended, or lying upon the bed with a rolled sheet under the neck and properly restrained. I never pin up the patient in a blan-

ket, as we see portrayed in most of the pictures in our text books. This method is terrifying, awkward, and quite unnecessary. The child sits erect on the lap of one assistant, who grasps the forearms just below the elbows and restrains the patient's lower limbs between the knees if need be. A second untrained assistant grasps the child's head firmly with both hands and, as has been graphically said, suspends him from his head. The head should be slightly extended and held too firmly to allow of the slightest deviation to either side.

The eyes must be to the front. The gag should now be introduced on the left side of the patient's mouth and opened sufficiently wide to allow of the necessary manipulations. The string hangs loose. The left forefinger of the operator is now quickly passed down to the ary-tænoid cartilages and held on their tips as a guide. Then, keeping the introducer carefully in the middle line, with a gentle sweep of the handle, the end of the tube is made to touch the pulp of the finger on the ary-tænoids, when by elevating the handle of the instrument rather sharply and exercising very gentle downward pressure the tube will enter the larynx. In performing this manipulation the handle of the introducer is at first almost parallel with the patient's body, while at the end it is perpendicular to it. The end of the tube describes a gentle curve at first and then goes straight down into the larynx.² Occasionally it has seemed necessary to hold the tube in contact with the vocal cords for a second or so to wait for a possible spasm to pass. Force is not required to send the tube home, if a tube of the proper size has been selected. If the tube does not enter the larynx, it should be withdrawn and another gentle attempt made after the patient has had a short rest. Repeated gentle attempts are preferable to a prolonged one and liable to do far less harm. If the handle of the instrument is not kept in the middle line, the tip of the tube will likely enter one of the ventricles of the larynx, when if force be used a false passage can readily be made. The usual error is to introduce the tube into the œsophagus. In most cases it requires but slight experience to know that the tube has entered the larynx by the whistling sound and the spasmodic cough which follow, together with more or less relief of symptoms. If there is any doubt about it, it is easy to put the finger into the gullet when the tube can be felt in the larynx when in position; moreover when the operation has been successful it will be noted that the string is not growing progressively shorter as the tube sinks lower and lower; again, the tube cannot be pressed

down farther by the tip of the finger; it is also perfectly possible to feel the tube in the trachea on palpating the throat; if the child is given a drink, he will almost surely strangle if the tube is in the larynx. In regard to the epiglottis, it is a small affair in young children and can generally be disregarded. If it should get in the way, it can easily be elevated by the guiding finger. When the tube has gone home, the finger is transferred from the tip of the ary-tænoids to the side of the head of the tube and holds the latter in place while the obturator is being released and withdrawn. The obturator should first be drawn upward until the knee is reached when the handle of the instrument should be depressed and the distal portion of the obturator made to ascend in a straight line until it is clear of the tube, when the handle should be still further depressed and the instrument withdrawn from the mouth. As soon as I am satisfied that air enters the tube freely, I cut the string, untwist it, and withdraw it, at the same time putting the left forefinger on the head of the tube to prevent its being pulled out.

Sometimes breathing is much interfered with by the presence of tenacious mucus and detritus. In this event the administration of a teaspoonful of raw whiskey or brandy will usually cause a paroxysm of coughing and so clear the tube. Sometimes a flapping sound, indicating the presence of partially detached false membrane, may be heard. Then it is advised by some that the string be left attached, if the case is to be left in the hands of the untrained. The presence of the string excites cough and leads to continued efforts on the part of the patient to withdraw it. Sooner or later it is almost sure to be chewed in two even though it were first placed carefully between the teeth. Dr. R. H. M. Dawbarn has suggested that it be passed through the nose in such cases.

Some of the dangers of intubation are: (1) Asphyxia from too prolonged attempts to introduce the tube. (2) Making a false passage. (3) Pushing down false membrane.³

Pushing down false membrane constitutes a real though rather infrequent danger. When expulsion of the membrane does not immediately follow removal of the tube (Case XXVI), tracheotomy may become necessary. Such necessity did not occur in any of my thirty-six cases.

Sometimes it will be found that the patient can inspire, but that expiration is impeded or impossible. This is due to valvular action of a piece of partially detached membrane at the lower orifice of the tube. In such cases, when the chest has been

² Waxham, F. E. Intubation of the Larynx. *Sajous's Annual and Analytical Cyclopædia of Practical Medicine*, 1899, iv, 160-180.

³ Brown, Dillon. Dangers and Accidents of Intubation. *Medical Record*, 1887, xiii, 403.

distended by several inspirations, if the tube is suddenly withdrawn by traction on the string, after giving a teaspoonful of brandy to produce cough, the false membrane will be expelled (Case XXII). If this is found ineffectual, two courses have been suggested: (1) To make use of the short O'Dwyer foreign body tubes for an hour or two. (2) Tracheotomy.

Extubation with the O'Dwyer instrument is certainly more difficult, requires more skill than intubation, and should never be attempted by one who has not had considerable experience on the cadaver. Those who apprehend difficulty may find it advisable to use Dillon Brown's modification of O'Dwyer's tube. This has a small loop posteriorly into which a thimble with a small hook on it (to be worn on the forefinger) is intended to be inserted. I have never used the thimble, but am sure the presence of the wire loop facilitated the introduction of the extractor in my earlier cases.

Expression⁴ I employed successfully once, but failed with it the second time. It is much more uncomfortable for the patient than the use of the O'Dwyer instrument in skilled hands. The forefinger of the left hand should be inserted into the pharynx while the forefinger and thumb of the right hand press on the sides of the trachea at the lower end of the tube: this will start the tube and cause it to be lifted into the pharynx, when it is to be seized by the left forefinger and pulled forward on to the dorsum of the tongue.

Before attempting extubation, another tube is to be got ready, so that it may be immediately inserted should reintubation become necessary (Cases XVI and XXVII). The thumb screw is first properly set. The patient is held as for intubation and the gag is inserted. The left forefinger feels for the posterior margin of the head of the tube, and the point of the instrument is first made to touch the pulp of the guiding finger, then by elevating the handle of the instrument slightly, so as to direct the point slightly forward, it will enter the tube. The middle line must be strictly adhered to. The blades are then dilated and the tube drawn first upward and then forward.

From what I have read on the subject it would seem that repeated unskillful attempts at extraction are a frequent cause of so called retained tube.

Feeding.—Nursing infants can often continue to nurse without much trouble. Older children will generally experience considerable difficulty, at least for a day or two, unless the Casselberry method is

resorted to.⁵ This consists in having the child's head lower than his body, so that he swallows up hill, so to speak. I now usually accomplish this by inverting a chair so as to make an inclined plane at an angle of about 45°; on this a pillow or blanket is placed and the child lies with his head down and feet up.

Fluid diet can generally be taken in this position if administered slowly with a medicine dropper, spoon, or feeding cup. If fluids cannot be taken, semisolids, such as junket, blancmange, wine jelly, ice cream, vegetable jelly, and the like, can often be swallowed without difficulty. After the last portion of food has been given in the Casselberry position, the patient should be encouraged to swallow several times in order to get rid of what has run into the nasopharynx so far as possible. Once or twice I have resorted to rectal feeding and gavage (Cases IV and VI).

Those to be entrusted with the care of the case should be instructed to encourage the child to cough and so clear the tube should respiration become noisy. Occasionally the tube will become occluded by detached membrane (Case II). This usually leads to spontaneous expulsion, but may not do so. In Cases XXII and XXIX, when the breathing became unsatisfactory, I was sent for and on removal of the tube found it almost entirely occluded by membrane.

Should sudden asphyxia occur in the absence of the surgeon, it has been advised that the child be inverted and slapped on the back of the chest, after the manner employed by domestic nurse maids for foreign body in the throat. I usually leave such directions, but fortunately this means of relieving asphyxia has not yet been made use of in my cases.

Many autopsies by Northrup⁶ have shown that the tube most frequently produces ulceration at the base of the epiglottis, at the cricoid ring, and at its lower end on the front wall of the trachea. When reintubation is required, by using a tube of a smaller size the points of pressure are changed and tissues which have been pressed upon by a too tightly fitting tube are enabled to regain their tone. When we have reason to believe that recurrent stenosis is due to the presence of oedematous granulations at the base of the epiglottis or on the arytaenoepiglottidean folds, the use of a smaller tube with a built-up head will often cure the condition.

Hard rubber tubes are to be preferred to those of metal, as the former do not become encrusted

⁵ Casselberry. A New Method of Feeding in Cases of Intubation of the Larynx, by Position, Head Downwards on an Inclined Plane. *Chicago Medical Journal and Examiner*, 1888, lvii, 201-203.

⁶ Northrup, W. P. Laryngeal Diphtheria: Intubation and Pathological Anatomy; Report of 165 cases. *Medical Record*, 1886, xxx, 645-650.

⁴ Bonain, A. *Traité de l'intubation du larynx dans les stenoses laryngées aiguës et chroniques de l'enfant et de l'adulte*. Paris, 1900, 264 pp., 12mo.

in spots with calcium carbonate. The deposits are capable of causing abrasions which may lead to the formation of granulation tissue.

In reporting the following cases I have set forth my difficulties and failures, as well as my successes, in the order in which they occurred. Most of these cases were in the poorer class of tenements; only five of the entire number of families could afford the services of a trained nurse. All of these thirty-six patients were operated on at the request of the attending physician. I have never refused to intubate because I regarded a case as hopeless. This has spoiled my statistics, but has saved one or two lives. I report thirty-six intubations with ten deaths. Repeated examinations failed to show the presence of the Klebs-Loeffler bacillus in Cases XVI and XX; therefore for statistical purposes they should be left out. We have then thirty-four cases of laryngeal diphtheria with ten deaths, a mortality of 29.4 per cent. In Cases I and XV the patients had been intubated by other operators before I saw them, and one of them had been abandoned as beyond hope; both died. In Cases XV, XXI, XXVIII, and XXXIII, the patients already had marked evidences of bronchial diphtheria when intubated. The tube in each of these cases relieved the dyspnoea to some extent and helped to produce euthanasia. In Case VIII the patient died ten days after removal of the tube, from sudden heart failure. In Case XXII the attending physician deemed it inadvisable to administer more antitoxine in spite of the fact that the diphtheritic process was rapidly extending. No case of retained tube occurred. The longest time a tube remained in the larynx was eighteen days, the shortest, in a successful case, thirty-six hours.

I wish to express my thanks to Dr. Dillon Brown for having taught me intubation on the cadaver and having given me much valuable advice on difficulties as they arose in practice.

CASE I.—A boy, aged twenty-two months, had had diphtheria for seventeen days when seen by me. Intubation had been attempted several times without success. No antitoxine had been administered until the day when I saw the case in consultation with a second physician who had taken charge after the first doctor had "given it up." There had been aphonia for three days, together with restlessness and sleeplessness. When seen by me the patient was clinging to the side of the crib, very pale and somewhat cyanosed about the extremities. Inspiration was greatly prolonged; there was marked retraction of the supraclavicular and intercostal spaces. Loud râles could be heard over the whole chest. The pulse was too rapid to count and scarcely perceptible. The tonsils and soft palate were covered with a sloughing membrane and the breath was intensely foetid. The tube was easily inserted, but the patient was too weak to expel the tenacious

mucus which was present. The tube was at once removed, as the patient appeared to be moribund. After waiting for some minutes and stimulating freely, the tube was reinserted, but relieved the dyspnoea for a few minutes only. It again appeared to be occluded by tenacious mucus and had to be removed, as cough could not be excited. The child died a few minutes later. Diagnosis: bronchial diphtheria, septicæmia, heart failure. February 16, 1899.

CASE II.—February 26, 1899. L. S., a boy, aged five years and a half, had had a cold for a week, croupy cough since the previous evening, with progressive dyspnoea. When seen, there was a thick membrane on the tonsils, respirations 55; color, pale; lungs did not fill posteriorly; marked retraction. Dyspnoea, vomiting, improvement, brief sleep had been about the sequence of events for the previous twelve hours. Several gentle attempts at intubation were made before succeeding. No pain and but little increase of dyspnoea was caused by failure to introduce the tube. Tube 4-5 was used. About ten hours later I was hurriedly called. The patient had coughed the tube into the nasopharynx during a sudden attack of asphyxia, whence it had been removed by the mother. A piece of membrane $\frac{1}{2} \times \frac{1}{3}$ inch was expelled at the same time. This had probably occluded the tube and caused it to be coughed out. Dyspnoea again became marked after about two hours and tube 6-7 was inserted. Five days later very gentle pressure over the lower end of the tube caused the child to cough it half way out of the larynx, when it was seized by the fingers of the left hand and removed. Three thousand units of antitoxine were administered when I first saw the patient. Recovery.

CASE III.—May 7, 1899. A girl, aged five years and a half, had had a cold for one week; also symptoms of laryngeal stenosis for the previous twenty-four hours. When seen by me she was very pale, respirations somewhat increased in frequency and very noisy, inspiration markedly prolonged, sinking in of supraclavicular and intercostal spaces, diminished vesicular murmur behind, pulse very rapid. Gold plated tube 6-7 was easily inserted at the first attempt. The string was not removed for three quarters of an hour, on account of the large amount of mucus present; 3,500 units of antitoxine were at once administered. Six days later, the temperature being normal and the pulse good, I attempted to express the tube as in the last case, but failed to do so, as the child was very refractory and I could not succeed in removing the tube when it was expressed upward toward the pharynx. I then extracted it with the O'Dwyer instrument after several trials. The child was allowed to rest between trials. Half an hour later the respirations rose to 30, and there was some sinking in of the supraclavicular spaces. Fifteen minutes later the lungs did not fill well posteriorly, respirations were 36 and noisy, the intercostal spaces were retracted. Intubation was easily performed, but the mother allowed the child to get its hand loose and pull out the tube by the string. It was again reintubated at the second attempt. A week later the tube was easily removed at the first attempt. Three quarters

of an hour later the child was again breathing badly, the lungs were not filling, and there was marked retraction of the chest walls. Intubation was attempted unsuccessfully, on account of vomiting, after which the child was somewhat relieved. Intubation was attempted a quarter of an hour later, also unsuccessfully. I then telephoned to Dr. Brown, who intubated without difficulty with a size smaller rubber tube. Five days later the tube was finally removed.

CASE IV.—H. C., a boy, aged two years and one month, had had a croupy cough for four days, which was moderately severe at night but improved during the day. The attending physician had not administered antitoxine or had a culture made, as there had been no membrane on the pharynx at any time. The patient had several severe choking spells on the day I was called. When seen, the respirations were 45 to the minute, temperature normal, pulse rapid but good, color good, retraction of epigastric region very marked, very hoarse cough, no aphonia. Large, coarse râles over the lungs posteriorly, vesicular murmur indistinct. Intubated with tube 2 at first attempt. Assisted by a teaspoonful of pure whiskey, much mucus was coughed up. The child went to sleep almost immediately. Two thousand units of antitoxine were administered. The Casselberry method was unsuccessful, so that rectal feeding and gavage were resorted to. Five days later the tube was removed, after three or four attempts. The child then had extensive bronchitis and was much emaciated. Had had in all 5,500 units of antitoxine. The tube remained out for fifteen minutes, when reinsertion became necessary, as dyspnoea had become very great and cyanosis marked. Rubber tube 2 was easily inserted, when the cyanosis immediately disappeared, but dyspnoea was not entirely relieved. Next day the temperature was 104° F., respirations 42, pulse 160, and there was consolidation of the left apex. As I feared that the tube might have to be reinserted at once if removed, I did not disturb it for a week. Then there was considerable cough and spasm, which was greatly relieved by a cold pack. The patient continued to show symptoms of bronchopneumonia, from which he finally recovered.

CASE V.—May 22, 1899. A. G., a boy, aged two years and a half, had been suffering for a week with a croupy cough and stertorous respiration at times. A physician had been called on the previous day, but no antitoxine had been administered until he was seen by me. The patient was asleep when I called, there was some retraction of the soft parts of the chest wall, inspiration was prolonged and noisy. On awakening him there was marked retraction, respirations 28, head and face bathed in sweat. There was no membrane to be seen. Intubated without difficulty with a rubber tube 3. Tube was easily removed on the sixth day. Patient had not eaten well in the erect posture, and parents were too ignorant to practise the Casselberry method, so that he was somewhat emaciated. Recovery.

(To be continued.)

THE PRACTICAL RECOGNITION OF THE TUBERCLE BACILLUS IN THE SPUTUM.*

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The significance of the presence of the tubercle bacillus in the sputum in cases of pulmonary tuberculosis is very properly being more and more appreciated. The presence of the tubercle bacillus in the sputum is of the greatest importance because the recognition of it enables a diagnosis of tuberculosis to be made with certainty. Furthermore, tuberculosis is almost wholly spread by means of the sputum. The expectoration, becoming dried, is inhaled as dust and lodged upon the bronchial mucous membrane, where the tubercle bacillus contained in it grows and infects the organism, and thus it is that the infectious diseases due to the tubercle bacillus mainly arise.

A necessary corollary to these statements is the logical and unavoidable deduction that, since pulmonary tuberculosis is distinctly a preventable disease made communicable by the inhalation of dried sputum, the disease could be almost entirely confined to the comparatively few who have it and its spread thus be prevented, if the sputum was properly taken care of or destroyed instead of being allowed to become household or other forms of infectious dust. These truths form the sufficient reason for making the consideration of the practical recognition of the tubercle bacillus in the sputum the opening phase of this Symposium on Tuberculosis.

The brief time placed at my disposal has necessitated a choice between a general description of all the methods of recognizing the tubercle bacillus in the sputum and a detailed description of one selected method and its results as applied to the practical diagnosis of pulmonary tuberculosis. I have decided after considerable deliberation, that the detailed description of one method would be the more appropriate, and consequently you must pardon me if I burden you with prosy, though important, detail.

The method which I have chosen to outline to you is based on the researches of Koch, Ehrlich, and Günther, and also includes two improvements or modifications which were originated by me. These additions are the employment of 3 per cent. or 5 per cent. of hydrochloric acid, 70 per cent. alcohol as decolorizing agents, and the use of an alkali contrast stain. This method has been employed in the diagnosis laboratory of the department of health of New York city for the past six years, and was

* Opening paper at the Symposium on Tuberculosis, New York Academy of Medicine, February 5, 1903.

selected and adopted by me after a thorough trial of most of the methods of staining the tubercle bacillus in the sputum, as the method which gave the most satisfactory and reliable results. It has, to my personal knowledge, been employed with satisfactory results for the examination of some 30,000 specimens of sputum from cases of suspected pulmonary tuberculosis. The tubercle bacillus was found to be present in many of these specimens. Most of the specimens came from different cases.

The method consists of staining a thin layer of sputum which has been spread and dried upon the surface of a glass slide or cover-glass. The stained sputum is then decolorized, and if the tubercle bacillus is present, it retains the stain, while the rest of the preparation becomes colorless. Another stain of a different color is employed to restain the parts that have been decolorized. The color of the first stain employed is usually red; the second, which is also called the contrast stain, is generally blue. When these colors are employed the tubercle bacillus is pictured red, and the rest of the preparation blue.

The method may be conveniently stated in detail as follows: Spread a moderately thin layer of sputum on the slide or cover glass. The cheesy or purulent parts of the sputum should be selected for this purpose, because they contain most of the tubercle bacilli. The smear is allowed to dry in the air or in an oven at a temperature of about 50° C. After it has been dried, it is passed three times through the flame. The preparation is next placed in a fresh solution of the Ehrlich aniline-fuchsin. If the smear has been made upon a cover glass, a watch glass full of the aniline-fuchsin solution is taken, and the preparation is floated upon it with the smeared surface facing downward.

The watch glass is then raised by means of a forceps and held over a small flame until the watch-glassful of the solution begins to bubble. It is then removed from over the flame and allowed to stand for one minute. If the preparation is upon a glass slide, the slide should be covered as a whole with the solution and the smeared surface should be separated from direct contact with the bottom of the receptacle by a layer of the coloring solution. The solution, when used in this way, is also heated until it begins to boil, and is then allowed to stand for one minute. The smear is next removed from the fuchsin solution and washed off in running water; then placed in a decolorizing solution made up of 3 parts of hydrochloric acid and 97 parts of 70 per cent. alcohol. The preparation should be gently moved from side to side in the solution until it becomes almost colorless or contains only pink traces of coloring matter. This usually requires

about a minute. When the specimen is sufficiently decolorized, it is again washed off in running water, to remove the acid decolorizing solution.

The next step is to cover the smear with the Loeffler alkaline solution of methylene blue. This contrast stain is allowed to remain on the smear one or two minutes, or until the preparation becomes a distinct blue. The methylene blue solution is then washed off and the smear dried with filter paper and passed rapidly through the flame several times. If the smear has been made upon a slide it is now finished. If a cover glass has been employed it is now mounted in xylol balsam.

The examination of this preparation with a $\frac{1}{12}$ th oil immersion lens and a No. 3 ocular, will show the tubercle bacillus, when it is present, as a minute red or pink rod. The other bacteria and cellular bodies are stained blue.

Minute blue rods or bacterial bodies are sometimes observed in the sputum of cases of tuberculosis and suspected tuberculosis, which contain red beads or round bodies somewhat broader than the tubercle bacillus. These bodies are situated at one or both ends of the rod, or at one or more places in the length of it. These bead-like bodies sometimes appear as if they had been contained within the body of the rod and the beads had remained after the body of the rod had been washed away. A consideration of the fact that the tubercle bacillus is largely made up of soluble fats has led me, when these beads occur and in some negative specimens, to modify my method and stain for the tubercle bacillus without the employment of any heat higher than room temperature. This modification consists in thoroughly drying the smear at room temperature and, without passing it through the flame, placing it in the Ehrlich aniline-fuchsin solution for from four to twenty-four or forty-eight hours. The dried preparation is then washed off, decolorized, and contrasted, as already described, and instead of being passed through the flame at the end of the method, it is well dried with filter paper and then allowed to become thoroughly dry in the air at room temperature.

The advantages of the other original features of this method may be briefly stated. The alkali contrast stain neutralizes the acid that may remain from the immersion in the decolorizing solution, and prevents its further action as a decolorizing agent upon the tubercle bacillus, thus ensuring a permanent preparation.

The 70 per cent. alcohol is used in the decolorizing solution, because this mixture of alcohol and water appears to decolorize better than alcohol of other percentages.

The Ehrlich aniline-fuchsin solution is made as

follows: Mix four cubic centimetres of aniline oil with 100 cubic centimetres of water, and shake thoroughly. Filter this solution through a wet filter; add 11 cubic centimetres of a concentrated alcoholic solution of fuchsine and shake thoroughly. This solution should be made fresh every third day, to obtain a stain of the maximum intensity. After about the third day it gradually begins to lose its power of staining to an intense red. By the fourteenth day the solution has become unreliable and is generally, when two weeks or more old, unfit to be used.

The most satisfactory color differentiation is obtained when the tubercle bacillus is stained a distinct pink or light red. Many of the foreign bodies which occur in the sputum stain dark red. The great advantage of the employment of the freshly prepared Ehrlich solution is that it imparts this distinct and characteristic pink or red color to the tubercle bacillus.

The 3 per cent. hydrochloric acid alcohol can be usually depended upon to decolorize with moderate rapidity. Occasionally, however, a smear seems to hold the stain and resist decolorization. With these specimens, 5 per cent. hydrochloric acid and 70 per cent. alcohol can be employed with advantage, and this is perfectly safe.

I have allowed preparations of the tubercle bacillus which had been stained by means of hot aniline-fuchsine to remain in a 5 per cent. solution of hydrochloric-acid-alcohol one hour, and at the end of the hour the bacillus was found to be still stained an intense red or pink. Strong decolorizing agents give unreliable results. A 20 per cent. nitric acid decolorizing solution, for example, often not only decolorizes the parts of the sputum from which the decolorizing agents should remove the first stain, but decolorizes also the tubercle bacillus, and the tubercle bacillus, instead of being red, is stained blue by the contrast stain.

The resistance of the tubercle bacillus to the process of decolorization by means of 20 per cent. solutions of nitric acid or similar strong acid solutions is not constant. Some decolorize and some do not. I have succeeded in decolorizing with these solutions some specimens of the tubercle bacillus in the sputum within one or two minutes. Other specimens have resisted decolorization for ten, fifteen, or twenty minutes, and one was not decolorized after remaining for thirty minutes in the solution. A decolorizing solution which gives such varying results should not, in my judgment, be used.

The Loeffler alkaline methylene blue solution, the contrast stain, is made up of 30 cubic centimetres of a concentrated alcoholic solution of methylene blue

plus 100 cubic centimetres of a 1 in 10,000 solution of caustic potash.

There are undoubtedly many varieties and variations of the tubercle bacillus present in the sputum. The great complexity of the bacterial and cellular components of the sputum renders it probable that the sputum often contains degenerate or atypical forms of the tubercle bacillus which we are unable to recognize by staining methods. In some of these cases the injection of the sputum into appropriate test animals would probably give rise to tuberculosis.

The limitations of the staining method of recognizing the tubercle bacillus in the sputum cannot be denied. The typical tubercle bacillus, however, when it is present in the sputum, can always, so far as my experience goes, be stained so as to be able to be positively identified by the methods which I have outlined.

THE JEWS AS IMMIGRANTS—FROM A MEDICAL STANDPOINT.

By MAURICE FISHBERG, M. D.,

NEW YORK,

MEDICAL EXAMINER TO THE UNITED HEBREW CHARITIES, NEW YORK CITY.

In the *New York Medical Journal* for February 7th I find a paper by Dr. H. L. Shively treating of the stereotyped question of immigration as a factor in the dissemination of tuberculosis in New York city. Dr. Shively begins with disagreeing with the metropolitan health department. He is convinced that tuberculosis is a "contagious" disease particularly "as it occurs in the average immigrant of to-day," and not a "communicable" as the health department calls it. While "a generation ago the sturdy Irishman or stalwart German constituted the bulk of immigration," these have been replaced at present, to Dr. Shively's dismay, by the "downtrodden Russian Hebrew and the degenerate Sicilian." Restrictive legislation is the only prophylactic remedy. If this is not attended to as soon as Dr. Shively advises, we may expect in the near future that these "downtrodden" and "degenerate" people will infect the city with the white plague; the inhabitants of New York who are, if I should judge by Dr. Shively's argument, at present free from tuberculosis, may expect to perish of this dread disease.

Let us see if Dr. Shively has any basis of fact in his assertions. I will leave out of consideration the question of whether tuberculosis is a communicable or contagious disease. I will refer all those interested to Professor Cornet's book on tuberculosis, which forms part of Nothnagel's *Encyclopædia*.

Those who may not be inclined to read it in German will soon have a chance to read the work in English. Cornet, who is entitled to an opinion on the question, is not convinced that tuberculosis is a "dangerously contagious" disease, even in immigrants. He is in line with the New York board of health in considering it only communicable. But agreeing for the sake of argument, that the New York board of health should adopt Dr. Shively's suggestion and call tuberculosis a dangerous contagious disease, will anybody be justified in accusing the "downtrodden" Jews of being the cause of its prevalence in this city?

Dr. John S. Billings, in his admirable report on vital statistics of New York of the *Eleventh Census*, has conclusively shown that while the death rate from tuberculosis of the "sturdy Irishman" has been 645.73 per 100,000 population, and of the "stalwart German" 328.80, that of the "downtrodden Russian Hebrew" has been only 98.25. I have brought forward confirmatory evidence in my paper on tuberculosis among Jews (*American Medicine*, November 2, 1901) where I show that in the fourth ward of this city, largely inhabited by "sturdy" people, the mortality of tuberculosis was during 1897, 1898, and 1899, 565.05 per 100,000 population, while in the tenth, eleventh, and thirteenth wards, mostly populated by those "downtrodden" Jews, it was about 150. This is confirmed by Dr. Shively, who says that the observations appear "well founded." Now, how can he logically accuse these people of disseminating tuberculosis in the city? The Jews, according to Dr. Shively himself, are "gregarious," they "herd together"; and if they were as careless with their expectorations as he would lead us to believe they would surely first disseminate the disease among their own people. But as a matter of fact we find that the Irishmen are greater sufferers from consumption. May this not be due to the greater carelessness of the people of this race, to whom Dr. Shively should first turn his attention while speaking on the subject? Dr. Shively quotes the reports of the United Hebrew Charities to the effect that the proportion of consumptive applicants for relief has doubled in four years. But he for some reason omits to mention that Dr. Lee K. Frankel, the manager of that institution, shows conclusively that the vast majority of these foreigners contracted the dread disease only after their arrival in the United States. Dr. Shively also omits to quote the same annual report to the effect that the committee on tuberculosis of the United Hebrew Charities has achieved remarkable results in its attempts to instruct the poor consumptives in the simple hygienic methods for the prevention of tuberculosis, such as

cleanliness, disposal of sputum, etc. I personally can testify that, as the medical examiner for this institution, I find that the majority of those afflicted with tuberculosis are well aware of the contagious nature of their ailment, and in many cases are anxious to learn good ways for the prevention of its spread among their relatives. Nearly all those who are unmarried or have no family beg to be taken away as soon as possible, because they can secure no lodging, on account of being afflicted with a contagious disease. All this goes to show that the Jews on the East Side are in accord with Dr. Shively by classing tuberculosis among the dangerously contagious diseases. This is not new with the Jews. Because of their recognition of contagion as a factor in the spread of certain disease, they have been spared to a greater or lesser extent during the mediæval and more recent epidemics (see my paper, *The Comparative Pathology of the Jews*, *New York Medical Journal*, March 30 and April 6, 1901). The fact that nearly all the Jews above one year old are vaccinated also shows that the Jews are eager to take advantage of every possible measure to prevent disease. In this respect they are unrivaled by any other race living in New York city.

Dr. Shively quotes an article of mine to the effect that the Jews are short of stature, which accordingly he considers to be a sign of deficient vitality. If stature went hand in hand with physical vigor it would be very bad for a number of European races. The Poles, for instance, are not much taller on the average than the Jews of Poland; the Russians as well are no more than five feet four and a half inches tall, according to measurements taken of nearly two million conscripts. Herbert Spencer has recently asserted that the idea that one who can lift great weights, jump great heights, or run great distances is proved by these abilities to be fitted for withstanding the strains of life, doing hard work, bearing unfavorable conditions, and so on, is an erroneous inference (*Facts and Comments*, p. 226). Stature and physical vigor do not go hand in hand, particularly in civilized communities where brute force is not required as a weapon in the struggle for existence. The fact that, notwithstanding the Jews have contracted chests, they are less subject to tuberculosis is the best proof of this assertion. We may add to this that the Jews are mostly engaged in indoor occupations, which again renders them more liable to consumption, and still they are proportionately less affected. All this shows conclusively that from the standpoint of health the Jews are not in any way inferior, short of stature as they are. And the statement of Dr. Shively that they have the distinction of being the least desirable immigrants has no basis of fact. Any distinction

they may have is positively in their favor. The rarity of alcoholism among these people, a fact which Dr. Shively forgets to mention, must also be mentioned when the Jews as immigrants are discussed by a physician.

The suggestion of Dr. Shively that every immigrant seeking admission to the United States should be thoroughly examined for fear that he may be a sufferer from tuberculosis cannot be seriously considered by medical men. If the people in the United States were as free from this disease as they are from yellow fever, cholera, plague, and similar diseases, we should have good reason to watch energetically lest some immigrant might yet introduce it into our country. But remembering that over 100,000 people die annually in the United States from tuberculosis, and that many more are sick with it, I can see no reason for alarm if a few new ones are arriving. Of course, from the economic standpoint, tuberculous people are decidedly undesirable. They sooner or later become a public charge. But I speak here as a medical man.

I hope that this may allay the native fears of Dr. Shively, who sees in the Jewish immigrant nothing but disease. If for some reason he still insists that they are undesirable immigrants, it is to be hoped that in the future he will not assign their alleged physical inferiority as a cause.

207 EAST BROADWAY.

Correspondence.

LETTER FROM PARIS.

Typhoid Fever in the French Army.—Koch on the Prevention of Typhoid Fever.—Defects in the Paris Hospitals.—Medical Women in France.—Sex and Adultery.—Removal of the Vermiform Appendix during an Attack and in an Interval.—The Ambulance Wagons of Paris.

PARIS, March 19, 1903.

In a military hospital at Rouen there were, some weeks since, fifty soldiers sick with typhoid. The number bade fair to increase, and, as usual, the water supply was made to bear the onus of blame. It seems, however, that the organization of the barracks is not what it might be, and it has been pointed out to the authorities that lack of exercise among the soldiers, the influence of nostalgia among the young recruits, and many other items are of importance in the quest for the predisposing factor. Now in Paris the same trouble has arisen and at the École militaire the *Bacillus typhosus* is working sad havoc. The whole matter has been brought up for discussion in the Chamber of Deputies, and

M. E. Dubois, of the Department of the Seine, in a heated debate, strongly adverted to some facts which were rather too salient to be pleasant. He pointed out, among other things, that while the sanitary condition of the people at large was better than it ever had been, the army mortality had alarmingly increased. The importance of this can be understood in a country which is constantly on a war footing, and where the glitter of brass helmets and the glare of steel cuirasses strikes the eye at every turn.

In connection with the question of typhoid, the views of Professor Koch, of Berlin, are being much discussed, and, in the main, favorably. At a recent sitting of the "Scientific Senate" connected with the Imperial Academy of Berlin, he pointed out not only that our prophylaxis must be defensive, but, if we wished to progress, that our hope for the future lay in the initiation of an offensive prophylaxis. In addition to municipal sanitation and our present guard over the sources of the water supply, we must resort to the isolation and disinfection of the sufferers.

The hospital service of Paris is passing through an ordeal of fire just at present. President Loubet has made a round of the hospitals, and their many perfections were pointed out to him with officious care. A trenchant writer in the *Gaulois*, however, devotes considerable space to "Ce qu' on ne lui montre pas." In the Hôpital de la Pitié the cuisine is absolutely bad; many of the accessory buildings are mere wooden sheds with defective boardings and so limited in size as to be worse than useless. The mortuary is shamefully indecent, and the lecture amphitheatre inadequate. Many of the wards are but a trifle over eight feet in height, and all are wainscoted (a serious defect from the standpoint of asepsis), and the staff quarters are exceedingly wretched. In the dormitories of the nurses the promiscuity is shameful and the roof is resorted to for the nightly rest in summer. All these details are supported in documentary evidence and by the actual facts.

The "feminine invasion" is becoming more and more pronounced here every year. Recent statistics show that there are fifty-seven doctors practising in Paris who are women. Twenty-five of them have official posts in connection with the government, and ten foreigners are married to French doctors. The other cities of France are also blessed with a fair proportion of women who are entitled to wear the doctor's mantle. At the Bibliothèque de l'École de médecine one is surprised at the large number of women present, and as it is necessary to be either a matriculate or a graduate to enter the library, the inference is obvious.

As illustrative of the subtleties of which the French mind is capable, it may be well to mention that recently, in the Tenth Chamber of the Paris Correctional Courts, the court found that Mme. Mazouir was guilty of committing adultery with M. Orderie, but that M. Orderie had not committed that offense. In accordance with this decision the fair delinquent was fined twenty-five francs, and the disorderly M. Orderie went free. The explanation of the judgment lies in the fact that, whereas in adultery all methods of proof are admitted so far as concerns the woman, only *in flagrante delictu* evidence and written proof are admitted in the case of the man.

There is considerable discussion just at present, upon the subject of removal of the vermiform appendix. Like the nursery pease porridge, "Some want it hot, some want it cold." Those who advocate the performance of the operation *à froid* seem to have the advantage over the adherents of the operation *à chaud*, and it certainly does seem the logical thing to operate when the patient has the shock of the operation alone to withstand, and when, moreover, all due precautions have been taken and every surgical emergency prepared for. In this connection it is interesting to note that Professor Faure, of the Faculté de médecine, who advocates the operation *à froid*, has performed it within a month upon Mme. Faure and upon his child, three weeks elapsing between the two operations.

The Paris ambulance wagon is pleasing in its operation. Quiet and unostentatious, with the body of the vehicle, hung low between the wheels, it moves at a moderate pace through the streets. There is nothing to attract attention save a red cross flag on a staff which fits in a socket at the driver's right hand. Yet everything gives way at the sight. The interior is capacious and admirably arranged for the care and comfort of the sufferer. They say here that the Parisians go to London to study the street railway system, but that the Londoner comes to Paris to study the ambulances. What a contrast to that rattling, clanging contrivance in New York that wakes the dead and well nigh kills the living.

Therapeutical Notes.

The Treatment of "Backache" in Women.—Bedford Fenwick (*Medical Times and Hospital Gazette*, November 15th; *Canada Lancet*, February) states that there are four principal causes for this very common condition in women: (1) Displacement of the uterus, most commonly retroflexion, and especially if this is associated with enlargement of the organ, either from subinvolution or from the presence of a new growth, and that the

direct cause of the pain is due to the dragging on the uterine ligaments, which, in cases of prolapsus of an enlarged organ, must be more or less considerable. The uterosacral bands extend from the bodies of the second and third sacral vertebræ, and thus the constant dragging causes this pain. The treatment is replacing the uterus and keeping it in its normal position. This the author does with success in many cases by the use of the Hodge or Zwancke pessary.

(2) Pressure on the sacral nerves, due very frequently to constipation. For this the treatment has been very frequently outlined. Fenwick proposes the following:

℞ Iron phosphate.....2 grains;
Extract of belladonna.....¼ grain;
Extract of nux vomica.....¼ grain;
Extract of cascara sagrada.....2 grains.
M. pro pil. i. One to be taken three times daily after meals.

(3) Muscular atony. The pain is felt in the lumbar and dorsal regions; generally found in anæmic persons of sedentary habits. The treatment is the ordinary systematic routine, with gymnastics, massage and electricity for the local condition.

(4) Affection of the cervix uteri, especially its dilatation by some new growth, the pains bearing an analogy to those of the first stage of labor. The treatment is surgical.

For the Acute Bronchitis of Childhood.—Professor E. Ausset (*Écho médical du nord*, December 7th) says that in cases of profound diffuse bronchitis of infancy, if the child is not too young, or the general state too feeble, the induction of vomiting is indicated. In this form the bronchial congestion, which especially keeps up the secretions and the cough, is very intense. Vasoconstrictors are, therefore, indicated,¹ and the following form is recommended:

℞ Ergotine.....0.75 grammes (11 grains);
Syrup of ipecac.....30.00 grammes (1 ounce);
Looch blanc.q. s. to make 100 cub. cents. (3 ounces).
M. To be taken in teaspoonful doses in the twenty-four hours, when awake.

Looch blanc is a preparation equivalent to the emulsum amygdalæ of the U. S. *Pharmacopœia*. The French formula is given by Dorvault (*L'officine*, 1872) as follows:

℞ Cleaned sweet almonds...30.00 grammes (1 ounce);
Bitter almonds.....2.00 grammes (30 grains);
White sugar.....30.00 grammes (1 ounce);
Powdered gum tragacanth.0.50 gramme (7½ grains);
Orange flower water...10.00 grammes (150 minims);
Water.....120.00 grammes (4 ounces).

M.

Or modified thus:

℞ Sweet almonds.....12.00 grammes (180 grains);
Sugar.....20.00 grammes (300 grains);
Gum tragacanth.....0.40 grammes (6 grains);
Orange flower water...10.00 grammes (150 minims);
Water.....80.00 grammes (2½ ounces).

M.

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LICENSURE RECIPROCITY BETWEEN STATES.

It has come to be generally understood that considerable needless annoyance might be escaped by physicians who change their residence from one State to another if the various States would issue licenses to the licentiates of other States without insisting upon an examination of the candidate. The profession has not yet been convinced, however, that this reciprocity in licensure could be made operative among all the States, or even among any considerable number of them, without an undesirable lowering of the standards that have been adopted in some of them. We have believed, nevertheless, that such reciprocity between a few adjoining States was feasible, but it seems that the experience of New Jersey does not quite bear out that belief.

We learn from the *Twelfth Annual Report of the State Board of Medical Examiners* for 1902 that a mutual, or unrestricted, system of reciprocity of license existed between that board and the examining board of another State (not specified) for a period of six years prior to 1900. All licentiates of either of the two boards were virtually entitled to endorsement by the other on certified testimony of their examination and license. "As a result of this system," says the report, "differences repeatedly arose between the reciprocating State boards over the educational standing of the applicants. . . . The mutual system of reciprocity of State licenses was therefore abandoned. Unless the standards and requirements of reciprocating State examining boards are absolutely uniform, mutual, or unrestricted, reciprocity cannot be carried on justly or satisfactorily, and it is not found

practicable, therefore, by any considerable number of State boards."

The difficulty mentioned in the New Jersey board's report is undoubtedly real, but quite as real is the hardship imposed upon a well educated and experienced physician when, as an incident to his moving from one State to another, he is required to undergo a new examination. If the move is to a State enforcing approximately the requirements of the State from which the physician is moving, it is a natural demand, we make bold to say, that harsh conditions be not imposed upon him. Perhaps a satisfactory way out of the trouble might be something like this: In the case of any two States having requirements nearly alike, if a physician wished to move from the one into the other, let the examining board of the State in which he was examined furnish him with certified copies of the questions put to him and of his replies to them, giving the date of his examination; then the board for the State into which he wished to move might examine the papers and decide as to whether or not they would have fulfilled its own requirements at that date. If they did, and the physician had been continuously in practice, we believe it might safely be taken for granted that he was entitled to a new license without further examination.

NEW YORK AND THE REST OF THE COUNTRY.

Public expression has recently been given to the feeling of dislike with which a large part of the country regards New York—a feeling which, unfortunately, seems to be as prevalent in the medical profession as in the community at large. A distinguished physician of Louisville, Dr. Thomas Hunt Stucky, lately delivered a popular address in which he spoke mainly of a visit of his to New York. He is reported in the *Louisville Herald* to have said of New York: "I hated all the more its money worship; its garish glare; its selfish rush in which the weak are trodden under foot; its haste and heat of greedy, grasping contest; its narrow provincial views in all that affects the nation's welfare; the babel of its commerce; and the variance of its diversions from hollowness to hellishness." We have long wondered why it was that the genial Dr. Stucky appeared so depressed on the all too rare occasions of his visiting New York, but the reason

is now apparent—the wickedness of the town simply appalled him.

But Dr. Stucky was destined to have it borne in upon him that New York was not wholly bad. While he was ruminating in the sad vein indicated above he bethought himself of a theatre engagement. During the early part of the performance he was mildly surprised by the fact that the entrance of a number of well known millionaires, people who he had always supposed were "worshipped by New Yorkers," failed to "attract any special attention." When the opening act was nearly over, however, the people noticed that Dr. Adolf Lorenz was in one of the boxes, and there went up a mighty round of applause. "It was," said Dr. Stucky, "such a greeting as I had never seen before—such a greeting royalty did not receive, they tell me, when an emperor's brother was this country's guest—such a greeting as the greatest hero might be proud of, yet it was given to no hero of battle fields, to no bearer of princely titles, to no statesman, to no man of millions, though it was the voice of the people I had thought were money worshippers. That splendid tribute of cheers and tears—for more than one woman near me wept and said aloud 'God bless him'—was given to a healer of little children."

Subsequently he said: "I was proud that night that such a triumph as past ages reserved for its Cæsars was accorded to a surgeon. And that night I relearned the old lesson to 'judge not,' and I learned the new lesson that for the first time I was not a 'stranger in New York.'" Let us hope that Dr. Stucky's final enlightenment will serve to impress upon others the lesson "judge not." We New Yorkers love our town, though we do not close our eyes to its glaring defects. We also love our fellow-men—those of them that deserve our love, conspicuous among whom is Dr. Stucky—whatever may be their place of abode. We ask them, therefore—our professional brethren of the East, of the West, and of the South—not to assume that every travelling New Yorker who puts on an offensive loftiness of demeanor is a true representative of the metropolis. Those who are truly representative of New York bear ever in mind the mighty achievements of the country doctor, and it is safe to say that there is here less of the narrowness of locality than is to be found in most other towns.

THE COMING MEETING OF THE AMERICAN MEDICAL ASSOCIATION.

The attractions of New Orleans as a place of meeting warrant most amply the presumption that the assembly to be held there in May will be largely attended. The work of the sections, therefore, it may be assumed, will be quite up to the standard that their previous labors at large meetings have set. The orators who have been chosen to deliver formal addresses before the association at large are men to whom their professional brethren always listen with pleasure and profit. So far, then, as the scientific aspect of the meeting goes, there need be no doubt of the entire success of the occasion.

As for the matters not strictly pertaining to the science and art of medicine—those that will claim the attention of the House of Delegates—we do not see how the attitude of the association toward the profession in the State of New York can fail to engage the most earnest thought of the delegates. If it comes before them—and it is difficult to imagine that it will not—we hope and believe that they will deal with it in the spirit best calculated to secure harmony. It was the general expectation that it would be settled satisfactorily at the meeting held in Saratoga last year, but virtually it seemed after that meeting to be as far as ever from definitive adjustment, for it soon became manifest that the Medical Society of the State of New York and the New York State Medical Association did not agree upon such a plan of consolidation as would entitle the joint body to affiliation with the American Medical Association. The physicians of the State of New York do not seek to take up the association's time to the exclusion of other important business, but we take it that the association itself will feel that this matter ought, in the interest of the entire profession of the country, to be finally settled at the earliest possible moment, but that it will also feel that no amount of time devoted to its consideration will be looked upon in years to come as having been wasted, provided, of course, a conclusion satisfactory to all who earnestly desire to contribute to the general welfare can be arrived at. We sincerely hope that such will be the outcome of the House of Delegates' labors in New Orleans.

THE USES OF PHOTOGRAPHY IN MEDICINE.

Whether photography is or is not a fine art, may well be left for the artists to settle; but that it is an increasingly efficient handmaid of science is becoming more and more evident. X ray photographs become daily more beautiful and illuminating; photography has, according to M. Vignon, in a communication to the French Academy of Sciences, served the purposes of religion, and incidentally of science, by showing through "the winding-sheet of Christ," preserved at Turin since 1353, "that the human body is," as the *Lancet* for April 26th puts it, "either radio-active or that it gives off 'vapors' which exhibit a similar action to light on sensitive surfaces"; and recently, according to the *British Medical Journal* for March 22nd, Professor Heneage Gibbes has demonstrated that the typhoid eruption is recognizable by orthochromatic plates for some time before it is perceptible either to the touch or the eye. The same author some time ago demonstrated a similar fact in regard to the eruption of smallpox. An inexpensive hand camera, and they are cheap enough in these days, filled with orthochromatic plates, may yet come to take its place alongside of the stethoscope and the thermometer in the physician's armamentarium.

POISONING WITH WOOD VINEGAR.

In various recent numbers of the *Aerztliche Sachverständigen-Zeitung* (cited in the *Zentralblatt für innere Medizin* for March 21st) Marcinowski, Schäffer, Curschmann, and Brandt report cases of poisoning with the so called Frankfort essence of vinegar, a form of acetic acid obtained by the distillation of wood. The preparation seems to be a common household article in Germany, and not to be adequately labeled.

THE INTERNATIONAL MEDICAL PRESS CONGRESS.

The Eleventh International Medical Press Congress will open in Madrid on April 20th, immediately preceding the opening of the International Medical Congress in the same city. The president of the congress is Dr. Cortezo, the editor of the *Siglo Médico*. From the announcements that have come to us we judge that the congress will be most interesting and profitable.

THE DEVIL'S TATTOO ON THE ELEVATED RAILWAY.

We lately indulged in a little speculation as to the possible effects upon certain persons of the buffeting that New Yorkers who travel on the elevated railway have had to encounter since the motive power was changed from steam to electricity.

We are now wondering if there is any class of people, normal or abnormal as to the nervous system, who are soothed and rendered fitter for a day's work by the clatter set up by the air pumps of certain cars whenever the train comes to a stop.

LIQUID AIR AND TYPHOID BACILLI.

In an editorial article thus entitled the *Lancet* for March 21st gives some additional information concerning Dr. Allan Macfadyen's use of liquid air in connection with the trituration of typhoid bacilli for the purpose of obtaining the intracellular juice. It seems that in his previous attempts to obtain the juice by trituration with fine silver sand and subsequent expression by means of an hydraulic press an appreciable amount of heat was evolved, and this induced chemical changes in the juice. Such changes are guarded against by the use of liquid air.

News Items

Society Meetings for the Coming Week:

MONDAY, April 6th.—New York Academy of Sciences (Section in Biology); German Medical Society of the City of New York; Morrisania Medical Society, New York (private); Brooklyn Anatomical and Surgical Society (private); Corning, N. Y., Academy of Medicine; Utica, N. Y., Medical Library Association; Boston Society for Medical Observation; St. Albans, Vt., Medical Association (annual meeting); Providence, R. I., Medical Association; Hartford, Conn., Medical Society; South Pittsburgh, Pa., Medical Society; Chicago Medical Society (annual meeting).

TUESDAY, April 7th.—New York Neurological Society; Buffalo Academy of Medicine (Section in Surgery); Elmira, N. Y., Academy of Medicine; Ogdensburg, N. Y., Medical Association; Syracuse, N. Y., Academy of Medicine; Hudson, N. J., County Medical Society (Jersey City); Androscoggin, Me., County Medical Association (Lewiston); Baltimore Academy of Medicine; Medical Society of the University of Maryland (Baltimore).

WEDNESDAY, April 8th.—New York Pathological Society; New York Surgical Society; American Microscopical Society of the City of New York; Society of the Alumni of the City (Charity) Hospital; Society for Medical Progress, New York; Pittsfield, Mass., Medical Association (private); Philadelphia County Medical Society; Lenox Medical and Surgical Society (private).

THURSDAY, April 9th.—New York Academy of Medicine (Section in Paediatrics); New York Academy of Medicine (Section in Otology); Society of Medical Jurisprudence and State Medicine, New York; Brooklyn Pathological Society; Medical Society of the County of Cayuga, N. Y.; South Boston, Mass., Medical Club (private); Pathological Society of Philadelphia; Church Hill Medical Society of Richmond, Va.

FRIDAY, April 10th.—New York Academy of Medicine (Section in Neurology); Yorkville Medical Association, New York (private); Brooklyn Dermatological and Genitourinary Society (private); German Medical Society of Brooklyn; Medical Society of the Town of Saugerties, N. Y.

SATURDAY, April 11th.—Obstetrical Society of Boston (private).

Change of Address.—Dr. Andrew H. Montgomery announces the removal of his office from 209 West One Hundred and Second Street to 209 West One Hundred and Seventh Street, New York City.

The Marion Sims-Beaumont Medical College is reported to have been purchased by the St. Louis University. It is to be conducted as a school of that university.

The American Academy of Medicine will hold its twenty-eighth annual meeting in the large banquet hall of the Arlington Hotel, at Washington, D. C., on Monday and Tuesday, May 11th and 12th.

Foreign Practitioners may be Excluded from Italy.—The project is being discussed in Rome of making the possession of an Italian diploma a prerequisite to entering upon the practice of medicine in Italy.

The Cincinnati Hospitals Crowded.—The trustees of the Cincinnati City Hospital have been compelled to close the doors of the hospital to private patients on account of the lack of accommodations, the hospital being filled to its full capacity.

A Medical Faculty Sued by an Expelled Student.—Suit has been brought against the medical faculty of the Northwestern University at Chicago by a student for damages on the ground that he was expelled without having been given a hearing.

Hospitals Censured for Failure to Care for Sufferer from Alcoholism.—The coroner at Yonkers has censured the local hospitals for refusing to care for a patient suffering from alcoholism, and whose life, it is thought, might have been saved by proper hospital treatment.

The Association of the Alumni of the New York Hospital will hold its regular smoker in the reception parlor of the Nurses' Home at 8 West Sixteenth Street, on Wednesday evening, April 8th. Dr. Alexander B. Johnson will read a paper on the Diagnosis of Renal Calculus.

A National Organizer for the American Medical Association.—Dr. J. N. McCormack, at present the secretary of the Kentucky State board of health, has been appointed to act as a national organizer for the American Medical Association. His work will be principally in the western States.

The Westchester County Medical Association held its annual meeting at White Plains on March 26, when the following officers were elected for the ensuing year: President, Dr. T. J. Acker, of Croton on Hudson; vice-president, Dr. W. D. Granger, of Bronxville; secretary and treasurer, Dr. D. T. McPhail, of Pardy Station.

A Dinner to Dr. Maddin.—The Nashville Academy of Medicine and the Davidson County Medical Society have issued invitations to a banquet to be given at the Tulane Hotel in Nashville, on Tuesday, April 7th, in honor of Dr. Thomas L. Maddin, of that city, who has completed fifty consecutive years of membership in the Tennessee State Medical Society.

Priests Exempted from Smallpox Quarantine.—The secretary of the Ohio State board of health is reported to have made a ruling to the effect that a priest may visit a smallpox patient to administer extreme unction without being subjected to quarantine rules thereafter. He holds that in this instance the priest must be regarded as a physician.

Death of the Oldest Practising Physician.—Dr. John H. Woods died on March 28th, at Thomas Okla., at the age of 101, from a stroke of paralysis. Up to the time of his fatal seizure he had enjoyed excellent health and was still actively engaged in the practice of his profession having been in active practice for seventy-five years. He was the first probate judge of Douglas County, Kansas.

Vacancies in the Medical Department in the Navy.—There are twenty-seven vacancies to be filled in the grade of assistant surgeon in the United States Navy, and Surgeon General Rixey in an address recently delivered before an undergraduate club of the Jefferson Medical College at Philadelphia, described at some length the character of the career offered to medical men in the navy.

A Nurses' Home.—Plans have been filed at the building department of this city for a new Nurses' Home of the Presbyterian Hospital, to be erected on the north side of Seventy-first Street, between Fifth and Madison Avenues. The new structure will be six stories in height and will cover a plot measuring ninety-four by one hundred and two feet. The estimated cost of the building will be \$300,000.

Osteopathy in New Mexico.—Graduates of an institution of osteopathy, requiring four courses of five months each, are now eligible to practice osteopathic-medicine (?) and osteopathic-surgery (?) in New Mexico, but are precluded from using drugs or performing major surgical operations under penalty of committing a misdemeanor. This is the outcome of a five-year conflict between the New Mexico Medical Society and the osteopaths.

State Manufacture of Antitoxine in Massachusetts.—The joint committee on health of the Massachusetts Legislature recently visited the biological laboratories of the H. K. Mulford Company, at Glenolden in Pennsylvania with a view to studying the methods used there in the manufacture of antitoxine and vaccine virus. The committee also visited the laboratories of the board of health of the city of New York to study the methods in use there.

To Regulate the Labeling of Drugs.—A large delegation from the New York board of trade and transportation and from various pharmaceutical associations appeared before the judiciary committee of the assembly for the State of New York on March 25th, and submitted arguments against the passage of the Bostwick bill, which provides stringent regulations and, according to the protestants, impracticable regulations, for the labeling of drugs and medicines.

Louisville Alumni Dine.—The Alumni Association of the Louisville Medical College held its annual banquet at the Galt House, Louisville, on March 23rd, Dr. J. W. Fowler acting as toastmaster.

The New Alcoholic Ward at Bellevue, as provided for in the plans for the new buildings at Bellevue Hospital, will afford accommodations for eighty male and forty female patients. At present the hospital provides accommodation for only twenty-nine men and sixteen women, which is inadequate.

Medication by Law.—In a police court in Cincinnati a warrant was issued on March 30th, compelling a certain John Townes to take treatment and medicine for a severe case of gripe. The warrant was issued on the petition of the sister-in-law of the patient who feared that his brain was affected since he refused to take either food or medicine. The patient was taken to the City Hospital and there compelled to take medicine under the warrant, which charges disorderly conduct.

The Board of Medical Examiners for the State of Texas.—The meeting of the board of regular examiners will be held in Austin, Tex., on April 20th, 21st, 22nd and 23rd. Those who desire to take this examination must make out applications and present themselves for examination not later than 10 o'clock on the morning of the 20th of April at the hall, on the first floor of the Driskill Hotel Building, Austin, Tex. For further information or application blanks, address Dr. M. M. Smith, secretary, Austin, Tex.

The Tenth Congress of Polish Physicians and Scientists, which was to have met in Lemberg Austria, in July, 1903, has been postponed until the same month in 1904, on account of the several international meetings which either have taken place recently, or will occur during the current year. Dr. Francis E. Fronczak, of Buffalo, has been appointed delegate for the United States to induce the Polish physicians and scientists in America to take part in the congress. Several have already promised to do so, and it is hoped that at least ten will travel to Austrian Poland to participate actively in the proceedings.

No Damages for X Ray Burns.—William Henslin brought suit against Dr. Wheaton, Dr. Rogers, and Dr. Dennis, of St. Paul, on the ground that he had been permanently injured by burns caused by the use of x rays in an effort to discover the location of a gold tooth crown which had been swallowed by the patient. It was proved that after exposure to the x rays a sore had developed on his back which, however, had been completely cured, though the plaintiff claimed that he had been permanently injured, and brought suit to recover \$22,500 for the injuries inflicted. Judgment has been rendered for the defendants on the ground that the evidence was not sufficient to prove damage.

The Abolition of the Coroner Delayed.—The bill abolishing the office of coroner in the city of New York and providing for the appointment of medical examiners has been passed by the senate of the New York State Legislature, but has been held up in the assembly cities committee. The delay in reporting it out of this committee has aroused much unfavorable comment on the part of friends of the measure; it is intimated that corrupt influences have been at work against the bill and that unless it is soon reported out of the committee most scandalous facts will be made public.

Tuberculosis in Hospitals.—Dr. J. B. Ranson, of the Clinton State Prison at Dannemora, recently testified before the Ways and Means Committee of the New York State Assembly that one-fourth of the population of the prison is affected with tuberculosis. This is a grave situation which should be instantly relieved by the construction of a separate building or buildings for the accommodation of sufferers from tuberculosis. This testimony was given at a hearing on a bill introduced by Assemblyman Knapp making an appropriation for the construction of such a building.

Association of Military Surgeons of the United States will hold its next annual meeting at Boston beginning on May 19th. The business sessions will be held in the Medical Library Building. On Tuesday evening, May 19th, a reception will be held at the Cadets' Armory on Columbus Avenue. On Wednesday evening there will be a review of two battalions of the First Regiment at the South Armory, and a demonstration by the ambulance corps of the Massachusetts Volunteer Militia. On Thursday automobile trips will be made to Lexington and Concord, and on Friday a trip around the harbor will be made, during which the party will visit Fort Warren.

The International Medical Congress.—A number of tours have been arranged in connection with the International Medical Congress, which will enable those who propose to attend to visit almost any portion of Europe which they may be particularly interested in. Dr. Ramon Guiteras, 75 West Fifty-fifth Street, is in a position to furnish all the details concerning the various tours, the routes, cost, etc. Special rates have been made on this occasion for physicians and their families, but in order to get the benefit of these rates it is necessary that members of the congress should have sent the amount of the registration fee to the secretary of the congress to Dr. A. Fernandez Caro, Facultad de Medicina, Madrid, Spain. The fee for Physicians is \$6, and for ladies of the party, \$2.40.

The Academy of Medicine.—On Thursday evening, April 2nd, a meeting was held under the auspices of the Section in Otolaryngology. Dr. T. Passmore Berens presented a paper on the Symptomatology and Diagnosis of the Complications of Chronic Middle Ear Suppuration, and Dr. James F. McKernon read a paper on The Treatment of the Complications of Chronic Middle Ear Suppuration. A meeting of the Section in Paediatrics will

be held on Thursday evening, April 9th, when Dr. Charles A. Elsberg will read a paper on Surgical Treatment of Perforation of the Intestines in Typhoid Fever in Children, and Dr. Jacob Sobel will present a paper on The Paroxysms of Whooping Cough, Treated by Pulling the Lower Jaw Downward and Forward.

Moving for Uniform Quarantine Regulations.—Dr. J. M. Lindsley, organizer and president of the International Quarantine Bureau, recently visited New Orleans to confer with Dr. Souchon, president of the Louisiana board of health, with a view to bringing about uniform quarantine regulations in all the Gulf States. Dr. Lindsley's purpose in organizing the Bureau was to secure uniformity of procedure in quarantine service. At present Mississippi and Florida act under the rule of the Public Health and Marine-Hospital Service, while Louisiana, Texas and Alabama act under the quarantine regulations adopted at the Galveston convention. Should the latter three States adopt the Marine Hospital Service regulations, the results would be markedly beneficial in so far as the commercial development of the gulf ports is concerned.

Hospital Buildings and Endowments.—The sum of \$125,000 has been appropriated for the completion of Gouverneur Hospital, by the Board of Estimate of New York city. An appropriation of \$250,000 for the use of the board of health has been recommended by the board of aldermen of New York city. A portion of this sum is to be expended in carrying out the improvements planned at North Brother Island. A large delegation appeared before the committee on appropriations of the lower house of the legislature of Minnesota on March 24th, in favor of the passage of a measure appropriating the sum of \$50,000 for the establishment of a sanitarium for consumptives at Walker. The Children's Hospital Society, of Chicago, has received a donation of \$100,000 and one of \$75,000. Henry C. Ide, a member of the Philippine Commission has donated 10,000 pesos toward the establishment of a general hospital in the city of Manila.

The State Medical Society of Wisconsin will hold its next annual meeting at Milwaukee June 3rd to 5th. The most important business which is likely to come before the society is the question of reorganization on the plan proposed by the American Medical Association. A conference meeting of the committee on reorganization and a number of the leading members of the society was held in Milwaukee last month. Dr. J. N. McCormack, the chairman of the committee of the American Medical Association, who prepared the model constitution for State and county societies, and Dr. W. A. Evans, of Chicago, were also present. At the meeting it was decided to adopt the constitution proposed by the American Medical Association with some changes—the most important being the adoption of the "Counsellor" plan of the Michigan State Society. It is almost certain that the report of the committee will be accepted at the coming session. At present the greatest obstacle in sight is the two existing county medical societies in Milwaukee—really rep-

resentative of the two medical colleges there—which will both claim recognition in the June meeting. It is hoped, however, that they will be able to adjust their differences before then and apply as one county society.

A State Board of Health for Oregon.—At the recent session of the Oregon Legislature a law was enacted providing for the establishment of a State board of health and the governor has appointed the following physicians as constituting the board: President, Dr. A. C. Smith, Dekum Building, Portland; vice-president, Dr. A. Kinney, Astoria; secretary, Dr. Woods Hutchinson, Marquam Building, Portland; Dr. C. J. Smith, Pendleton; Dr. J. B. Pickle, Medford; Dr. Harry Lane, Abingdon Building, Portland, and Dr. E. A. Pierce, Salem. Oregon has for the past two years or so been without a State board of health—that, too, at a time when cases of smallpox presented themselves, here and there as "Manila itch," chickenpox, etc., but now seeing seven regular physicians actually in charge the public will certainly expect efficient service from the State board. Through the introduction of a new charter for the city of Portland, opportunity was presented for the creation of a city board of health based on modern ideas of municipal government, and the following were appointed: Dr. Wm. Jones, chairman, Abingdon Building; Dr. W. H. Saylor, Hamilton Building, and Dr. Mae H. Cardwell, Dekum Building.

The Congress of American Physicians and Surgeons will hold its sixth triennial session at Washington from May 12th to May 14th. The congress will be formally opened with an address by Dr. W. W. of Philadelphia, at 3 o'clock on the afternoon of the 12th. The names of the constituent societies of the congress, of their secretaries and of the halls in which they will meet are given below: American Ophthalmological Society, Dr. S. B. St. John, Arlington Hotel; American Otological Society, Dr. Frederick I. Jackson, Arlington Hotel; American Neurological Association, Dr. Graeme M. Hammond, Arlington Hotel; American Gynecological Society, Dr. J. Riddle Goffe, Columbian University Medical School; American Dermatological Association, Dr. Charles J. White, New Willard; American Laryngological Association, Dr. James E. Newcomb, Cosmos Club; American Surgical Association, Dr. D. P. Allen, Columbian University Medical School; American Climatological Association, Dr. Guy Hinsdale, New Willard; Association of American Physicians, Dr. Henry Hun, New Willard; American Association of Genitourinary Surgeons, Dr. John Vander Poel, New Willard; American Orthopaedic Association, Dr. John Ridlon, Arlington Hotel; American Physiological Society, Dr. F. S. Lee, Columbian University Medical School; American Paediatric Society, Dr. S. S. Adams, the Raleigh; Association of American Anatomists, Dr. G. C. Huber, (hall not yet selected); American Medico-Psychological Society, Dr. C. M. Burr, the Shoreham; American Association of Pathologists and Bacteriologists, Dr. H. C. Ernst, Columbian University Medical School.

The Meeting of the American Medical Association.—Much interest is being manifested in the approaching meeting of the American Medical Association by local physicians in New Orleans. It is stated in the local papers that some \$12,000 will be expended in entertainment on this occasion, half of this sum having already been secured by subscriptions among the physicians of the city. The Tulane Theatre has been engaged for three night sessions of the whole association, and the second floor of the Washington Artillery Hall has been reserved for the section of general medicine. The first floor has been reserved for physiology and pathology. The other exhibits will be as follows: Ophthalmology, in the College of Pharmacy; laryngology and otology, College of Pharmacy; surgery and anatomy, Young Men's Christian Association Auditorium; diseases of children, Young Men's Christian Association; dermatology, Young Men's Christian Association; obstetrics and gynecology, Touro Synagogue; nervous and mental diseases, Touro Synagogue; stomatology, Carondelet Street Methodist Church; hygiene and sanitary science, Carondelet Street Methodist Church; materia medica, pharmacy and therapeutics, Carondelet Street Methodist Episcopal Church; house of delegates, City Council Chamber. The provisional programme of entertainment includes a reception in the palm garden at the St. Charles Hotel on the first day of the meeting, receptions at two private residences on the second day, a ride on the river and luncheon on the third day, and a fête champêtre under the oaks at City Park on the fourth day. About one third of the space set aside for exhibits was reported as having been sold on March 24th, and it was expected that as much more would be sold before the opening of the meeting.

Official News.

Infectious Diseases in New York:

We are indebted to the Sanitary Bureau of the Health Department for the following statement of cases and deaths reported for the two weeks ending March 28, 1903:

DISEASES.	Week end'g Mar. 21.		Week end'g Mar. 28	
	Cases.	Deaths.	Cases.	Deaths.
Measles	247	10	314	12
Diphtheria and Croup.....	364	42	411	61
Scarlet fever.....	304	17	282	13
Small-pox	1	0	1	0
Chicken-pox.....	123	0	131	0
Tuberculosis	341	164	345	169
Typhoid fever	70	13	46	12
Cerebro-spinal meningitis. ...	0	6	0	0

Public Health and Marine-Hospital Service:

Official List of Changes in the Station and Duties of Commissioned and Non-Commissioned Officers of the Public Health and Marine Hospital Service for the seven days ending March 26, 1903:

STONER, G. W., Surgeon. To proceed to Washington, D. C., for special temporary duty.

GODFREY, JOHN, Surgeon. Department letter of November 22, 1902, granting Surgeon GODFREY extension of leave of absence for three months, amended so that said ex-

tension shall be for two months and 25 days, from December 13, 1902.

MEAD, F. W., Surgeon. Granted leave of absence for five days, from April 13th.

SMITH, A. C., Passed Assistant Surgeon. Granted leave of absence for fifteen days, from April 8th.

ROBINSON, D. E., Assistant Surgeon. Granted leave of absence for two months and fifteen days, from April 1st.

GIBSON, R. H., Pharmacist. Department letter of March 18, 1903, granting leave of absence for twenty-three days to Pharmacist R. H. GIBSON, amended so that said leave shall be for eight days, from March 9th.

Promotion.

Assistant Surgeon M. H. FOSTER commissioned as Passed Assistant Surgeon, to rank as such from March 11, 1903.

Public Health and Marine-Hospital Service Health Reports:

The following cases of smallpox, yellow fever, cholera, and plague, have been reported to the surgeon-general, Public Health and Marine-Hospital Service, during the week ending March 28, 1903:

Smallpox—United States.

Place.	Date.	Cases.	Deaths.
Alabama—Mobile	Mar. 14-21	2	
California—Berkeley	Mar. 4-11	1	
California—Los Angeles	Mar. 7-14	4	
California—San Francisco	Mar. 8-15	6	
Colorado—Denver	Mar. 7-14	22	
Delaware—Wilmington	Mar. 14-21		1
Florida—Jacksonville	Mar. 14-21	3	
Illinois—Chicago	Mar. 14-21	12	
Indiana—Elwood	Jan. 15-22	7	
Indiana—Indianapolis	Mar. 7-21	29	7
Iowa—Davenport	Mar. 14-21	3	
Iowa—Dubuque	Mar. 14-21	1	
Kansas—Wichita	Mar. 14-21	3	
Kentucky—Newport	Mar. 14-21	1	
Louisiana—New Orleans	Mar. 14-21	4	Imported.
Maryland—Baltimore	Mar. 14-21	2	
New Jersey—Camden	Mar. 14-21	2	
New York—New York	Mar. 14-21	1	
Ohio—Cincinnati	Mar. 13-20	17	
Ohio—Cleveland	Mar. 14-21	1	
Ohio—Hamilton	Mar. 14-21	1	
Pennsylvania—Altoona	Mar. 14-21	2	
Pennsylvania—Erie	Mar. 14-21	2	
Pennsylvania—Johnstown	Mar. 14-21	1	1
			Imported.
Pennsylvania—McKeesport	Mar. 14-21	1	
Pennsylvania—Philadelphia	Mar. 14-21	26	1
Pennsylvania—Pittsburg	Mar. 14-21	29	4
			Imported, 3 cases.
South Carolina—Charleston	Mar. 14-21	5	1
Tennessee—Memphis	Mar. 14-21	1	
Tennessee—Nashville	Mar. 14-21	1	
Texas—San Antonio	Jan. 1-31	4	
Texas—San Antonio	Feb. 1-28	1	
Utah—Salt Lake City	Mar. 7-21	53	
Washington—Tacoma	Mar. 1-16	4	
Wisconsin—Green Bay	Mar. 15-22	6	
Wisconsin—Milwaukee	Mar. 14-21	2	

Smallpox—Foreign.

Belgium—Antwerp	Feb. 14-21	2	1
Brazil—Rio de Janeiro	Feb. 20-27		5
France—Lyons	Feb. 21-28	1	1
France—Paris	Feb. 28-Mar. 7		1
Great Britain—Dublin	Feb. 28-Mar. 7	5	1
Great Britain—London	Feb. 28-Mar. 7	2	
Great Britain—Manchester	Feb. 28-Mar. 7	19	
Great Britain—Sunderland	Feb. 28-Mar. 7	1	
India—Bombay	Feb. 17-24		74
India—Calcutta	Feb. 14-21		6
Mexico—City of Mexico	Mar. 1-8	9	5
Straits Settlements—Singapore	Jan. 31-Feb. 7		1
Turkey—Alexandretta	Feb. 21-28	3	

Yellow Fever.

Brazil—Rio de Janeiro	Feb. 20-27		40
Colombia—Panama	Mar. 10-17	3	1
Ecuador—Guayaquil	Feb. 14-21		8

Cholera—Foreign

India—Calcutta	Feb. 14-21		68
Straits Settlements—Singapore	Jan. 31-Feb. 7		1

Plague—Insular.

Hawaii—Hilo	Mar. 7		2
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Plague—Foreign.

Africa—Durban	To Feb. 23	83	50
Africa—Pietermaritzburg	Feb. 26	1	
Brazil—Rio de Janeiro	Feb. 20-27		1
India—Bombay	Feb. 17-24		1,054
India—Calcutta	Feb. 14-21		277
Mauritius	Feb. 12-19	4	1
Mexico—Mazatlan	To Mar. 20	313	254

Army Intelligence:

Official List of Changes in the Station and Duties of Officers serving in the Medical Department of the United States Army for the Week ending March 28, 1903:

ASHFORD, BAILEY K., Captain and Assistant Surgeon. Relieved from duty at Ponce, P. R., and ordered to San Juan, Porto Rico, for temporary duty. Relieved from temporary duty at San Juan, P. R., and assigned to duty at Cayey, P. R.

CHAMBERLAIN, W. P., First Lieutenant and Assistant Surgeon. Relieved from duty at Fort Greble, R. I., and ordered to Cabana Barracks, Cuba, for duty.

DEVEREUX, J. RYON, First Lieutenant and Assistant Surgeon. Relieved from duty at Cabana Barracks, Cuba, and ordered to Fort Columbus, N. Y., for duty.

EDIE, GUY L., Major and Surgeon. Relieved from duty at Columbus Barracks, Ohio, and ordered to Monterey, California, for duty.

FORD, CLYDE S., First Lieutenant and Assistant Surgeon. Relieved from duty at Fort Wadsworth, N. Y., and assigned to duty at Fort H. G. Wright, N. Y.

FRICK, EUCLID B., Major and Surgeon. Relieved from duty at San Juan, P. R., and assigned to duty at Fort Snelling, Minn.

HARTNETT, E. H., First Lieutenant and Assistant Surgeon. Relieved from duty at Fort Columbus, N. Y., and ordered to report to the Commanding Officer, Department of the Columbia, for duty in Alaska.

KILBOURNE, H. S., Lieutenant-Colonel and Deputy Surgeon-General. Directed to assume temporary charge of the Medical Supply Depot, San Francisco, Cal. Relieved from further duty at the Presidio, San Francisco, Cal., and assigned to duty as Chief Surgeon of the Department of California.

LIPPITT, WILLIAM F., Major and Surgeon. Relieved from duty at Fort Monroe, Va., and assigned to duty at San Juan, P. R.

MAUS, LOUIS M., Lieutenant-Colonel and Deputy Surgeon-General. Granted thirty days' leave of absence, with permission to apply for thirty days' extension.

MEARNS, EDGAR A., Major and Surgeon. Relieved from duty at Fort Snelling and ordered to the Philippine Islands.

STEER, SAMUEL L., First Lieutenant and Assistant Surgeon. Relieved from duty at Fort Du Pont, Del., and ordered to the Army and Navy General Hospital, Hot Springs, Ark., for duty.

TRUBY, WILLIAM F., First Lieutenant and Assistant Surgeon. Relieved from duty at Cayey, P. R., proceeded to New York City, and reported by letter to the Adjutant-General for further orders. Assigned to duty at Columbus Barracks, Ohio.

TURNBULL, WILFRID, First Lieutenant and Assistant Surgeon. Relieved from duty at Fort Myer, Va., and assigned to duty at Fort Monroe, Va.

WILLIAMS, ALLIE W., First Lieutenant and Assistant Surgeon. Relieved from duty at Mayaguez, P. R., and assigned to duty to relieve Willard F. Truby, First Lieutenant and Assistant Surgeon. Relieved from duty at Cayey, P. R., and ordered to Fort Greble, R. I., for duty.

The following-named Assistant Surgeons have been ordered before the Medical Examining Board at Washington, D. C., on April 1st, for examination for promotion: Captain GEORGE M. WELLS, Captain H. C. FISHER, Captain H. A. SHAW and Captain CHARLES F. KEEFFER.

Naval Intelligence:

Official List of Changes in the Medical Corps of the United States Navy for the week ending March 28, 1903:

GROVE, W. B., Passed Assistant Surgeon. Detached from treatment at the Naval Hospital, New York, and ordered to duty at the Naval Dispensary, Washington, D. C.

MURPHY, J. F., Assistant Surgeon. Detached from the *Glacier*, and ordered to the *Monocacy*.

PLUMMER, R. W., Passed Assistant Surgeon. Detached from the Navy Yard, New York, and granted sick leave for three months.

Births, Marriages, and Deaths.

Married.

BIRKHAHM—WASSERMANN.—In Brooklyn, N. Y., on Wednesday, March 25th, Dr. Alexander D. Birkhahm and Miss Nellie Wassermann.

FLOWER—LOCKHART.—In Pittsburg, Pa., on Thursday, March 26th, Dr. W. S. Flower and Miss Elнора Lockhart.

GRADWOHL—LEDERER.—In St. Louis, Missouri, on Monday, March 23d, Dr. R. B. H. Gradwohl and Miss Fannie Lederer.

MACNICHOL—MURDOCK.—In New York City, on Wednesday, March 25th, Dr. William Arthur Mead MacNichol and Miss Nellie Louise Murdock.

NELSON—STEPHENS.—In Boonville, Missouri, on Wednesday, March 25th, Dr. Arthur W. Nelson, of Bunceton, Mo., and Miss Rylie Stephens.

Died.

BALDWIN.—In Olive Island, Muskoka, Canada, on Monday, March 23d, Dr. W. W. Baldwin, of Toronto.

COLLINS.—In Pueblo, Colorado, on Friday, March 20th, Dr. John W. Collins, in the sixty-eighth year of his age.

DORSEY.—In Hyattsville, Maryland, on Saturday, March 21st, Dr. Harry Woodward Dorsey, in the seventy-first year of his age.

DULIN.—In Nevada, Missouri, on Monday, March 23d, Dr. William C. Dulin, of Kansas City, in the thirtieth year of his age.

FISHER.—In Augusta, Michigan, on Tuesday, March 24th, Dr. J. P. Fisher, in the twenty-fifth year of his age.

GORDON.—In Baltimore, Maryland, on Saturday, March 28th, Dr. Donald Gilbert Gordon, of Toronto, Canada.

FAY.—In Yonkers, N. Y., on Monday, March 30th, Dr. Russell P. Fay, in the thirty-ninth year of his age.

JONES.—In Brooklyn, N. Y., on Thursday, March 26th, Dr. Charles H. Jones, in the twenty-fifth year of his age.

LEAMING.—In Cape May, N. J., on Sunday, March 29th, Dr. Walter S. Leaming, in the forty-ninth year of his age.

MCBETH.—In Denver, Colorado, on Tuesday, March 17th, Dr. Joseph C. McBeth, in the seventy-eighth year of his age.

OLIVER.—In Chicago, Illinois, on Thursday, March 26th, Dr. T. Oliver, in the seventy-third year of his age.

OWEN.—In Mobile, Alabama, on Tuesday, March 31st, Dr. Goronwey Owen, in the sixty-ninth year of his age.

PARKER.—In Boston, Mass., on Tuesday, March 24th, Dr. Charles F. Parker.

ROBERTS.—In Scranton Pa., on Friday, March 20th, Dr. Charles W. Roberts, in the fifty-fourth year of his age.

WEBER.—In Philadelphia, Pa., on Sunday, March 29th, Dr. Reinhard H. Weber.

WOODS.—In Thomas, Oklahoma, on Sunday, March 29th, Dr. John H. Woods, in the one hundred and first year of his age.

OBITUARY NOTES.

PROFESSOR ENRICO BOTTINI, the brilliant Italian surgeon, parliamentary deputy, and Senator died at his home of retirement, in San Remo, on March 11th. Though he is most known for the operation which bears his name, his achievements in a wide operative field were such as to entitle him to lasting fame. In addition, he was an excellent teacher of surgery and a clear expounder of political principles.

Pith of Current Literature.

PRACTICE OF MEDICINE.

Malta Fever.—To Bruce belongs the credit of isolating the specific microorganism—*Micrococcus melitensis*—of Malta fever; a pure culture of the organism having been obtained by him in 1887 from the spleens of nine patients who had succumbed to the disease. Subsequent inoculation with such cultures produced typical symptoms of the disease in healthy subjects. Apropos of a case of Malta fever in which there was a question of possible typhoid, and in which Widal's test failed utterly, but treatment of the patient's blood-serum with a pure culture of *Micrococcus melitensis* resulted in agglutination within a few minutes, Torras y Pascual (*Revista de Ciencias Médicas de Barcelona*, Year xxviii, No. 11) discusses Malta fever in general, describing it as an endemic febrile affection which, upon occasion, becomes epidemic. It is characterized by malaise, headache, intense lumbago, a temperature of 35° [38°?] C. to 40° C., or more (95° [100.4°] F. to 104° F.), with daily oscillations from two to three degrees, and sometimes bilious vomiting and diarrhoea. The disease is of long duration, irregular course, and is difficult of diagnosis in the early stages; but by the beginning of the second week, well marked agglutination reaction may be obtained, and the clinical symptoms are more clearly defined, the temperature curve (which has given it the name of undulating fever) and absence of visceral manifestations are characteristic. Treatment is large symptomatic, no one drug having proved effective in the condition. Gipps believes quinine to be positively injurious in this disease. Some enlargement of the spleen is found *post mortem*, and congestion of other organs is present.

Obstinate Subacute Rheumatism. By James J. Walsh, M. D., Ph. D. (*American Medicine*, March 14th).—Dr. Walsh believes that many cases of so called obstinate subacute rheumatism are not simple cases of a rheumatic arthritis, but are joint affections which develop as a consequence of some underlying condition of toxæmia or aberrant metabolism. In such cases, persistent use of the salicylates will not only not do good, but may do much harm. A positive diagnosis may be difficult or impossible, and in all cases of joint affections of a seeming rheumatic nature, when the salicylates fail to do good, one must keep these other possibilities in mind and not persist with a treatment that may do harm. Some of the conditions that one must consider are: (1) Gout. Although this affection is generally supposed to be rare in this country, such is really not the case. In the neighborhood of Baltimore, Osler's statistics compared with those of St. Bartholomew's Hospital, London, show that gout is only one-fourth less frequent in this country than in England. (2) Toxæmias, such as alcohol and lead, may be the underlying causes that prevent a response to purely antirheumatic treatment. (3) Neurosis or oversensitive conditions of the vasomotor system may be the underlying cause of the persistent arthritis. (4) Many other con-

ditions, to which the author refers briefly, may tend to interfere with the normal reaction and prevent prompt relief of the symptoms by purely so called antirheumatic remedies.

Antistreptococcic Serum and its Use in Malignant Endocarditis. By C. Ogle, M. B. (*British Medical Journal*, March 14th).—The author's article is based on: (a) A series of fifteen cases of general streptococcus infection, out of which four patients died: Streptococci were found in the blood during life in thirteen cases; and (b) a series of nineteen cases of malignant endocarditis, out of which thirteen patients died.

The conclusions drawn from a consideration of these cases are as follows: (1) That the gravest symptoms combined with streptococcic infection, even of the blood stream, are not incompatible with recovery if treated by injections of antistreptococcic serum. (2) That this is true also in malignant endocarditis, but that here the chances are probably less favorable on account of the colony of micrococci involved in the vegetations in constant contact with the blood stream. (3) That in malignant endocarditis staphylococci are frequent, or a mixed infection of staphylococci and streptococci. (4) Therefore that if the result of a blood examination is negative it would be prudent to use injections of antistaphylococcic together with antistreptococcic serum.

SURGERY AND ANATOMY.

The Indications for Operative Interference in Intracranial Tension. By Frederick S. Dennis, M. D. (*Medical News*, March 21st).—The old classification of concussion and compression of the brain is no longer adequate. What a surgeon must clearly bear in mind is the difference between cerebral compression and cerebral pressure. In diagnosing head injuries it is essential that one keep in mind the meaning of certain terms and know precisely the pathological conditions that are embraced by them. Definitions: (a) Concussion. This is due to a disturbance of the fluid equilibrium of the brain and is usually of momentary duration. It is a condition found in fracture of the skull as well as in trauma without fracture. Dr. Dennis believes that he is the first to make the observation that concussion may follow the slightest fall upon the head in a highly educated person while persons with a poorly developed nervous system suffer little, if any, from concussion, even after severe head injuries. (b) Contusion. This condition, which is present in nearly every case of severe head injury, is important chiefly because it gives rise to intracranial tension. It is characterized anatomically by a distention of the parenchymatous vessels, a general formation of minute thrombi, the presence of punctate extravasations, and a more or less distinct cedema. (c) Laceration. This term needs no elucidation. It is to be remembered, however, that the accompanying hæmorrhage may be sufficient to disorganize completely the brain tissue. This condition, like the foregoing, may greatly augment intracranial tension. (d) Compression. "By cerebral compression is meant the application of any force acting from without upon the brain in part or in whole." The compression may be produced by

blood, bone, pus, or a foreign body. (e) Pressure. "By cerebral pressure on the other hand is meant the application of any force acting from within upon the brain." In this condition the brain is pushed against the skull. The following conditions may produce cerebral pressure; traumatic hydrocephalus; diffuse meningitis; surface blood effusion in the subdural space; cerebral oedema. Both compression and pressure greatly increase intracranial tension and, as Cushing has shown, unless the vasomotor system succeeds in maintaining the general blood pressure higher than the intracranial tension, the respiratory centres will be starved and the patient will die. Hence the importance of reducing the intracranial pressure. The relief of compression by surgical intervention is a well established surgical procedure and need not be discussed. The treatment of brain pressure is a new subject and must be carefully considered. Two chief methods of treatment claim attention: (1) Trephining or lumbar puncture; and (2) the plan of expectancy. It is to be understood that, in the cases now considered, no injury to the skull or to the scalp can be made out. The author has formulated for himself the following rules: (1) If coma is profound, operate. (2) If coma is not profound, but if the symptoms of intracranial pressure are gradually increasing in severity, operate. (3) If coma is not present; if the systemic blood pressure is not daily increasing; if the leucocytosis and the number of red blood cells is not rising; if there is no glycosuria, and if the cephalalgia is not increasing, then operation should be deferred. (4) If the symptoms just enumerated, after a period of stasis, augment in severity, operate.

Two Cases of Wounds of the Left Ventricle Treated by Suture.—Dr. Errilo Giordano (*Gazzetta degli ospedali e delle cliniche*, January 11th) reports two cases in which he sutured wounds of the heart and which he offers as additions to the statistics of such wounds recently collected by Salomoni. In 42 cases referred to in these statistics, there were 13 recoveries, 28 deaths, and in one instance the final result was not reported. In the first case here reported there was a stab wound in the sixth intercostal space on the left side, one centimetre external to the nipple, in a man aged twenty-three years. The patient was brought to the hospital in a grave condition, as the result of a profuse hæmorrhage which had formed a hæmothorax on the left side. Two transverse incisions were made; the first from the wound to the sixth space to the margin of the sternum, and the other of the same length to the fourth space. The external extremities of these incisions were united by a vertical cut, and the flap thus outlined was reflected upon the sternum. When the pleura had been opened a wound of the pericardium was found, which penetrated into the left ventricle at its outer margin near the apex. This wound was immediately closed with the index finger and then with the two silk sutures. The condition of the patient was so grave that the operation had to be suspended at this point and a quart of salt solution had to be injected into the veins. The pericardium and the flap of thoracic structures were then sewn into place and

although the patient improved for a time he died about an hour and a half later.

In the second case there were two penetrating wounds in the fourth and fifth intercostal space respectively as the result of an attempt at suicide in a man aged twenty-six years, who was admitted in a very grave condition owing to a profuse hæmorrhage. The same method was followed, and when the pleura had been opened the pericardium was found full of blood and clots and a penetrating wound, 2 centimetres long, was discovered in the left ventricle. This was sutured with two stitches of silk; the pericardium was closed, and the flap of chest-tissues was replaced, leaving a drain of gauze which passed into the mediastinum. The patient recovered after a prolonged convalescence due to the development of suppuration in a circumscribed area under the third costal cartilage near the sternum. The sternal ends of the fourth and fifth ribs were found necrosed and were therefore resected.

The Resection of Large Nervous Trunks in Operations for New Growths in the Neck.—Dr. S. P. Feodoroff (*Roussky Vrach*, February 8th) found that large nerve trunks could be resected in the neck, when necessary, in the removal of new growths in that region, without danger to life. The majority of the important nerves of the neck may indeed be resected without any risk to life itself, though this procedure is followed by functional disturbances of various kinds. In removing new growths from the neck it is often necessary to remove with the neoplasm, the tenth, eleventh, and twelfth cranial nerves, and the branches of the cervical and brachial plexuses. This is especially necessary in some cases of sarcoma or carcinoma of the tissues of the neck in which the deep lymphatics and the tissues around the deeply situated vessels and nerves are involved. Ligature of the common carotid may be necessary in these cases, and is not a dangerous procedure after the artery had been compressed by the tumor for a long time. Resection of the vagus nerve is often necessary, and is not in itself dangerous, for in the last ten or twelve years the author has been unable to find a single case in which death has followed the resection of this nerve in the neck. The only sequel was a paralysis of the vocal cord on the corresponding side. In some cases, however, the respiration and the heart's action ceased for a time during the operation and in others vagus-pneumonia developed, with fatal result.

The author reports four cases of new growths in the neck in which various important nerves were purposely severed in removing the tumors. In the first patient the entire nervous-vascular bundle which passed through the tumor was removed, including a portion of the vagus, and there was complete recovery, except that a recurrence appeared later. In the second case he resected the tenth, eleventh, and twelfth cranial nerves, and all the branches of the cervical plexus. A number of muscles were, of course, disabled after the operation, but the only discomfort that the patient complained of was hoarseness and regurgitation of food when swallowing liquids. There were, besides, immobility of the epiglottis and anæsthesia of the mucous

membrane of the larynx. The great danger in these operations is, not the resection of the vagus, but its irritation. If this nerve is irritated, the pulse becomes immediately very slow, and may be arrested, and its section in such cases does not always produce an immediate acceleration of the heart beat. The resection of the long branches of the brachial plexus is not dangerous to life, but is followed by paralyses of the corresponding muscles. The resection of the accessory nerve of Willis and of the short branches of the brachial plexus is of no great consequence, although the arm becomes somewhat weakened and cannot be raised above the horizontal. The resection of the cervical plexus is followed merely by paralysis of the small muscles of the neck and a loss of sensation on that side of the neck. The third case illustrates the results which may be obtained by radical treatment in these cases. In a man with a sarcoma of the neck of four months' standing which had involved nearly all the tissues of that side of the neck, the removal of the new growth was followed by complete recovery without recurrence for a year. The author believes, therefore, that radical operations are indicated in cases with extensive infiltration in the neck, and that there is some hope of permanent cure in such cases.

Cancer of the Tonsils, the Pharynx and Adjoining Parts. Results of Operations.—Dr. Guido Bendandi (*Riforma medica*, February 18th) gives the result of his experience with the operative treatment of cancer of the tonsils, pharynx, and adjoining parts. He reports five cases which he had under his observation. Primary cancer of the tonsils spreading to the adjoining parts is quite rare, but it is not unusual to see cancers of the pharynx which spread upwards to the tonsils, the soft palate, the tongue and the œsophagus. A number of operations have been devised for the treatment of these conditions by Langenbeck, Weber, and others. In the cases in which the author had occasion to operate, the malignant process had invaded the anterior pillars of the fauces, thus giving an additional space for examining the cancerous mass and for reaching it more conveniently. The author proceeded as follows: The head of the patient having been extended as far as possible, Kocher's incision was made in the geniomastoid region, the tongue was amputated and the incision was prolonged downward following the anterior margin of the sternocleidomastoid, if the infiltrated glands were in that direction or if the disease extended to the inferior portion of the pharynx. The skin and the platysma were raised, the veins and the facial artery were tied, and the large flap having been sutured to the zygoma the lower jaw was resected. For this purpose it was cut at the level of the last false molar, and was disarticulated without opening into the cavity of the mouth. The lymphatic glands and connective tissues in the groove of the carotid artery and in the submaxillary fossa were removed.

If the process extended to the base of the tongue, the lingual artery was tied and if it extended to the pharynx at its lower portion the superior thyroid artery was also ligated. The pharynx having been reached, the new growth was palpated, the cavity of the mouth opened, and the tumor removed with the

aid of the Paquelin cautery. The remaining healthy tissues were sutured to the angle of the wounds. There was almost no deformity after this operation and the patients chewed well. In cases which were so far advanced that an operation could not be any longer considered, and in which an intervention was urgent, tracheotomy was performed; and in other cases in which the pharynx was blocked by the new growth the author had recourse to a very low œsophagotomy. In the five cases reported the author performed total excision of the growth. In one patient there was favorable progress for three years, but the patient died afterward from a recurrence of the disease. In the second case the patient died five days after the operation as a result of a cerebral hæmorrhage. In the third case the patient was discharged cured but has not been seen since then. In the fourth case the result of the operation was favorable, but a recurrence of the malignant growth came on three years later. In the fifth case the recovery was perfect and there was no recurrence.

The Serum Diagnosis of Typhoid Fever.—Dr. Giovanni Caccialanza (*Riforma medica*, February 18th) reports the results of his experience with the Widal reaction in typhoid fever in 45 patients whom he had under his care during four months in 1902. Of 16 cases in which the clinical history showed the presence of a mild typhoid fever, the reaction was positive in 15 instances, and negative in one. These patients varied in age between fifteen and forty years and in none had there been any previous infectious disease. The history showed in all these patients that they had been ill for several days before admission, so that they all could be said to be in the second week of the disease. In speaking of the value of the Widal reaction as an element in the diagnosis and prognosis of typhoid fever, the author takes the middle ground between those who consider this test as the great, almost the only, factor in diagnosis, and those who absolutely deny that any value can be attached to it. The majority of observers agree that the reaction does not take place before the second week. The reaction is generally found positive, therefore, when the majority of the clinical symptoms have already developed and when the diagnosis no longer presents any great difficulties. The test, therefore, serves only to confirm the clinical findings. Widal's reaction, consequently, cannot be said to have any value as a help in the early diagnosis of the disease.

In 24 cases of typhoid fever in which the disease was not really grave, a positive reaction was obtained 22 times. This result corresponds exactly with those obtained by other authors, and leads the present author to conclude that the serum reaction is always positive in the milder cases of typhoid. The author thinks, therefore, that the reaction may be useful to the practical physician, especially in the ill-defined, atypical cases in which the infection does not correspond to the ordinary form of typhoid fever and does not give symptoms which are definite enough for a positive diagnosis. The behavior of the Widal reaction in severe cases of typhoid fever differs from that found in the mild cases. A number of authors have reported instances in which the reaction was absent and the symptoms were severe.

and the present author reports 5 such cases in which typhoid fever was proved to have been present at the autopsy. In grave cases, therefore, the Widal reaction may be absent; or when it is present, it is nothing but a beautiful confirmation of what the clinician has already found. The reaction may have a certain value even in the grave cases, however, when some of the characteristic symptoms which are necessary for a diagnosis are absent. The reaction cannot be regarded as a true criterion in prognosis. Such a criterion can only be obtained by studying the constitution of the patient, his age, the occurrence of previous diseases, the resistance of the lymphatic glands, etc.

The Present Status of the X Ray Treatment of Malignant Tumors. By William B. Coley, M. D. (*Medical Record*, March 21st).—Dr. Coley reviews the literature of the x ray treatment of malignant tumors and reports in detail forty-six out of seventy-five cases that have come under his observation in the past year. The author devotes considerable space to a consideration of the following subjects: (1) Cancer of the breast. (2) Abdominal cancer. (3) The relative merits of the toxins and x rays in inoperable sarcomata. (4) Technics. (5) Dangers of the treatment. (6) Danger of toxæmia. (7) Conclusions. The author's conclusions, condensed, are as follows: (1) In the x ray we have a most valuable therapeutic agent for the treatment of inoperable cancer of all varieties, but in the great majority of cases the beneficial influence of this agent is only temporary. (2) The x rays have an inhibitory action on all forms of malignant tumors. (3) It is at present impossible to state what particular varieties of tumors are most susceptible to this form of treatment. (4) Sarcomata, primary in the lymph glands, and superficial epitheliomata, seem at present to yield most readily to the treatment. (5) In several cases of recurrent carcinoma of the breast, prolonged exposure to the x ray, has been followed by disappearance of the growths. (6) Sufficient time has not yet elapsed in a single case of cancer treated with the x ray to justify us in regarding it as a cure. (7) While the x ray has a legitimate place in the treatment of inoperable cancer, we are not warranted in advising the method in primary operable cases.

Lipoma Arborescens. By Charles F. Painter, M. D., and William G. Erving, M. D. (*Boston Medical and Surgical Journal*, March 19th).—Lipoma arborescens may affect any joint, although it most frequently involves the knee. The importance of recognizing the condition is considerable, since the removal of the growth will not only rid the affected joint of the cause of its symptoms but it will also rid it of its source of internal trauma which, if allowed to remain, would end by permanently impairing the function of the joint. The condition is not infrequent, yet it receives scant attention in the surgical text-books, and the number of cases recorded in medical literature are few. The authors report seven cases, selected from a series of sixteen, which have come under their observation during the past year. The cause of the condition has generally been held to be a preexist-

ing tuberculosis or arthritis deformans. The authors regard such an ætiology as too restricted and believe the condition can be caused by any irritation of the joint, and a radical operation is therefore not indicated unless tuberculosis is also present. In none of the authors' patients was this the case. The condition occurs either as an overgrowth of the synovial villi or as a true lipoma that has originated in the subserous fat and has pushed its way into the joint. Clinically the condition presents the following picture: There is more or less swelling of the joint without the signs of acute inflammation and without much, if any, excess of fluid. There is imperfect function, at times with pain, but more often without. At times the joint will lock in a partially flexed condition and can be straightened with difficulty. The tumors may be as large as a hen's egg and have any shape from round regular masses to irregular ones, with finger like projections. Microscopically, they differ from ordinary lipomata in having many blood vessels and much connective tissue running through their substance. The treatment recommended by the authors is simply to open the affected joint and remove the growth. Excision of the joint, which has been practised, would only be justified by the presence of tuberculosis, and none of the authors' patients were tuberculous.

Excision of the Superior Maxillary Under Medullary Narcosis. By A. W. Morton, A. B., M. D., (*American Medicine*, March 21st).—Dr. Morton has used spinal cocaine in 929 cases, in 76 for operations above the diaphragm, many of the latter being operations on the face and neck. He has found that the analgesia about the mouth is as complete as in the lower extremities and that constitutional disturbances are no greater in operations about the mouth than they are in operations on the extremities. He is convinced that this method of producing analgesia has its greatest field of usefulness in operations so located that there is danger of blood and secretions entering the lungs. One case of excision of the upper jaw is reported in detail. The author summarizes the advantages of this method of narcosis as follows: (1) The anæsthetizer is not in the way of the operator. (2) The danger of blood and secretions entering the lungs and producing suffocation, and later pulmonary complications, is absent. (3) It can be used in acute diseases of the heart, lungs, or in kidney complications, when the anæsthetic is contraindicated. (4) The shock of the operation is diminished, and there are not the severe disturbances which often follow an anæsthetic. The author uses half a grain of cocaine hydrochloride and injects it between the third and fourth lumbar vertebræ.

The Operative Treatment of Goître. By Ingersoll Olmsted, M. B., Tor. (*Philadelphia Medical Journal*, March 21st).—The medical treatment of goître is wholly unsatisfactory. The author urges operation under local cocaine anæsthesia and reports twelve cases operated on by him within the past year. He gives his technics in detail. The following indications for operation are those of Kocher, of Bern, and are quoted by the author with approval: (1) "As soon as the goître becomes dangerous, that

is when attacks of dyspnoea appear or inflammatory changes occur or there is the slightest suspicion of a malignant degeneration. (2) All enlarged thyroids, classed as deep, having a tendency to grow toward the aperture of the thorax, even if they are movable, should be considered dangerous. (3) All goitres that have reached considerable development from the formation of single large colloid nodes can only be actually removed through operation. Medical treatment acts principally on the accompanying hypoplastic parts. (4) When, with moderate goitre, symptoms like those of Basedow's disease appear, accompanied by an increased development of the goitre, an operation is the best means of warding off that dread disease. To these may be added the goitre in most cases of Graves's (Parry's) disease."

NERVOUS AND MENTAL DISEASES.

Trunecek's Serum, and its Value in Disturbed Cerebral Functions Caused by Circulatory Changes, with Report of Twelve Cases. By Alfred Gordon, M. D. (*Philadelphia Medical Journal*, March 21st).—In 1901, Trunecek, of Prague, reported the results he had obtained with a combination of inorganic salts devised for the treatment of the symptoms caused by arteriosclerosis. The principle of the treatment consists in introducing into the circulation a solvent for calcium phosphate, which is the chief salt found in the walls of sclerosed vessels. This so called serum, therefore, is not a true serum. The method of giving the original serum was either by hypodermic or intravenous injection. Trunecek asserted that in the cases of arteriosclerosis treated by him by this method there was a marked amelioration of all the usual symptoms, such as dyspnoea, asthma, vertigo, angina pectoris, and loss of general health and strength. Several European observers have tested the method, and Léopold-Lévi has modified the "serum" so that the salts can be given either by enema or by the mouth. The formula of the modified combination of salts follows: "Sodium chloride, 4.92 grammes; sodium sulphate, 1 gramme; sodium carbonate, 0.40 gramme; sodium phosphate, 0.30 gramme; calcium phosphate and magnesium phosphate, of each 0.75 gramme. M. ft. cachets No. xiii." Each cachet corresponds to 15 cubic centimetres of the serum or to 150 cubic centimetres of blood serum. The author has used this preparation in the treatment of cases of disturbed cerebral functions caused by circulatory changes due to a variety of causes. A total of 12 personal cases are reported with, on the whole, encouraging results. From his own experience with the method the author draw the following conclusions: (1) The combination of inorganic salts known under the name of Trunecek's serum may be a valuable remedy in some cases of disturbed cerebral function caused by circulatory changes. (2) Not only by hypodermic and intravenous injection, but also internally, this remedy may give favorable results. (3) When the iodides, nitrites and other means used in such cases are without avail, Trunecek's serum should be given a trial. Sometimes a combination of both may be necessary. (4) Several days, at least a week, must

elapse before the desirable results can be expected. (5) There are cases in which the remedy is absolutely useless. Dr. Gordon adds, however, that the cases treated by him have been under his observation too short a time for him to feel justified in announcing his conclusions too positively.

Friedrich's Hereditary Ataxia. Dr. Cesare Mannini (*Riforma medica*, February 18th) reports three cases of this disease, in which the patients presented different phases of the same disease. Their symptoms consisted of motor incoordination and of accompanying disturbances in the gait. The following may be said to be the principal symptoms to be looked for in differentiating Friedrich's ataxia from other conditions stimulating it: 1. Ataxia of the ordinary motions, including an ataxia gait. 2. Static ataxia, that is, oscillating movements or choreiform contractions. 3. Nystagmus. 4. Disturbances of speech, an impairment of this function owing to weakness of the muscles. 5. A long duration, the presence of the same disease in other members of the family, and a relative uniformity in the course of the disease. 6. The abolition of the patellar reflex. All these symptoms were observed in the three patients whose histories are here recorded. There were, in addition, Romberg's phenomenon, deformities of the spine and of the feet, and paraplegia. An infectious disease may be the cause of Friedrich's ataxia which usually appears after the fifteenth year. The gait of these patients is characteristic. They hold their limbs apart, their feet bent outward, and the head and trunk bent forward. Most of the symptoms of the disease, such as the ataxia, are due to asthenia, atony, and ataxia of the nerves and muscles. The nystagmus is not a necessary symptom. The skeletal deformity, the disturbances of nutrition, and the paraplegia may be secondary symptoms and usually appear comparatively late.

MATERIA MEDICA, PHARMACY, AND THERAPEUTICS.

Collective Investigation Concerning the Value of Silver Nitrate Injections in the Treatment of Pulmonary Consumption. By Thomas J. Mays, A. M., M. D. (*Philadelphia Medical Journal*, March 14th).—Dr. Mays believes firmly in the efficacy of this method of treating pulmonary consumption. His own experience with the method, practised for four years with satisfaction in a large hospital and dispensary service, has been already reported. In order to avoid the possible error that might be due to personal bias he has collected, and now reports, fifty-five cases treated with this method by other practitioners. (1) Directions for making the injections: They are best made in the neck at a point slightly behind the pulsating carotid artery and midway between the angle of the jaw and the clavicle. Inject first five minims of a two and a half per cent. solution of cocaine hydrochloride, and follow this by an equal quantity of a two and a half per cent. solution of silver nitrate. The injections may be repeated. If abscesses are produced in the neck the injections may be given just below the clavicle. (2) Effect of the injections on the pa-

tients—(a) Cough and expectoration. Not improved in 3 cases; improved in 44 cases; ceased entirely in 6 cases. The author believes that these results are brought about by stimulation of the vagus nerve. (b) Vomiting. This symptom is either entirely relieved, or is abated in the majority of the cases in which it occurs. (c) Night-sweats. In 42 cases in which this symptom was noted, it was unimproved in one case, improved in twenty-seven and it ceased in fourteen. (d) General strength. This is improved in some cases to a remarkable extent. (e) Gain in weight. In 24 recorded cases there was an average gain of 10 pounds each. (f) Conclusion. The author believes that nitrate of silver injections possess a decided antagonism to the pathological complex process that is known as pulmonary tuberculosis, and hopes that the report of these cases will induce others to develop its full possibilities.

The Therapeutics of Tuberculosis.—In view of the prominence recently given to intravenous therapy, the paper by A. G. Mendoza (*Revista Médica Cubana*, February 1st) dealing with the treatment of tuberculosis through intravenous injections of cinchamic acid is not without value. Landerer, upon whose experience in this line of treatment the author bases his use of the remedy, found that cinchamic acid produced the same effects upon tuberculous lesions as were seen in the natural course of healing; save that the process was more active and energetic when that remedy was used. It is said that two hours after injection of the salts of cinchamic acid—preferably sodium cinnamate—an active leucocytosis takes place which reaches its maximum in eight hours; penetration of the white cells into the tuberculous foci, followed by development of new blood vessels and connective tissue, takes place, and subsequent encapsulation and resorption of caseous masses occur. While the results obtained in the six cases that Mendoza reports are not comparable to the favorable issues shown in Landerer's statistics, owing to suspension of treatment, advanced stage of the disease, etc., they at least serve to demonstrate the harmlessness of the remedy, and also that, even under unfavorable conditions, it produces a decided improvement in the general condition. The author has practised as many as thirty injections in the same vein—the cephalic being preferred for this purpose—and in no case was there local reaction or other unfavorable symptom. The initial dose was one-half a milligramme, and this was gradually increased till a maximum of twenty-five was reached. Sodium cinnamate was used in preference to other salts of cinchamic acid, and the solution was sterilized for five minutes before its injection.

OPHTHALMOLOGY.

Diseases of the Eye Caused by the Larvæ of Wohlfahrt's Fly.—Dr. A. V. Lotine (*Roussky Vrach*, February 1st) reports the case of a boy, aged three years, who entered with an acute conjunctivitis, and in whose conjunctival sacs were found certain small grayish points which on examination proved to be the larvæ of Wohlfahrt's fly (*Wohlfahrtia magnifica Schinerii*) in the second

stage of their development. The larvæ appeared as small worms of a grayish color, half a centimetre in length and a millimetre in width, and appeared to be imbedded in the conjunctiva. Ten such larvæ were removed, and a lotion of mercuric chloride, 1:5000, was ordered. The conjunctivitis disappeared on the removal of these worms. The larvæ of this fly are white, with transverse minute black striations. Under the microscope the bodies of these larvæ are found to consist of thirteen rings, and the striæ to be due to a circular arrangement of black spurs, pointing backwards. The head is provided with two large black hooks and the last ring with breathing plates. These appearances are characteristic for the second stage of the development of this larva. In the first stage the head ring has three hooks and the body has fewer spurs. In the third stage there are more spurs than in the second, and the spurs are not arranged so regularly in a parallel fashion, as in the second stage. Cases of this kind are extremely rare, the first one having been reported by Wohlfahrt as early as 1770. Nearly one hundred years later, Schiner, an Austrian entomologist, described the fly under the name of *Sarcophila magnifica*. A peculiarity of this affection is that the fly never enters houses, so that infection takes place always in the open air, particularly among persons who are in the habit of sleeping out of doors in summer, in the fields. The larvæ develop in the bodies of these flies and are deposited as such upon wounds, or on exposed mucous membranes, e. g., the eye, the nose, the gums, etc. The larvæ make a path for themselves through the tissues by means of their hooks, thus causing itching and inflammation in the affected parts. The eye is reached in various ways. The flies drop the larvæ into the conjunctivæ of sleeping persons, or the larvæ are directly deposited on the conjunctival surface, or they reach the eye through one of the neighboring cavities.

LEGAL MEDICINE.

A Case of Poisoning with Corrosive Sublimate.—Dr. Alfonso Boumans (*Gazzetta degli ospedali e delle cliniche*, January 11th) reports a case of severe acute poisoning with corrosive sublimate in a young woman aged twenty years. She had taken three tablets of one gramme each of corrosive sublimate with suicidal intent. She had not eaten anything for over twelve hours, so that she must have taken this poison on an empty stomach. The symptoms of acute irritant poisoning followed, three-quarters of an hour after the ingestion of these tablets. The stomach was washed and large quantities of beaten white of egg were given, whereupon the symptoms gradually abated. On the following day there was retention of urine and partial suppression; for only 120 cubic centimetres were withdrawn in twenty-four hours by catheter, and the urine contained a large amount of albumin, blood, granular casts, and renal epithelium. The suppression of urine continued for five days. During this period no food could be borne on the stomach and there was frequent vomiting of bloody fluid. Hot packs and injections of salt solution subcutaneously were given, to promote the action of the skin, but

only a slight amount of perspiration was obtained on the sixth day. A number of ulcerations appeared at that time on the lips, the gums, the under surface of the tongue, etc., which bled easily and were covered by a necrotic exudate. On the fourth day there was diarrhœa and bloody stools continued during the following day. After the fifth day a very small amount of urine was finally obtained by catheter (29 cubic centimetres) and from that time on there was gradual improvement in the function of the kidneys. A very marked anæmia remained. The author calls attention especially to the anuria which continued in this case for five days, during which the bladder continued to be empty and not a drop could be obtained with the catheter.

PHYSIOLOGY AND PATHOLOGY.

A Research into the Means of Controlling the Blood Pressure. By George Crile, M. D. (*Boston Medical and Surgical Journal*, March 5th).—Most of Dr. Crile's conclusions are antagonistic to current opinions. They are based, however, on the results of a long series of most elaborate experiments, and deserve careful consideration, since his conclusions, if correct, are of great practical value. The relative value of the best means of controlling blood pressure is best illustrated in a study of the two conditions known as shock and collapse. (1) *Shock*. In shock the essential phenomenon is a diminution of the blood pressure. Since, in cases that terminate fatally, no structural changes are found, and since in the cases that end in recovery, no after effects are noticed, it is reasonable to assume that exhaustion, rather than a structural lesion, is the cause of the fall in blood pressure. If this is true the exhaustion must be one of (a) the cardiac muscle; (b) the cardiac centres; (c) the blood vessels; or (d) the vasomotor centre. The author excluded by experiment the first three possibilities and concludes that "shock is essentially an exhaustion or breakdown of the vasomotor centre." Experiments were then undertaken to find the best way of raising the blood pressure and so overcoming true traumatic shock. It was found that strychnine, alcohol, nitroglycerin, and similar drugs were not only of no use in shock, but were, on the contrary, absolutely harmful. ". . . the most convenient and certain method of producing shock for experimental purposes was by the administration of physiological doses of strychnine." "It would seem to be as reasonable to treat strychnine shock by administering traumatism, as traumatism shock by administering strychnine." Saline solution is of very limited application in pure traumatic shock. The best means of overcoming the condition are adrenalin, by continuous infusion, and external pressure. This latter the author applies by means of a double rubber suit, which is put on the patient and then inflated by means of a bicycle pump. (2) *Collapse*. The term collapse is applied to the "cases of the more sudden fall of blood pressure from hæmorrhage, from injuries of the vasomotor centre, or from cardiac failure. These conditions represent suspension of function rather than exhaustion of centres. There being no exhaustion, stimulants may be of value." In collapse, there-

fore, the different modes of producing stimulation (mechanical, electrical, and therapeutic) may all be of distinct value. The author considers the mixed condition in which shock and collapse occur together, and gives the rational indications for meeting these conditions.

A Soluble Form of Plastein.—Dr. V. V. Zavialoff (*Roussky Vrach*, January 18th), in a preliminary communication, announces that he has been able to isolate a soluble form of plastein. It is well known that the albumin which is formed under the influence of the gastric juice from the product of digestion (albumose) appears in the form of an insoluble residue. This substance was isolated at first by the author in an insoluble form and was named plastein. Recently he has been able to obtain the substance in a soluble form by the following method: He peptonized fibrin with the aid of artificial gastric juice, allowing the process of solution to go on for fifteen or twenty minutes. The mixture was freed from syntonin and from coagulable albumin and was saturated by evaporation. The residue, a saturated solution of albumoses, was mixed with one half its volume of artificial gastric juice and allowed to stand for twenty-four hours at room temperature. Although this fluid does not show any changes or precipitates, it contains the new proteid, which can be obtained by adding a little acetic acid and boiling. The new proteid is soluble in very weak alkalies, is precipitated on neutralizing, and is soluble in an excess of acid. On boiling in alkaline solutions, this substance coagulates in the form of large flocculi if a large amount of plastein is not present in the solution. Therefore, an albumin which is coagulated by heat and is soluble in the usual solvents is formed in saturated solutions of albumoses under the influence of the gastric juice. The coagulum thus obtained is distinguished from the coagula of other globulins and albumins by its easy solubility in weak alkalies. Plastein, the product of the digestion of albumoses into albumin, is therefore found in the very first stages of digestion. The author is continuing his experiments with the soluble form of plastein.

On Gastric Digestion in Jaundice.—Dr. S. S. Zimnitzky (*Roussky Vrach*, January 11th) gives the results of his studies on the processes of digestion in persons suffering from jaundice. His experiments lead him to conclude that in all cases of retained bile in the organism, causing jaundice, there is an excessive secretion of the gastric juice. The same alterations in the functional activity of the stomach are noted both in acute and in chronic jaundice. In the chronic jaundices, *e. g.*, those due to hypertrophic cirrhosis of the liver, there is a transition from an increased secretion to a deficient secretion of the gastric juice, and sometimes this deficiency is very sharply marked. These phenomena are the results of the same effect upon the secreting cells of the stomach—an asthenia of these cells—but are effects of various degrees of this action, corresponding to different periods of the disease. The decrease in the secretion of hydrochloric acid which ensues in a certain stage of hypertrophic liver cirrhosis and the fact that in these stages the

peptic power of the gastric juice is not diminished, shows that the peptic function of the stomach is evidently more resistant than the hydrochloric.

The Pulmonary Reflex.—Dr. Augusto Plessi (*Gazzetta degli ospedali e delle cliniche*, January 11th) studies the phenomenon known as the pulmonary reflex (Abrams, *New York Medical Journal*, January 13, 1900) which consists in a dilatation of the lungs brought about reflexly after freezing a portion of the skin. This phenomenon was induced by Abrams by directing a stream of ether vapor upon a portion of the thorax corresponding to the border to the lungs, and by this means he was able to obtain a lowering of this border to the extent of two or three finger breadths. According to Abrams, this manifestation is of importance in diagnosis inasmuch as it enables us to differentiate between dulness due to consolidation and that due to atelectasis, the dulness disappearing in the latter case on vigorous irritation of the skin. The present author, convinced of the value of this test has applied it in patients with various pulmonary affections, and in order to control the movements of the lung has employed percussion and the diaphragm phenomenon, which indicates the level of the midriff, and thus that of the lung. The result of eight observations shows that by reflex stimulation the lungs are expanded to the extent of from one to two centimetres, as shown by the movement of the borders, and that this expansion can be demonstrated both by percussion and by Litten's diaphragmatic phenomenon. The expansion of the lungs induced by freezing a portion of the skin of the chest, which Abrams terms the pulmonary reflex, is produced presumably by the contraction of the diaphragm and the thoracic muscles, as the result of the cooling effects of the others.

A Contribution to the Pathogenesis of Progressive Pernicious Anæmia.—Dr. Giuseppe Finzi (*Riforma medica*, December 27th and 29th) gives the histories of three cases of progressive pernicious anæmia. Two of these patients were suffering from tuberculosis of the mesenteric glands, and the third had a hyperplastic inflammation with hæmorrhages in the same structures. Ghersi reported another case of progressive pernicious anæmia following latent tuberculosis. The author concludes that alterations in the mesenteric glands may be closely related to the production of a progressive pernicious anæmia. These glands serve in the chylification, and therefore in the renewal of the elements of the blood. While it is easy to believe that the atrophy of the intestines which occurs in these cases is secondary to the anæmia, yet the author thinks it improbable that the glandular enlargement is secondary to the changes in the blood, for the lesions in the mesenteric glands are secondary to an infection of some kind from the bowels, *e. g.*, tuberculosis, colitis, cancer, etc. If it is not improbable that progressive pernicious anæmia may develop as the result of a puerperal sepsis acting slowly upon the blood-forming organs, it is not impossible that some cases, and a number of them, may be referred to infection in the mesenteric lymphnodes; for the mesenteric lymph follicles

should be considered as the principal sites of formation and transformation of the morphological elements of the lymph. Only a continued biological study of pernicious anæmias can give a true solution to its nature which corresponds to the clinical features of the disease.

Cryoscopy of the Urine as a Method of Clinical Investigation.—Dr. P. Oussoff (*Roussky Archiv*, November 30th) regards the application of the freezing test to urine as perfectly possible without the admission of Koranyi's theory of renal secretion, which, in his opinion, is still unproved. It is sufficient in employing cryoscopy to be guided by the principles of Haidenham's theory which attributes to conditions of the circulation the variations in the excretion of salts, and to the activity of the renal epithelium the excretion of other constituents of the urine. The diagnosis of renal affections may be assisted by the determination of the daily excretion of chlorides and "non-chlorides." In order to calculate the amount of these substances excreted in twenty-four hours, the author suggests the use of a formula which expresses these amounts in gramme-molecules. By multiplying the lowering of the freezing point by the amount of a given constituent expressed in per cents., we obtain the lowering corresponding to each constituent. In this way one can determine the total number of average gramme molecules, the total number of gramme molecules of chlorides, and the total number of gramme molecules of sub-oxidized substances. A healthy man under ordinary diet excretes not less than one gramme molecule of total solids, and not less than 0.8 gramme molecule of chlorides. If he secretes less, there is probably some lesion of the kidneys. By comparing the amount of oxidized substances with that of the sub-oxidized constituents, we can judge of the activity of the processes of assimilation.

Cryoscopy By D. S. Grim, M. D. (*Philadelphia Medical Journal*, March 21st).—Dr. Grim reviews the literature of cryoscopy and describes the techniques of the determination of the freezing point of liquids. He adds to his paper his conclusions as to the value of the method in determining the sufficiency of the kidneys. He has performed the test on 400 pathological specimens and on a large number of normal urines. The following conclusions are reached: (1) Cryoscopy cannot replace, but only supplement the older qualitative tests and microscopical examination of urines. (2) It is probably the most delicate test we possess in detecting and estimating the effect of therapeutic measures directed toward cardiac and kidney lesions. (3) It permits of reasonable accuracy in diagnosing renal insufficiency and the type of renal lesion present, though the examinations should be prolonged over a number of days; his conclusions coinciding with Lindemann's. (4) Uræmia cannot be diagnosticated from an examination of the urine alone. (5) Cryoscopy of the urine from each kidney, obtained by ureteral catheterization, and especially when supplemented by the phloridzin and methylene blue

tests, becomes a very delicate and reliable test in determining a unilateral kidney lesion and the degree of insufficiency of the affected kidney.

The Ductless Glands as Organs of the First Importance in Vital Functions, and their Relationship as Such to Disease and Therapeutics.

By Charles E. de M. Sajous, M. D. (*Philadelphia Medical Journal*, March 7th).—In this paper Dr.

Sajous attempts to give an outline of some of the subjects treated in the first volume of his recent work, and of a few of the subjects to be considered in the second volume, which, however, is not yet completed. An abstract of an abstract must necessarily be a very incomplete exposition of any thesis, yet the author's theories, if correct, are of such importance that attention should be called to them. We give only the conclusions, without even a hint of the facts and arguments on which they are based.

(1) *The adrenal system.* This is composed of the thyroid gland, the anterior pituitary body, and the adrenals. It has for its function to sustain physiological oxidation and the metabolic activity of all tissues. The internal secretion of the adrenals combines loosely with the atmospheric oxygen in the lungs, and by this means endows the plasma with its oxidizing properties. The organic compound thus formed has been named adrenoxin. The red blood cells are given a very unimportant rôle, for it is the plasma that is looked upon as the great oxygen-carrying medium. The anterior pituitary body governs the functional activity of the adrenals and is directly connected with these organs through the cervicothoracic ganglia, the splanchnics, and the semilunar ganglia of the sympathetic system. The internal secretion of the thyroid gland, principally in virtue of the contained iodine, sustains the activity of the anterior pituitary body. So much for what may be called the mechanism of the system. The cause of all general symptoms that are witnessed in disorders in which the blood is invaded by a poison of any kind lies in a perversion in the activity of the adrenals. The invading poison will either stimulate, depress, or paralyze the anterior pituitary body, which in turn will render the adrenals overactive, underactive, or inactive, and it is the greater or less quantity of adrenoxin in the circulation that gives rise to the general symptoms, and not the invading poison acting directly. (2) *The functions of leucocytes.* The mitomes in leucocytes the author considers to be minute canaliculi through which the blood plasma flows and so carries the oxygen into the interior of the cells, where the vital processes take place. He distinguishes three kinds of leucocytes and to them he assigns definite and specific functions. His theories are most ingenious but cannot be gone into. (3) *The splenopancreatic internal secretion.* The greater part of all the trypsin in the body is formed in the splenic vein, and on reaching the portal vein it mixes with the general blood stream and continues the cleavage process begun in the intestinal canal. The main function of the splenopancreatic secretion is to protect the organisms from the effects of bacteria and of all poisons of whatever nature. (4) *The posterior pituitary body.* This body adjusts the func-

tional activity of all organs through the nervous system. (5) *The ductless glands in disease and therapeutics.* The treatment of very many diseases, if one accepts the theories advanced by the author, resolves itself into attempts to do two main things: (a) To regulate adrenal secretion; and (b) to furnish the system with an adequate amount of alkaline salts. The first of these objects is attained by means of appropriate drugs; strychnine, iodine, digitalis, etc., are adrenal stimulants, while veratrum viride, tartar emetic, etc., are adrenal depressants. The second of these objects is to be attained by using hypodermoclysis.

The Psychological Conditions of Hypnotization.—

Dr. Th. E. Rybakoff (*Roussky Vrach*, January 25th and February 1st) discusses the question of the conditions of the psychical sphere which facilitate and induce hypnosis. The author believes that, in order to produce hypnosis, it is not sufficient to bring to bear certain physical influences, such as "passes," fixation of the attention on certain objects, etc., and that concentration of thought upon one idea is enough to induce hypnosis. A certain emotion is requisite and essential for the development of the hypnotic state. This emotion is specific in character, pertaining only to hypnotization, and is closely related to the emotion of external influences. The presence of such an emotion during the act of hypnotization is shown by the increase in the pulse rate and the rate of respiration in the persons hypnotized, by the subjective sensations described by intelligent persons who have been hypnotized, and in the occurrence of fatigue after hypnosis. All other circumstances which attend the act of hypnotization are only of assistance to the hypnotizer in so far as they induce or assist the development of the emotion which underlies hypnosis. The emotion of hypnotic sleep does not arise without some cause to induce it, just as is the case with any other emotion. In other words, in order to hypnotize a person we must put his mind into such a state as to evoke the emotion of hypnosis. The rôle of the idea of sleep, which is so much insisted upon by the Nancy School, is simply that of a signal which heralds the onset of the emotion of hypnosis, which is analogous to the emotion of fear, expectation, etc. The fact that hypnosis can be induced much more easily after one or two séances shows that the mind is accustomed to the signal, whatever it may be, and at that signal falls into the emotion of hypnosis. The idea of sleep is not necessary for the production of hypnosis, but serves as a convenient signal. The specific emotion of hypnosis must be present in order that a person may be hypnotized. If in its place another emotion is produced by the hypnotizer or by the circumstances attending the act of hypnotization, *e. g.*, fear, excitement, expectation, then no hypnosis will follow, and this is why at the first attempt so many hypnoses fail. Concentration of thought upon a single object, etc., helps by preventing the mind from wandering, and concentrating it involuntarily upon the expectation of the emotion of hypnosis which the patient is waiting for.

Letters to the Editor.

THE INTRAVENOUS INJECTION OF FORMIC ALDEHYDE.

CHARLOTTESVILLE, Va., March 15, 1903.

To the Editor of the NEW YORK MEDICAL JOURNAL:

Sir: Dr. Barrows's article in your *Journal* on the beneficial results following the intravenous injection of solutions of formalin in the case of puerperal streptococcus infection has awakened anew the interest in the use of this procedure, not only for such an infection, but also for the original purposes for which Dr. Maguire designed it. In view of the present status of the use of intravenous injections of formic aldehyde, the following case and its results are here detailed, hoping that it may lead to a still further investigation of the method of treatment mentioned in the hospitals and laboratories of our larger cities, where ample facilities are at hand for full and thorough investigation.

An English gentleman residing in this vicinity, where he has lived for more than fifteen years, came to your correspondent in the latter part of June of 1902, calling attention to Dr. Maguire's treatment of tuberculosis by the intravenous injections of formic aldehyde, and requesting that the case should be taken in hand at once. His son, a tall, spare youth of about twenty-five years, was known to have had pulmonary tuberculosis for several years, and a sister had recently died from the same cause. The father himself was very stout and active; the mother had been dead of cancer about three years.

The issues of the *Lancet* for December, 1900, were soon obtained, and after careful study of the article by Dr. Maguire therein contained, the treatment was undertaken, though with very little, if any, hope of benefit accruing from the use of the proposed management of the case.

The formalin solution of the strength advised by the writer in the *Lancet* was prepared by Dr. Peters, the resident physician at the University of Virginia Hospital, who also rendered very efficient assistance during the continuance of the case.

A burette holding a little over 50 cubic centimetres was used, and the solution of the formalin of a strength of 1-2,000 in sterilized normal salt solution. The burette was connected with a piece of rubber tubing connected to an ordinary aspirating needle by another piece of tubing fitted with a small piece of glass tubing, so that the absolute freedom from air in the stream of fluid might be assured before the introduction of the needle into the vein was attempted. The size of the needle was such as to approximate the introduction of the entire amount of fluid into the right heart during the number of heart beats which was estimated by Dr. Maguire as necessary to render the amount of blood passing through the heart in that time germicidal to the tuberculous bacillus. The arm being corded tightly above the elbow, the swollen vein—sometimes the median cephalic, at others the median basilic—was easily punctured by the needle in nearly every application, and, the burette being elevated, the fluid, at a temperature nearly always of

about 80° F., ran rapidly into the vein, care being always taken to start the flow of the fluid before inserting the needle into the vein.

The injections always gave pain, more particularly about the shoulder joint, and paroxysms of more or less severe cough invariably followed in a few minutes after the injection was completed. The injections, at first practised every other day, were invariably followed by better nights, the coughing spells going down to almost *nil* within an hour after the treatment.

The patient within two months from the commencement of the treatment had gained within a few ounces of four pounds, his cough was less, and the amount of expectoration was materially diminished.

It began to appear, however, after some three weeks' use of the measure, that the fluid—the same needle being used—did not flow so readily into the vein, and on several occasions, it was found that it flowed in the opposite direction, breaking through the vein valves. Of course whenever this condition prevailed, the injecting needle was at once withdrawn, and the operation stopped. Close observation showed a thickening of the veins, and an unmistakable hardness, though there never were, and never have been up to this time, any signs of inflammatory action in the veins, or any evidence of thrombosis or embolism.

A smaller needle was substituted, and the treatment continued, but even then the trouble of diminishing vein calibre soon became apparent, and although there had evidently been considerable improvement in the general condition of the patient, the pain of the injections and the slowness of the healing process led him to abandon the intravenous formic aldehyde method for some advertised preparations.

That there was a temporary improvement under the treatment described above cannot be doubted, but as it is now stated that Dr. Maguire is not so well satisfied with his method as at first, the continuing must be a matter to be determined by much larger clinical experience, and it has all along been a matter of thought with the writer why investigators have not gone into the subject more frequently. As it is, Dr. Barrows seems the only one on this side the Atlantic who has thought the idea worthy of a following, and it is earnestly hoped that success may attend investigation in this line.

HUGH T. NELSON, M. D.

THE PROMISCUOUS USE OF OPIUM IN CITY AND COUNTRY.

SYRACUSE, N. Y., March 23, 1903.

To the Editor of the NEW YORK MEDICAL JOURNAL:

Sir: The advice of an old physician, "Your chief reliance will be on opium. Use it. Don't be afraid of it. Where you have pain you are sure to get the best results," is fresh in my mind as I write this. How great is the number of physicians who virtually rely on opium in their practice! How many have fallen into the habit of dispensing morphine in large quantities for ailments and condi-

tions which are neither grave in pain nor of that class of cases where this drug is in its proper place.

How many practitioners are there that give even a passing thought to the criminal results of promiscuous morphine giving? How great is the mass of people who tell the same old words "Dr. so and so first advised morphine"? These are facts. Opium and its derivatives are dispensed less cautiously in the country than in the city. Men of legitimate practice in cities, men of good judgment, men who keep in mind the danger of certain drugs—they will be found using opium in few cases, and as a rule only in emergency.

What a difference we see in the drug stock of the city and country physician. I mean the proportion of dangerous drugs to others. The stock of the city doctor includes a certain amount of the somnifacient—that of the other physician a great many times more! There is, of course, a certain class of city practitioners that use the drug in as large quantities as the country man. That class is the kind that is in the profession for money and easy labor. Science and all that is good and legitimate mean nothing to them. With the country physician there are reasons (known to all) whereby the tendency for opium giving is ever present. The most important one is the distance between the patient and the doctor's office. Therefore the patient is left morphine tablets to allay any pain he may have, and the physician is certain that everything is serene and quiet until his next visit. Now comes the physician's habit of giving—and also arises the danger of a habit of taking on the part of the patient. There are men who tell their customers that it is morphine they are dispensing. There are a great many doctors who feed opium by the mouth while the hypodermic gets rusty awaiting an emergency. These same practitioners often leave a stock of the drug behind them, directing the patient to take it whenever they have any pain.

Again I say that this nefarious practice is carried on in the country more than in the city. Only last week a woman came to me for treatment for cough. During the examination she pulled a bottle of tablets (about twenty-five of them) out of her pocket, and said the country doctor had given them to her a few months previous when she had the "grippe." The tablets were morphine. Personally have I seen evidence of promiscuous drug giving in the country. In the dispensary of many country physicians the amount of morphine carried surprised me, but I soon became aware that it was the stock in trade and began to look at the other side—the result.

It is plain that opium is used by the inhabitants of the country districts in greater quantity than in the larger places. It is a fact (naturally) that the proportion of opium fiends is greater in the country than in large cities. How often do we hear the drug victim say "My doctor started me at it!" While we find it difficult to believe, while we give that doctor the benefit of the doubt, still there is something behind the whole thing, after all, and physicians are in a great measure to blame for it.

CHARLES MULLIN, M. D.

Book Notices.

Experimentelle Untersuchungen über die entzündliche Neubildung von Bindegewebe. Von Dr. med. ALEXANDER MAXIMOW, St. Petersburg. Mit 13 Tafeln und 1 Figur im Text. Jena: Gustav Fischer, 1902. Pp. vii-262.

This monograph is the result of a most careful and laborious study of the subject of the inflammatory production of connective tissue. The author selected dogs, rabbits, and doves for his experiments, and the results noted in each series are separately detailed. The formation of connective tissue was produced by the introduction of a sterile foreign body into the tissues of the animal, either subcutaneously or into the muscular tissue. For this purpose several varieties of foreign substances were employed, small cover glasses fused together at one end, so as to form a thin space between their flat surfaces, empty capsules made of collodion, and similar capsules filled with ordinary nutrient agar. After a variable length of time the foreign body was removed and the tissue formed by its presence was examined, either in the fresh state on the warm stage of a microscope, in which case certain phases in the development of cells could be studied for hours, or after fixation, hardening, and staining. Every step in the technics of these procedures is described with painstaking care and accuracy.

More than 200 pages are given to the results noted in this series of cases. The author first describes the effects seen in the first nineteen hours after introducing the foreign body, then the first appearance of fibroblasts, at a somewhat later stage, and finally the picture noted after the production of newly formed blood vessels. Special study is made in each experiment of the leucocytes, fibroblasts and polyblasts. The latter is the name given by the author to the lymphocytes and uninuclear leucocytes that have emigrated from the blood vessels and to the clasmatoocytes of normal connective tissue. These cells comprise the bulk of all the round cells usually found in inflammatory processes, and include amœboid wandering and plasm cells. When the inflammation has finally subsided, the polyblasts do not entirely disappear. A part are again taken up by the blood vessels and lymphatics, some undergo a granular degeneration, and a large number remain in conjunction with the fibroblasts to form a connective tissue scar. The author also believes that they may in some way be responsible for the hæmosiderin in the tissue.

Those polyblasts that find themselves in the vicinity of the newly formed blood vessels are probably concerned in the formation of the clasmatocytic adventitia cells of normal connective tissue. That a certain number of polyblasts finally become identical with fibroblasts seems highly plausible to the author. A certain proportion may become very large, take on the general character of phagocytes, and show distinct mitotic changes. The nucleus may become distinctly changed in form, and altogether not the faintest resemblance to the original lymphocyte of the blood may remain to be seen. The relationship which the polyblasts bear to giant cells is also given.

A number of well drawn cuts serve to elucidate the author's observations and statements. For the advanced worker in general or experimental pathology this monograph will prove most interesting and valuable, dealing as it does with one of the most important subjects in general pathology.

Anleitung zur Diagnose und Therapie der Kehlkopf-, Nasen- und Ohrenkrankheiten. Vorlesungen gehalten in Fortbildungscursen für practische Aerzte. Von Dr. RICHARD KAYSER in Breslau. Zweite vermehrte und verbesserte Auflage. Mit 130 Abbildungen. Berlin: S. Karger, 1902. Pp. 178.

The present edition contains nine pages more text and nine more illustrations than its predecessor. It is designed primarily, we should say, for German students rather than for practitioners, and contains only the plain, undisputed facts of rhinology and laryngology. Favorable mention was made in these columns of the first edition, and we have only to repeat the commendation of that time.

Experimentelle Beiträge zur Pathologie des Blutes. Von Dr. P. SCHMIDT. Jena: Gustav Fischer, 1902. Pp. iv+41.

In a small monograph of forty pages the author describes the methods and results of his experimental research on the baseophilous granulations in erythrocytes. Rats, mice, and rabbits were used for the purpose, and the results were produced by starvation, hæmorrhage, and the injection of acetate of lead, pyrodine, and phenylhydrazine. In about fifteen hours after the injection of 0.04 gramme of phenylhydrazine, the presence of these granulations may be demonstrated in a rabbit. Two hours after such an injection, before the baseophilous granulations are present, but when the action of the drug is manifested by the presence of methæmoglobin in the blood and urine, the author placed a clamp on one of the animal's ears, thus closing off this part from the general circulation. Fifteen hours later, baseophilous granulations in the erythrocytes could be seen in blood withdrawn from the vessels, but not in that taken from the ear. After eliminating the alterations caused by metabolism and changes in temperature, the author believes this experiment to demonstrate the production of such granulations by the blood-forming organs, chiefly the bone marrow.

Further experiments were made to demonstrate the diminution in the number of baseophilous granulations by lowering the alkalinity of the blood. Small amounts of tartaric acid and hydrochloric acid were injected into animals subsequently to the production of a baseophilia by phenylhydrazine. In from one to three hours the baseophilia had almost entirely disappeared while the metachromatophilia was distinctly increased. Large doses of quinine did not seem to have any influence on baseophilia. The author compares the bone marrow to a gland whose function is controlled by a nerve. He also believes that the lymph spaces of the bone marrow are directly connected with the veins of the bones, and thus explains the entrance of newly formed

blood cells into the circulation. Baseophiles, polychromatophilous cells, and normoblasts are placed in the same list genetically. Four lithographic plates show the various granulations described. Much information on the subject may be obtained by a careful study of this monograph.

The Development of the Human Body. A Manual of Human Embryology. By J. PLAYFAIR McMURRICH, A. M., Ph. D., Professor of Anatomy in the University of Michigan. With Two Hundred and Seventy Illustrations. Philadelphia: P. Blakiston's Son & Company, 1902. Pp. xvi-17 to 527. (Price, \$3.)

The medical student of to-day has more than one advantage over him of a generation ago, not the least of which is the compulsory study of so much of embryology as will enable him to comprehend clearly and fully the life processes and the structure of the human form. With the lengthening of the time of study, more hours can be and are given to the fundamental sciences, and there can be no doubt that physicians of more scientific tendencies and of deeper insight into their work will be the ultimate result. As President Hadley recently said, it is not the function of the university to turn out discoverers and research workers; but, he might have added, the spirit which leads to the making of such men should be part of their equipment, that is, the work of the physician, at least, should always be imbued with the feeling that the relations of cause and effect should stand forth in logical clearness.

So much by way of introduction of Professor McMurrich's excellent handbook of embryology. The work itself is conceived in the proper spirit, as we believe, in trying to make clear to the student not only the relation which the story of the development of the body bears to its adult form, but also the logical sequence of events as they take place in the embryo from the time of conception to completed growth. The *why* is insisted upon at every page. Where human embryology presents imperfection because of incomplete study, the facts of comparative anatomy are drawn upon for illustration; and in this respect the author has followed good precedent and illustrious modern example. The 270 illustrations are very well chosen from authentic sources, and those which are original—we regret that they are comparatively so few—are well drawn and expressive of the facts which they are intended to portray.

The author has divided his subject into two parts, General Development and Organogeny. Under the first heading are included the spermatozoid and the ovum, the segmentation of the ovum, the development of the external form of the human embryo, the medullary groove, notocord, and mesodermic somites, and the yolk stalk, belly stalk, and foetal membranes. Under the discussion of segmentation, facts as to aberrant development are inserted which have a practical bearing on clinical medicine, while the discussion of the segmentation of the mesoblastic plates is, we think, in view of its brevity, one of the clearest with which we are acquainted. We have always found that students

experience great difficulty in comprehending the formation and relation of the mesoblast and its derivatives, but this description is certainly easy of comprehension.

It is impossible to pass in review all the data of this book, but one point more we should like to make. The author does not accept, it appears, Kollmann's view that the Wolffian body is of epiblastic origin, his only reference to its derivation (p. 360) stating that it is of mesodermic source. It is possible, as Disse has recently pointed out, that the pronephros is of mesodermic origin, while the ectoderm may furnish the material for its continued development. It would be well, we think, to state mooted questions in some such way as this in a textbook for students, rather than to be too dogmatic.

The other chapters, on the genesis of organs are very good, with here and there some slight deviation from continental teaching. The modified plate of Huxley's, being put in colors, enhances the clearness of understanding the changes in the Wolffian and Müllerian ducts. Throughout, the relations of embryology to faulty development and to clinical facts are well brought out. We can warmly commend the book to students and to the practising physician who wishes to understand the primal facts in the development of the human body.

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Allgemeine Semiotik des Erbrechens. Von Dr. med. W. Janowski, Primärarzt am Kindlein Jesu-Hospital zu Warschau, etc. Jena: Gustav Fischer, 1903. Pp. 108.

Transactions of the American Surgical Association. Volume the Twentieth.

A Text-book of Practical Medicine. By William Gilman Thompson, M. D., Professor of Medicine in the Cornell University Medical College, New York City, etc. Second Edition, Revised and Enlarged. Illustrated with Sixty-two Engravings. New York and Philadelphia: Lea Brothers & Company, 1903. Pp. 3 to 1014.

A Manual of Practical Hygiene for Students, Physicians and Medical Officers. By Charles Harrington, M. D., Assistant Professor of Hygiene in the Medical School of Harvard University. Second Edition, Revised and Enlarged. Illustrated with Twelve Plates in Colors and Monochrome, and One Hundred and Thirteen Engravings. Philadelphia and New York: Lea Brothers & Company, 1903. Pp. 5 to 760. (Price, \$4.25.)

The American Year-Book of Medicine and Surgery. Being a Yearly Digest of Scientific Progress and Authoritative Opinion in all Branches of Medicine and Surgery, drawn from Journals, Monographs, and Text-books of the Leading American and Foreign Authors and Investigators. Collected and Arranged with Critical Editorial Comments by J. M. Baldy, M. D.; J. Chalmers Da Costa, M. D.; W. A. Newman Dorland, M. D.; George Fetterolf, M. D.; John H. Gibbon, M. D.; Virgil P. Gibney, M. D.; C. A. Hamann, M. D.; Howard F. Hansell, M. D.; Barton Cooke Hirst, M. D.; D. Braden Kyle, M. D.; Wendell Reber, M. D.; J. Hilton Waterman, M. D. Under the General Editorial Charge of George M. Gould, M. D. Surgery. Philadelphia, New York, and London: W. B. Saunders & Company, 1903. Pp. 3 to 671. (Price, \$3.)

Diseases of the Stomach. A Text-book for Practitioners and Students. By Max Einhorn, M. D., Professor of Clinical Medicine at the New York Post-Graduate Medical School and Hospital, etc. Third Revised Edition. New York: William Wood & Company, 1903. Pp. xvii-534.

The Internal Secretions and the Principles of Medicine. By Charles E. de M. Sajous, M. D., Fellow of the College of Physicians of Philadelphia, etc. Volume I. With Forty-two Illustrations. Philadelphia: F. A. Davis Company, 1903. Pp. xxvi-800.

Physical Chemistry for Physicians and Biologists. By Dr. Ernst Cohen, Professor of General and Inorganic Chemistry in the University of Utrecht. Authorized Translation from the German by Martin H. Fischer, M. D., Instructor in Physiology in the University of California. New York: Henry Holt & Company, 1903. Pp. viii-343. Physiology at Harvard. By William Townsend Porter, M. D., Associate Professor of Physiology in the Harvard Medical School. Second Edition. Cambridge, Mass.: The University Press, 1903. Pp. ix-101.

Cutaneous Blastomycosis. A Summary of the Observations of James Nevins Hyde, A. M., M. D., and Frank Hugh Montgomery, M. D. (Reprinted from the *Journal of the American Medical Association*.)

Transactions of the American Ophthalmological Society. Thirty-eighth Annual Meeting, held in New London, Conn., 1902. Volume IX, Part III.

Twenty-seventh Annual Report of the Managers and Officers of the New Jersey State Hospital at Morris Plains for the Year ending October 31, 1902.

Reports of the Trustees and Superintendent of the Butler Hospital. Presented to the Corporation at its Fifty-ninth Annual Meeting, January 28, 1903, Providence, R. I.

Beiträge zur Frage der Volkshelstätten VII. Mitteilungen aus Dr. Weicker's Volkssanatorium "Krankenheim," Jahresbericht, 1901. Von Dr. med. Hans Weicker, Görbersdorf, Schl. Leipzig: F. Leineweber, 1903. Pp. 38.

Surgical Anatomy. A Treatise on Human Anatomy in its Application to the Practice of Medicine and Surgery. By John B. Deaver, M. D., Surgeon-in-Chief to the German Hospital, Philadelphia. In Three Volumes. Illustrated by 499 Plates, nearly all Drawn for this Work from Original Dissections. Volume III. Abdomen; Pelvic Cavity; Lymphatics of the Abdomen and Pelvis; Thorax; Lower Extremity. Philadelphia: P. Blakiston's Son & Company, 1903. Pp. xii-17 to 816.

A Practical Treatise on Materia Medica and Therapeutics. By Roberts Bartholow, M. A., M. D., LL. D., Professor Emeritus of Materia Medica, General Therapeutics, and Hygiene in the Jefferson Medical College of Philadelphia, etc. Eleventh Edition, Revised and Enlarged. New York and London: D. Appleton & Company, 1903. Pp. xxiv-866.

Therapeutics of Infancy and Childhood. By A. Jacobi, M. D., LL. D. Third Edition. Philadelphia and London: J. B. Lippincott Company, 1903. Pp. xvii-560. (Price, \$3.50.)

The American Year-book of Medicine and Surgery. Being a Yearly Digest of Scientific Progress and Authoritative Opinion in all Branches of Medicine and Surgery, drawn from Journals and Monographs, and Text-books of the Leading American and Foreign Authors and Investigators. Under the General Editorial Charge of George M. Gould, M. D. Medicine. Philadelphia, New York and London: W. B. Saunders & Company, 1903. Pp. 3 to 691. (Price, \$3.)

Miscellany.

The Telephonic Properties of the Inflamed Abdomen.—According to the *Edinburgh Medical Journal* for March, Peters (*Canadian Journal of Medicine and Surgery*, December) draws attention to the distinctness with which the heart and breath sounds may be heard over the tense distended abdomen in peritonitis, after the usual gurgling sounds due to the passage of gas and liquid feces from one loop of the bowel to another by peristaltic action have ceased. The heart sounds are invariably to be heard over the whole abdomen, and both inspiratory and expiratory breath sounds are also audible, and especially well in children. These sounds are not audible in distention due to causes other than paralysis of the muscular coat of the intestine, as a result of peritonitis, *e. g.*, flatulence due to indigestion, chronic obstruction, collections of ascitic

fluid, or fluid associated with tuberculous peritonitis. He believes that this phenomenon is a valuable diagnostic sign of paralysis of the muscular coat of the intestine. It is to be explained by the fact that, when the bowel is paralyzed and its tone is lost, the gas which collects in the coils of intestine causes them to distend, and by mutual compression the different air containing compartments come to form a continuous body of gas of uniform tension, which transmits sounds readily. Its capability of transmitting sound is doubtless enormously amplified by the dense boardlike condition of the muscles of the abdominal wall. In the opinion of the author, the distinctness with which the heart and breath sounds are heard over the abdomen bears a direct relation to the degree of paralysis present; and if the paralysis is due to sepsis, as is usually the case, the prominence of the symptom has high prognostic significance.

The Ætiology of Sporadic Cretinism.—Mr. Jonathan Hutchinson (*Polyclinic*, February, 1903) concludes an article on English Cretinism as follows: "A problem of great interest for us is the explanation of sporadic cretinism in England. Why should it happen that every now and then a child is born either without a thyroid or with the gland in a state of atrophic inefficiency? We may perhaps gain some light by taking note of the facts as observed in Switzerland. There it is well known that the cretins are usually the offspring of goitrous parents. The water of certain wells produces enlargements of the thyroid. These enlargements are often of very great size, but are not associated with any tendency to myxœdema. Yet the children of those who have suffered from them are liable to be born with glands defective in function, and thus to develop the myxœdema of childhood, that is, to become cretins. Now, in England, goitres are comparatively rare and very seldom of large size. I am not aware whether any collection of facts has as yet been made in England which would enable us to connect sporadic cretinism with parental bronchocoele. There are many facts, however, which give support to the belief that there must be a connection between the two. Amongst the laws of hereditary transmission there is probably one under which disease of any viscus, whether structural or functional, occurring in a person about to become a parent, may lead to defective development or even absence of that viscus in a child."

An English Impression of American Medical Institutions.—The *Medical Chronicle* for December contains an admirable, and let us add gratifying, account by Dr. Thomas Harris, of Manchester, of his impressions derived during a tour of New York, Washington, Baltimore, Philadelphia, and Montreal "with the object of seeing the construction and management of their chief hospitals and medical educational institutions." Dr. Harris very judiciously prefaces his subject with the remark, "I have thought that it would not be without interest to give a short account of the impressions formed from what I saw, but as impressions gained by a short visit to a vast continent, such as America, are apt to be erroneous, and not likely to do justice to the subject, I have hesitated a long time be-

fore committing them to writing." Dr. Harris says that "in this country (England) we know too little of the amount of good work which is being done on the other side of the Atlantic, and how very up-to-date are their hospitals, and how advanced are their methods of medical education. The more the scientific workers in this small kingdom know their brethren on the great American continent, the better will it be for the progress of medicine and surgery."

Of his reception here the author has this to say: "I have often heard of the cordial reception which Americans generally give to strangers from this country, and the accounts are not at all exaggerated. The amount of trouble and unselfishness which so many showed me was very great. Everything was done for me in a most kindly and ungrudging manner."

As regards hospitals, the author records the fact that "much attention has been paid of recent years to the details of hospital construction in America." He was impressed with the great width of the wards, and the consequent extensive free space which exists along the centre between the rows of beds. The small wards adjoining the larger ones, for noisy and other patients whom it is not desirable to treat in the general ward come in for commendation. The ventilating methods are described, and the author remarks, "I saw no open fireplaces in any of the American hospitals." The various forms of flooring—polished wood, tiles, cement, etc.—are discussed, and the author is led to the conclusion that "no floor is without fault for hospital purposes, and the perfect floor has yet to be found."

On the operating department he has much to say. After describing the typical construction he remarks: "It will readily be understood that such a method of construction must cost a very large sum, and although it conduces to the maintenance of asepsis and perfect cleanliness, it appears to be open to question whether such expensive structures are absolutely necessary, and it was evident to me that many thoughtful members of the profession in America were beginning to question the necessity for such elaboration of details in the buildings devoted to operations. Buildings so constructed conduce to perfect purity of the atmosphere, but it is felt by many that this purity of the atmosphere is a much less important factor in maintaining asepsis than the conditions of the operator's hands, instruments, and whatever material comes into immediate contact with the wound."

The consideration of aseptic practice leads to the quaint remark that "American surgeons carry out the principles of asepsis most thoroughly, but the idea which prevails among many members of the profession in this country, that American surgeons carry these principles so far as to always take a bath before operating, is of course erroneous."

In the emergency department the small wards for temporary detention particularly attracted his attention favorably, especially as conducing to "lessen the risk of sending away cases which, when first seen, appear trivial, but subsequently develop serious symptoms."

In the dispensary or outpatient department, he

says: "The only point which specially attracted my attention was the fact that in some (hospitals) a very perfect system of note taking and recording of cases by means of the card index system was in thorough working order. . . . The system adopted appeared to be not only theoretically good, but to be actually carried out in a practical manner. By this means a very valuable mass of evidence was gradually being obtained, and we all know what a large amount of similar material is wasted in this country for the want of some system of note taking in the outpatient departments of our large hospitals."

Of the pay wards, Dr. Harris says that "this department is a considerable source of income to the hospital, as large sums are charged for the privilege of a private room, and the department appears to be well supported. The well-to-do American does not appear to have the strong objection to a hospital which the average well-to-do Englishman possesses. Private nursing homes are much less in vogue on the other side of the Atlantic than here, the private paying department of some general hospital taking their place."

After describing the details of the system, he continues: "One would expect that such a system was fraught with various dangers, and likely to lead to much trouble and friction in the management of a large general hospital primarily intended for poor people. So far, however, as I could ascertain, it worked well in America, and nearly all hospitals encouraged it and derived a considerable income from it. The only adverse comment which I heard of the system was that in some hospitals there was a tendency to make too much of the paying department to the detriment of the charitable portion of the institution."

Of the laboratory facilities the author says, "The importance of good clinical laboratories, thoroughly equipped, and in immediate connection with the hospitals, appears to be much more fully and generally recognized in America than in this country. A very large amount of good scientific work is being done in these laboratories, and the system of recording the results of the investigations brings it into direct connection with the clinical work and notes taken in the wards. The boards of management generally of the American hospitals seem to fully recognize and to encourage scientific work in the clinical laboratories, and to attach greater importance to it than is frequently done in this country. The pathological departments are, moreover, excellent. . . . We may certainly learn much in America as to the best arrangement of a mortuary and post-mortem rooms, and as to the best means of avoiding the unpleasantness usually associated therewith."

Our nursing system comes in for unstinted praise. "America learnt, I believe, her nurse-training methods from this country, but I think we must admit that she has now excelled her teacher. The nursing department in American hospitals is generally very efficient. At nearly every hospital I was much impressed by the type of nurse I met. The nurses evidently have a good general education before undertaking their purely professional work, and I had no doubt that there was a higher intel-

lectual standard among the nurses of the American hospitals than is the case in this country. The training of the nurse is, I believe, very complete."

The management of the hospitals impressed the visitor favorably. As to the visiting staff, he notes the difference of system obtaining here and in England. Regarding the resident staff he comments approvingly on the longer terms of office in vogue in America, and on the greater number of residents and other assistants, and says that "in some—as for instance the Johns Hopkins Hospital at Baltimore—the number is very considerable, and would surprise some of the boards of management in this country. The considerable number of assistants connected with the American hospitals facilitates the keeping of clinical and pathological records, and I was impressed by the care which is bestowed on the taking of such records and with the indexing of the same. The Americans never lose sight of the fact that the principal hospitals ought to be scientific institutions, whereat the treatment of the sick is only one of their duties."

As regards medical education, he notes the inequality consequent upon the varying standards of the numerous degree-granting bodies, but adds, "In many (schools) a very high standard of education is maintained, and general medical education in America has considerably improved of recent years." After a long consideration of the comparative merits of didactic lectures, clinical and laboratory instruction, "quizzes," etc., he says, "It seems to me advisable that we, in England, should consider whether our plan of numerous systematic lectures on various subjects, and each course trying to embrace the whole subject of which it treats, is best calculated to conserve the time of the average student and to give him the best insight into his professional work." Of the clinical laboratory work, his impression is that it is more systematically and thoroughly taught at some of the best schools in America than is usual in England. This fact he attributes to the number of Americans who go for postgraduate study to Austria and Germany, and come back imbued with their scientific methods. Medical literature, the Association of American Physicians, the intercommunion between the members of the multitudinous medical societies in the United States and Canada, all come in for remark, and the interesting paper closes with the following gratifying words: "Our American *confrères* are doing very valuable scientific work, and I can strongly recommend any medical men to visit the United States and Canada with a view to seeing up-to-date hospitals, and associated medical institutions, and to see how great is the number of men—nearly all of whom are comparatively young—engaged in medical education and in valuable scientific medical work. As I have said before, a visitor from this country is certain of a very cordial and kindly welcome, and I have no doubt he will return, as I did, grateful for many kindnesses, and with broader views on many subjects. If the above fragmentary notes encourage more of my fellow countrymen to visit the medical educational institutions on the other side of the Atlantic, I shall feel some recompense for having been rash enough to allow to be printed my impressions of a very brief visit."

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Original Communications.

INTESTINAL OBSTRUCTION.*

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In presenting this subject I feel that it is one in which the physician and the surgeon have a common interest.

By obstruction of the bowel I mean any condition which will interfere with the continuity of the intestinal canal. This condition may be either acute or chronic, and the obstruction may be either partial or complete.

Of the acute lesions the different herniæ may be classed among the most common, while twists in the bowel and intussusception will follow in the order named; early postoperative adhesions, concretions, impacted material, and foreign bodies claim a goodly percentage.

Late postoperative adhesions, malignant diseases, and benign growths may be mentioned among the instances in which premonitory evidences of impending obstruction may be noted for some time prior to complete stoppage.

In arriving at a diagnosis in the acute cases a careful search should be made for a possible hernia. It is surprising how frequently a hernia may be overlooked. I have seen a number of instances in which severe abdominal, colicky pain and incessant vomiting had been going on for several days before this lesion was discovered. A certain hesitation to expose females to a more searching investigation may result in just this calamity.

In the case of external herniæ, however, the cause of the trouble is usually readily cleared up. In this we have a distinct tumor to guide us, but in hernia of the diaphragm and obturator hernia when no tumor can be felt, one is forced to rely entirely on the symptoms present for a diagnosis.

Whatever the cause of acute obstruction may be, the symptoms are generally quite marked: Acute pain which, at the outset apt to be intermittent, soon becomes continuous; persistent vomiting, first of the food taken, then of material mixed with

bile or pure bile, until the rejected material is stercoreous or fecal. Distention of the abdomen is generally present at this time and obstinate constipation always, but that all these symptoms are ever present to make our line of action clear is far from uncommon.

How many of us have operated on strangulated herniæ which have existed for days, time and again with little evidence of trouble beyond the local tumor with devitalized bowel in the sac and general peritonitis present; all this occurring without the vomiting or distention and with no marked discomfort.

This state of affairs, applied to an internal block, will very often wrap the case in sufficient obscurity,



FIG. 1.—Gallstone causing acute intestinal obstruction.

so that, when the doubt can be cleared up, only one result may be looked for.

One will frequently find himself in a quandary regarding what to do.

We have all seen cases where the condition seemed reasonably positive that obstruction existed but subsequent developments proved the contrary.

I was asked by Dr. English, of Troy, to see a case which he had diagnosticated as acute obstruction, with reference to opening the abdomen. The patient had been suffering for three or four days with severe pain which was referred to the region of the umbilicus, constant vomiting of dark brown offensive material and distention of the abdomen, but the constitutional symptoms were not quite so active. The case, however, seemed one in which delay was unsafe, and the patient's removal to the hospital was decided upon.

While she was making preparation to be transferred, she felt something move, and shortly a free

* Read before the New York State Medical Association, October 22, 1902.

evacuation followed, with such marked relief that necessity for operative intervention was no longer thought of. Within a few hours another movement brought along the concretion which I show you (Fig. 1).

This concretion seems to be made up of cholesterine and bile salts, and no doubt had its origin in the gall bladder, finding its way into the intestinal tract by a process of ulceration.

The most common cause of chronic obstruction of the bowel will be found to depend on some malignant growth, and I desire to speak more particularly of obstruction created in that particular way.

When a diagnosis of malignant disease of the intestine can be made, it has usually made considerable headway. In the absence of obstructive symptoms or pain there is nothing, as a rule, to direct the patient's attention to the insidious process, and it may be that the disease may have progressed far beyond its starting point, that regional infection may have taken place, and constitutional evidences have become marked, such as emaciation, blood disturbances expressed in anæmia, etc. The disease can only arrive at this stage, however, without manifesting itself to the patient in instances where the patency of the bowel is maintained and involvement of nerve trunks has escaped. Usually there is sufficient narrowing early in the history of a malignant neoplasm attacking the intestinal tract to cause some resistance to the passage of the contents, causing at times a partial block or accumulations of gas, which the patient is perfectly conscious of and can very often locate and demonstrate its presence by his own sense of touch. A good deal of colicky pain is always present in such instances and complete relief is obtained when the bowels have been thoroughly evacuated.

The moment a malignant process involving the bowel is suspected, and before the patient has suffered particularly from the inroads of the disease and extensive regional involvement has taken place, would seem the opportune time for a radical operation.

When a diagnosis of malignant disease has been made and an operation has been decided upon, the work, if possible, should be as complete as the circumstances of the case will permit. The condition of the patient and the location of the growth will invariably determine our line of action. A radical operation, with the removal of the entire portion of the bowel involved together with the complete dissection of the corresponding mesentery, insuring, if possible, its complete extirpation, is positively necessary.

Usually, malignant tumors select some portion of

the large intestine, with an unusual preference for either the sigmoid flexure or the rectum. Ordinarily, the obstruction may be removed and an intestinal anastomosis made, if the trouble occurs not lower than the upper third of the sigmoid flexure of the colon; below that point the disease will be attacked from the rectal outlet and its removal effected in that particular way. If possible, the destruction of the sphincter ani muscle should be avoided, but its preservation should never be considered when the lower part of the rectum has been attacked. The establishment of an artificial anus is something to be avoided, but will come up as an inevitable proceeding in the instances where it is inexpedient to attempt the removal of the entire mass and the operation is undertaken solely for the purpose of relieving the obstruction and prolonging life.

CASE I.—F. W., on entering Troy Hospital, October 5, 1901, gave the following history: Aged seventy-one years; married; flagman. Family history, negative. *Personal history*: has never been ill except with fever at the age of twelve years; no specific history and no history of injury. About March, 1901, began complaining with some discomfort in right side of abdomen near caput coli. More or less constipation became evident and very soon he was aware of a collection of gases at this point which he could dislodge by pressure. The pain was not acute and did not even disturb his night's sleep until the early autumn. When he entered the hospital he was aware of the existence of a tumor in his right abdomen, suffered a good deal of colicky pain, and bowels moved with the greatest difficulty. He had lost flesh, his appetite was poor, and his nights very restless. Had never vomited and there was no evidence of mucous or blood in his passages.

Examination: Somewhat emaciated, muscles soft, abdominal walls flabby, skin and mucous surfaces pale; a prominence noted at outer border of right rectus muscle on a level with the umbilicus. Patient refers all his discomfort to this area.

On manipulation distinct gurgling can be elicited which causes well marked discomfort. The mass impresses one as being more or less nodular and seems to extend from the caput coli to the commencement of the transverse colon. Its free border is movable but the base is firmly attached. The fingers can be pushed between the lower border of the ribs and tumor.

Diagnosis: Malignant disease involving the caput coli and portion of ascending colon.

Operation: Incision made over tumor at right border of right rectus muscle, about four inches in length. The new growth was seated in the *large bowel*. The mesentery of three inches of ileum, caput coli, and almost the entire ascending colon was the seat of a new growth with attachments so deep that its removal seemed impossible. The small bowel was divided as you see in the specimen, and a process of dissection begun. The mesenteric glands were intimately adherent to, and

mixed up with, important vessels; but, as you can readily understand, with such widespread infection and in this neighborhood particularly, the complete eradication of the disease was impossible. However, the intestine, as you see here presented, was excised, and represents a portion of the ileum, the caput coli and most of the ascending colon. (Fig. 2.)

A lateral anastomosis was made by means of mattress sutures of fine silk. No bowel disturbance was noted after the operation. The post-operative history was uneventful. The patient returned to his work, flagging at a railroad crossing, continued in good health for some time, the bowel performing its work in a perfectly normal way until the time of his death, which occurred eight months afterwards.

Microscopical examination, made by Dr. George Blumer, of Albany: Adenocarcinoma.

The history of the case from the outset of the illness until she entered the hospital resolved itself into vomiting after all food taken, enlargement of the abdomen, absolute constipation, and progressive loss of flesh. The vomitus consisted of food taken, and never was bad smelling or fæcal in appearance.

Examination on entering hospital, November 14th. Patient much emaciated, says she has lost fifty pounds; facial expression much the same as one would find in a 'well advanced ovarian cyst. The abdomen is universally distended, the coils of intestine, particularly the large bowel, stand out prominently; percussion note is high pitched, not tympanitic, and manipulation gives one the impression of a solid mass. The abdomen is not sensitive. No areas of tenderness.

Bimanual examination. Uterus large, pressed down in the pelvis, and immovable. Impossible to outline it on account of the enormous abdominal dis-



FIG. 2.—a, seat of new growth; b, distended cæcum; c, vermiform appendix; d, ileum; e, infected lymphatic glands.

CASE II.—Mrs. H. R. Entered Troy Hospital, November 14, 1901, and gave this history: Aged 43 years, married, native of Norway. Family history, negative, so far as she knows, except that one sister died with consumption.

Past history: Has always enjoyed good health; menstruation began at fifteen years of age, was always regular, and normal in amount and duration; married at thirty, and never had children.

Present history Was perfectly well until the early part of June, 1901. Illness began with vomiting and pains in the abdomen, referred particularly to the left iliac region; some distention. June 10th, took a dose of Epsom salts, which was followed next day by a movement. The dejecta were small in amount and this was the last material passed of a fæcal character until she was operated on, November 18, 1901.

She had a constant desire to evacuate the bowels but never succeeded in passing even the smallest amount of flatus. The abdomen became distended. The patient could see this becoming larger daily.

tention and engorged condition of pelvis. Rectal examination negative.

Diagnosis: Probably uterine fibroid, causing a block in the lower bowel.

Operation: November 18th. Exploratory cœliotomy. Finger passed in abdomen demonstrates a good-sized fibroid, apparently blocking the entire pelvis and preventing the further descent of intestinal contents. Intestines completely loaded with fæcal matter; large bowels distended to utmost capacity. A considerable quantity of serous exudate in peritoneal cavity escaped freely when abdomen was opened. Intestinal peritonæum much injected, but no exudate of lymph or acute peritoneal trouble. The condition of the patient, as you may well imagine, was not such that a hysterectomy could be done, and I closed the abdomen and did a left inguinal colostomy. The descending colon was plainly to be seen through the abdominal wall, and I cut down on it bringing it into the line of incision, and, after suturing it to the peritonæum, made a longitudinal incision. The amount of material escaping

far surpassed my expectations. I should say gallons of faecal matter ran away and continued to discharge at an enormous rate for days. The patient soon rallied from the operation and soon evidenced a notable gain in spirits and ability to take food.

Second Operation. The further history of the case until December 18th would be uninteresting and tiresome. On that date I reopened the abdomen for

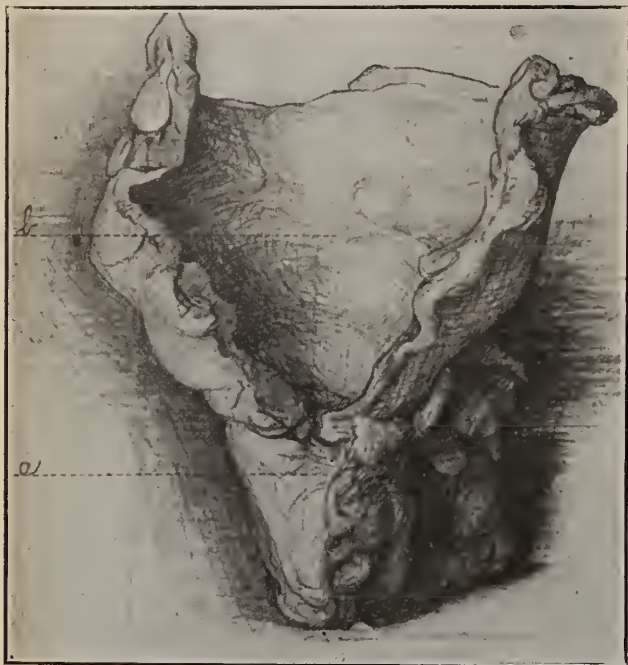


FIG. 3.—a, seat of new growth; b, distended bowel above point of stricture.

the purpose of doing a hysterectomy, the uterus being considered the cause of the block. A pan-hysterectomy was done, the patient standing the proceeding very well; but, on examining the sigmoid flexure of the colon just as it passes over the brim of the pelvis, I found a complete closure in the gut, due to a malignant neoplasm. (Figs. 3 and 4.) This meant an intestinal resection, and those who were present and assisted me will remember the difficulty associated with making an intestinal anastomosis at this point working low down in the pelvis on a patient whose ability to withstand such a long drawn out performance was more than could be reasonably expected. A lateral anastomosis was made in this case also. I made no attempt to close the fistulous opening in the colon, as the patient's condition would not permit of it. The postoperative history was uneventful. The patient made a rapid recovery and the artificial opening has since closed spontaneously. The occlusion of the bowel was absolute and occurred just at the pelvic brim. While the specimen was recent it was found impossible to pass even the smallest probe through the strictured area.

Microscopical examination by Dr. George Blumer, of Albany; Adenocarcinoma.

The histories of these cases point strongly to the gradual onset of the trouble with well marked clinical symptoms which should have been unmistakable, but notwithstanding this, all idea that interference

could be practised successfully seemed to be lost sight of. The operative histories were sufficient to demonstrate the practicability and the almost positive favorable outcome if early operation had been done. If any permanent good can follow such a proceeding it is reasonable that with the earliest manifestation the abdomen should be opened. Malignant growths, no matter where located, are among the most insidious, and when their presence is demonstrated by the existence of pain, we had better not operate, ordinarily, inasmuch as pain is always a late symptom of cancer, and is sufficient evidence, as a rule, that the disease has traveled far beyond its starting point. The higher up the growth the greater the likelihood of regional infection. Most of our stomach cases are early associated with secondary deposit in the liver, and it will be rare indeed to find a malignant growth in the small intestine without engorgement of the mesenteric glands. Regional infection, however, in the large bowel, as a rule, comes later, and the prognosis for



FIG. 4.—a, showing lumen of bowel below point of stricture.

non-recurrence is correspondingly brighter.

In conclusion, I desire to say that the intestinal tract, beginning with the stomach and extending throughout its entire length, furnishes the greatest opportunities for brilliant surgery, as to both immediate recovery and lasting benefits.

The New Mexico Medical Society held its annual meeting in East Las Vegas, April 7th and 8th. Dr. J. Frank McConnell, of Las Cruces, is secretary of the society.

ON THE PHYSIOLOGICAL ACTION OF SILVER SULPHOICHTHYOLATE.

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Although the reports of the clinical use of the sulphoichthyolate of silver, commonly known by the trade name of ichthargan, are very numerous, scientific studies of its effects are very few. The only tests of its general action that I know of are those made by Aufrecht (*Deutsche medicinische Wochenschrift*, 1900, xxvi Therap. Beil, p. 28), and these were limited mostly to determining its comparative toxicity. Aufrecht succeeded in demonstrating that the remedy was possessed of a high degree of antiseptic power, fully equal to, if not greater than, that of silver nitrate, so that it seems deserving of some further study.

Locally, the ichthyolate of silver is astringent, but it is much less irritant than the nitrate; thus, when applied to the mucous membrane of the mouth it produces a styptic, metallic, and slightly bitter taste, but no pain and no visible sign of local irritation. In passing, I may remark, however, that frequently the hypodermic injection of only a moderately concentrated solution of this compound produces in the lower animals marked evidences of pain.

The chemical relations of this substance would seem to have such an important bearing upon the question of its internal effects that as a preliminary to the study of its physiological action, I may call attention to the reaction between it and various chemical agents. It is precipitated by the ordinary reagents for silver, such as potassium hydrate, alkaline carbonates, iodides, and, which is especially important in the present discussion, by the salts of hydrochloric acid. It is evident that since the substance is precipitated by hydrochloric acid it is impossible for it to retain its integrity in the stomach, and therefore it is unabsorbable as the sulphoichthyolate, if given by the mouth. Under the influences of these reagents it is to be expected that the compound would be broken up into its component parts, and such I have found to hold true, at least so far as sodium chloride is concerned; by precipitating a solution of ichthargan with sodium chloride and filtering, I obtained a solution of ichthyol. This change probably takes place after its ingestion into the stomach, the hydrochloric acid breaking it up into silver chloride and ichthyol.

What occurs when the silver ichthyolate is injected directly into a vein, I am not quite certain. It would seem highly improbable that it can maintain its integrity in the blood. In the first place,

the sodium chloride of the blood must cause a decomposition of the substance; but, even if it escapes this change, like the other salts of silver it is an active precipitant of albumen. Thus, the addition of a drop or two of blood to a solution of ichthyolate as dilute as one part in 10,000 causes a distinct cloudiness, and the addition of the silver salt in almost equally dilute solution to the blood throws down a precipitate. This precipitate, however, is soluble in excess of blood, and it would therefore seem that it is possible for the silver to circulate in some form in the blood; but it is unlikely that it circulates unchanged. In passing, I may say that the symptoms which follow the injection of silver sulphoichthyolate into a vein are not at all explicable on the supposition that it forms a coagulum in the blood, for they in no way resemble the symptoms of thrombosis.

It is apparent that this substance being so rapidly precipitated by the alkalis, the chlorides and the albumens of the body can be absorbed after its hypodermic administration only with the greatest slowness, and it is therefore unlikely to exercise any poisonous action; and I have failed to obtain in the mammal (rabbit) any sign of its action from subcutaneous injection, except locally, with doses reaching as high as 1.38 gramme to the kilo of body weight. The marked discrepancy between some of my results given below and those of Aufrecht seem entirely explicable on this ground. In many of his experiments he fails to note the mode of administering the remedy, and it is therefore possible that the low toxicity he obtained was due to imperfect absorption. In Aufrecht's experiments, doses of from 0.02 to 0.05 gramme had practically no effect on the frog, while in mine the batrachian was always killed by amounts above 0.02 gramme. The substance is certainly, however, far less toxic than silver nitrate. For although I have made no extensive studies of the latter, I have killed a frog with a dose of the nitrate less than one-tenth the lethal dose of the ichthyol salt.

That the harmlessness of the large doses depends on the slowness of absorption is shown by the difference in the effects according to the mode of administration. Thus, while the hypodermic injection of 0.4 gramme, or 0.6 gramme, and even 1.38 gramme to the kilo had no effect, the intravenous injection of 0.02 in a rabbit of about 1.5 kilo weight caused death in three minutes, while in the dog, in several instances, doses of 0.01 gramme to the kilo proved fatal. It is fair to note, however, that in one case 0.49 gramme had no pronounced effect upon a dog weighing 5.2 kilos.

Physiological Action.—The injection of ichthargan into the posterior lymph sac of a frog caused

motor weakness and finally complete paralysis. This palsy was associated, if the dose was very large, with diminution in the irritability of the motor nerve, but was not entirely dependent on changes in the nerve or muscle as is shown in the following experiments:

EXPERIMENT I.
Small Frog.

Time.	
11.15	Injected 0.02 gramme of ichthargan.
11.30	Frog weak, but seems abnormally irritable.
11.55	Unable to turn over when laid on its back.
12.05	Completely paralyzed, motor nerve about normally irritable.

EXPERIMENT II.
Small Frog.

Time.	
10.55	Injected 0.03 gramme ichthargan, some lost.
11.07	No symptoms.
11.09	Injected 0.04 gramme.
11.11	Less lively, but can turn over.
11.15	Turns over with difficulty.
11.30	Reflexes gone, some voluntary motion persists.
11.35	Motor nerve responds to strong currents, but less readily than muscle when directly stimulated.

EXPERIMENT III.

Time.	<i>Pithed frog with one nerve protected by mass ligature.</i>
11.50	Injected 0.06 gramme ichthargan.
12.50	Almost paralyzed—protected nerve responds at 48 c. m.
	Separation of secondary coil, non-protected at 43.
1.00	Complete paralysis. Both nerves respond at 48 c. m.

The concentrated solutions applied directly to the nerve muscle preparation produced a paralysis of both the motor nerve and the muscle itself.

The two gastrocnemii with tributary nerves were prepared and one placed in a one per cent. solution of ichthargan in normal salt solution¹, the other in simple saline, as a control.

EXPERIMENT IV.

Time.	<i>Ichthargan Solution.</i>	<i>Control Solution.</i>
3.25	Responds at 10.5 c. m.	Responds at 10.5 c. m.
	separation of secondary coil.	
3.30	Placed in solution	
3.41	Responds at 10.5 c. m.	Responds at 10.5 c. m.
3.50	Slight response at 11.5 c. m.	Responds at 10.5 c. m.
4.00	No response to any current.	Responds at 10.5 c. m.

The paralysis is therefore chiefly central in origin. Direct confirmation that the spinal centres are depressed by this drug was brought by Turck's method, under which circumstances the reflex time was found to be distinctly prolonged.

¹Of course this is hardly a test of the action of silver sulphoichthyolate, since the salt was precipitated by the sodium chloride, but rather the combined effects of silver chloride and sodium sulphoichthyolate.

EXPERIMENT V—(TURCK'S METHOD).

Metronome beats 150 per minute.

Time.	
11.00	6 Beats.
11.04	6 "
11.07	5 "
11.10	6 "
11.11	Injected 1 c. c. of 2 per cent. ichthargan.
11.20	6 Beats.
11.25	7 "
11.28	8 "
11.37	8 "
11.41	9 "
11.55	10 "

In some experiments there was an apparent primary increase in the reflex activity. Whether this was a real motor stimulation or simply an indirect increase following the injection of an irritant substance I am not prepared to say.

EXPERIMENT VI—(TURCK'S METHOD).

Time.	
1.10	10 Beats.
1.20	12 "
1.30	13 "
1.35	Injected 0.04 gramme ichthargan.
1.50	10 Beats.
1.55	11 "
2.00	10 "
2.05	14 "
2.20	16 "
2.40	16 "
2.50	17 "
3.00	20 "
3.05	22 "

When injected into a vein there occurred an immediate fall of the blood pressure, which, if the dose was sufficient, progressed steadily until death. After death the lungs were found to be filled with a frothy fluid and to have marked congestion at the bases. In one case there was a very marked exudation of this frothy fluid from the nose just before the animal died.

EXPERIMENT VII.

Time.	Pressure.	Pulse in 10 seconds.	Weight of dog, 7 kilos.
0.0	104	17	Injected 1 c. c. of 2-per-cent. solution ichthargan.
0.5	..	..	
0.35	99	17	
0.45	..	..	Injected 1½ c. c.
1.35	75	16	
2.35	70	16	
2.45	..	..	Injected 1½ c. c.
3.45	50	20	Not breathing.
5.00	to	..	Breathing slowly for about 1 minute, but did not affect fall of pressure.
6.00	..	..	Pulse almost imperceptible.
7.45	12	10	Pressure has been falling steadily.

It will be seen from these experiments that the action of this compound is precisely similar, at least qualitatively, to that of the other silver salts. Charcot and Ball have noted the same paralysis of the heart following the intravenous injection of silver nitrate, and Rouget describes a very similar condition in the lungs as the result of silver injections. It has the advantage over silver nitrate in that it is locally less irritant and is decidedly less poisonous.

PRACTICAL POINTS ON INTUBATION OF THE LARYNX FOR CROUP, WITH A REPORT OF THIRTY-SIX CASES.

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(*Concluded from p. 592.*)

CASE VI.—June 14, 1899. F. W., two years and eleven months old, had had diphtheria for six days, laryngeal involvement since the previous day. Coughed up membrane in the morning, when 3,000 units of antitoxine were administered by the physician in attendance. When seen by me, twelve hours later, breathing was stertorous and there was marked retraction of the supraclavicular and abdominal regions. The air entered the lungs fairly posteriorly, but many râles were present over both lungs. Temperature 103°, pulse 124, respirations 40.

Tube 2 was easily inserted and gave immediate relief. Much mucus was coughed up. The string was removed with some difficulty, as it had become twisted. There was considerable cyanosis in this case on inserting the gag for intubation. This child passed about twelve ounces of urine in twenty-four hours, of sp. gr. 1035; urea .05 gm. in 1 c. c.; albumin was present in large quantity, also hyaline casts and renal epithelia. This patient experienced great difficulty in feeding in the Casselberry position, so that rectal alimentation and gavage were resorted to.

Four days later I was hurriedly called on account of dyspnoea. The patient was very restless and expiration appeared especially difficult. There were many coarse râles over both lungs posteriorly and some dulness over the left apex in the same aspect. It was evident that there was some bronchopneumonia, but it did not seem to be sufficient to account for the dyspnoea. The pulse was 136, respiration 45, temperature 101° F. The tube was easily removed with the extractor, when the pulse fell to 106 and respirations to 36; the patient became calm and quiet and fell into a peaceful sleep. Recovery.

CASE VII.—August 27, 1899. A girl, Hungarian, aged four years and five months, had been indisposed for four days. Croupy cough severe the previous day. First seen by a physician the day I saw her. When seen by me cyanosis was marked, and there was great obstructive dyspnoea with marked re-

traction of the soft parts of the neck, chest and upper abdomen. I did not wait to count the pulse and respirations, but immediately inserted rubber tube 4-5 without difficulty. Relief was immediate. Two thousand units of antitoxine were administered and 2,000 more ordered at once. The tube met with slight resistance on insertion, but went home easily on very slight pressure. The string was removed after fifteen minutes. There was no difficulty in feeding. The tube was removed on the fifth day without difficulty. For about half an hour I thought that I should have to reintubate; however, a cold compress to the throat and an opiate obviated this. Recovery.

CASE VIII.—December 9, 1899. H. B., a girl, aged four years, had had croup for four days which had been bad for twenty-four hours previous to my having been called. No antitoxine had been administered. The child was *in extremis* when I arrived, being absolutely unconscious, while only an occasional gasp took the place of respiration. On auscultation no air seemed to enter the lungs; tube 4-5 was inserted at the first attempt. The patient was stimulated vigorously and became fully conscious in about an hour. As much mucus was present the string was left attached for twenty minutes. Four thousand units of antitoxine were administered. December 14th, I saw the patient again with the family physician. For forty-eight hours ending the previous evening the temperature had ranged around 104° F., respirations were very rapid, there were many small moist râles over the right lower lobe. Temperature this morning was 101° F., pulse good. Tube was allowed to remain in for forty-eight hours longer, on account of unwillingness to disturb the child when apparently improving. She took nourishment without difficulty, first in the Casselberry position and then in any position. December 16th the tube was easily removed, there was a loose cough. In the evening I was again called to see the case on account of dyspnoea, which I concluded was due to pneumonia. On December 26th, after the temperature had become about normal, the child sat up in bed suddenly and fell dead. The family physician informed me that previous to death she had had considerable difficulty in swallowing, with regurgitation through the nose for some days, but this was improving.

CASE IX.—R. J. S., a boy, aged three years and a half, had had croup at night for two weeks, but no membrane had appeared on the pharynx or tonsils. There had been marked difficulty in breathing for twenty-four hours. There was great retraction of the supraclavicular and epigastric regions. Inspiration was greatly prolonged and whistling, while the patient was bathed in sweat. An O'Dwyer tube, 3-4, was easily inserted and gave immediate relief. Antitoxine was administered by the board of health. The tube was easily removed on the sixth day. The four hours, of sp. gr. 1035; urea .05 gm. in 1 c. c.;

CASE X.—December 14, 1899. G. S., a boy, aged two years and two months, had been ill for three days. The previous night he was treated with steam inhalations and emetics for croup. When

I was called 1,500 units of antitoxine had just been administered. The patient was semicomatose, of an ashen color, with cyanotic lips. There was an enormous amount of retraction of the soft parts about the thorax on attempt at inspiration. Two attempts were made before being successful at introducing gold tube 2. I am not sure that the tube did not go home at the first attempt, but it certainly did not relieve the obstruction. The last time also the tube was much obstructed by tenacious mucus, so that relief was not apparent for a considerable time. The child was first fed in the Casselberry position, but later this was found unnecessary. Sixty hours later, on being allowed to sit up, contrary to directions, to take nourishment, the child died suddenly.

CASE XI.—January 8, 1900. Mabel G., aged twelve, had been sick for two weeks and had had croup for several days, when seen by the family physician. The pulse was then 130, temperature 103°, and there was an extensive membrane on the tonsils, pharynx, and uvula. The patient had not slept for two nights. There were great cyanosis, marked retraction of the supraclavicular spaces, and slight abdominal retraction. Intubation was performed at once with the O'Dwyer rubber tube, and 3,000 units of antitoxine were administered. The following morning 3,000 units more were given, and another 3,000 in the evening. During twenty-four hours eleven ounces of urine were passed, which contained 11 gm. of albumin to the litre: sp. gr. 1040, urea .038 gm. in 1 cc.; very few casts were present. January 10th, the tube was easily removed, when the patient immediately coughed up a piece of membrane of the size of a twenty-five-cent piece. There was no membrane remaining on the tonsils or pharyngeal walls. Recovery.

CASE XII.—March 24, 1900. R. O., a girl, aged three years and a half, had had markedly croupy cough since the previous morning. The physician in attendance administered 2,000 units of antitoxine at that time. When I was called the child would sleep fairly quietly for a time and would then awake to have spells of stertorous breathing. Just before I arrived she had had a very severe attack of suffocation, for which syrup of squill had been given with some relief. When asleep the respirations were 28, and prolonged inspiration alternated with periods of fairly quiet breathing. On arousing her, the face became at once bathed in sweat and the pulse rapid, while the soft parts about the thorax were markedly drawn in and the *alæ nasi* moved very perceptibly. As she was some distance away, I was afraid to leave without intubating. I introduced a Dillon Brown tube, 4-5, on the second attempt. The first attempt failed on account of pushing the epiglottis down with the end of the tube. I administered 4,000 units more of antitoxine. The tube was removed on the sixth day. There was some croupy cough, but no dyspnoea following its removal. The child could take but little nourishment in the Casselberry position. Recovery.

CASE XIII.—March 18, 1900. J. N. P., a girl, aged three years, had been sick for a week,

but was first seen by a physician the day I was called. The breath had a foetid, sweet odor, the tonsils were raw, but no membrane could be seen. There was some retraction of the epigastric and supraclavicular regions, expansion of nostrils, prolonged inspiration and aphonia; marked dyspnoea, however, only when disturbed. The patient had not slept all day and her neck and chest were bathed with sweat. On account of inaccessibility of the case and danger of leaving it, I determined to intubate without delay. There were marked dyspnoea and cyanosis when the child was disturbed to insert the tube. Intubation presented no difficulty; the tube was removed on the sixth day. No difficulty in feeding was encountered. Recovery.

CASE XIV.—March 21, 1900. C., a boy, aged three years and a half, had a bad attack of croup the previous night, which had grown progressively worse. The child was in a stupor when I saw him. The most noteworthy symptoms in the afternoon were cyanosis, very slow, stertorous respiration, and marked retraction of the soft parts. Tube 4-5 was introduced at the first attempt. About two inches of string broke off on withdrawing it, and remained attached to the tube. Relief was immediate. Antitoxine was administered later by the board of health. The child died of pneumonia the following day.

CASE XV. April 19, 1901. V. S., a girl, aged two years and a half. This child had been treated for a week by the physician in attendance for bronchitis. No membrane had been present in the tonsils or pharynx. On the morning of the day I was called she had been intubated by a colleague, who removed the tube in a short time because it became obstructed. A large piece of membrane was said to have come away with the tube, and stenosis to have been markedly relieved. On account of the family's not being able to reach this physician, I was called about 6:30 p. m. to see the patient. Cyanosis was very marked and breathing was very rapid. Intubation was hurriedly performed. I failed on the first attempt on account of bad holding. The child now stopped breathing entirely for a short time. It was stimulated and a four-year tube was inserted. The pharynx and larynx were absolutely dry, there was anuria and a temperature of 104° F. The tube relieved the cyanosis somewhat and more air entered the lungs, but the number of respirations was 60 to the minute. There were fine moist râles at the base of the right lung, while there were dulness and dry bronchial râles below the scapula on the left side. The child died about 6 a. m. In all, 12,000 units of antitoxine were administered during the last day of its life; none had been given previously. I think that this was probably a case of ascending diphtheria which began in the bronchial tubes.

CASE XVI.—April 21, 1900. L. G., a boy, aged five years and ten months, had had nine attacks of false croup. He was taken in the morning with symptoms of laryngeal stenosis, which had grown progressively worse in spite of steam inhalations, ipecac, and hypodermic in-

jections of morphine. The physician in attendance gave 3,000 units of antitoxine during the afternoon. When seen by me, at 11 p. m., there was marked retraction of the soft parts and absolutely no air was entering the lower lobes of the lungs posteriorly. Aphonia was not absolute, respiration was rapid, and inspiration was greatly prolonged. A rubber tube, 6-7, was inserted with difficulty after several gentle attempts. At the first attempt the tube would not pass the vocal cords, then it slipped into a ventricle. Then the child was given a brief rest and another attempt made. Again it did not pass the cords until gentle pressure had been made upon it for several seconds. Relief of the symptoms was absolute and immediate.

April 22.—Temperature 101°, pulse rapid but regular. The child is doing well and swallows well in the Casselberry position. P. m. temperature 103° F., pain on deglutition.

April 23.—Temperature 104° F.; lungs clear, enlargement of the spleen. Culture from the throat does not show the presence of the Klebs-Loeffler bacillus.

April 24.—Extubated at noon. Reintubation became necessary at 7 p. m. A smaller tube (gold) was used. Some difficulty was again experienced on reintubation. The patient is still having same temperature.

April 27.—The patient coughed out the tube. The next larger size was reinserted within half an hour. Examination of secretion from the larynx shows only streptococci. The temperature is gradually coming down.

May 3.—The tube was easily removed, but reinsertion was necessary after ten minutes.

May 9.—The tube was easily removed at 5 p. m. I was called at 9 p. m. on account of dyspnoea, but did not consider reintubation necessary. The child breathed badly while asleep for this and the following night, but made a perfect recovery. Several examinations for Klebs-Loeffler bacilli revealed only streptococci.

CASE XVII.—May 18, 1900. C., a girl, aged seventeen months. Had had German measles for several days. Dyspnoea commenced the previous evening at 11 o'clock, but did not become alarming until 4 o'clock in the afternoon. At 11:30 p. m., there was marked retraction of the soft parts, and no air entered the lower lobes behind. Temperature 103° F. Bronchial breathing over left lower lobe. O'Dwyer tube 2 was easily inserted. Membrane was expelled through the tube.

May 25.—Extubation easily accomplished. Respiration was normal for about ten minutes. Then a brassy cough with dyspnoea and marked retraction of the soft parts commenced. On account of the presence of pneumonia, I did not wait for the symptoms to become urgent, but reintubated at once.

May 30.—Extubation. Some dyspnoea after half an hour, which was much benefited by cold applications to the throat. Feeding by Casselberry's method was unattended with difficulty. Recovery.

CASE XVIII.—June 14, 1900. Ed. W., a boy, aged three years and a half, had been croupy for two days. The physician who was called at noon

to-day noted membrane on the tonsils and symptoms of laryngeal obstruction. Two thousand units of antitoxine were administered. I was called to intubate at 10:30 p. m. There were prolonged inspiration, marked retraction of soft parts, etc. Tube 4-5 was easily inserted. A large piece of membrane was coughed through the tube.

June 20.—The tube was coughed out this morning. Recovery.

CASE XIX.—November 24, 1900. M., a girl, aged twenty-two months, had had a sore throat and enlarged tonsils since November 19th. Had dyspnoea the previous day and night, which grew worse the day I saw her. When I was called there were marked dyspnoea, stridor, aphonia, and retraction of soft parts. The symptoms grew much worse on awakening patient. O'Dwyer rubber tube 2 easily inserted. Complete relief. Antitoxine 2,000 units, administered. The tube was removed the fifth day. Child could eat in the upright position on the third day. Recovery.

CASE XX.—January 2, 1901. V. J., a girl, aged six months, had had an exanthematous rash, apparently röteln. Two days after the rash appeared there were symptoms of laryngeal croup, which were preceded by a discharge from the nose and swelling of the tonsils. There was no membrane visible in the throat. Temperature 100° F., respiration 52, prolonged inspiration, retraction of soft parts. Breathing was very harsh below and behind, and there was absence of vesicular breathing. No dullness. O'Dwyer tube 1 easily inserted. There was much mucus present in the tube for one hour. Casselberry's method was employed with perfect success. Cultures did not show the presence of the Klebs-Loeffler bacillus.

January 7.—Two doses of $\frac{1}{4}$ of a grain each of Dover's powder were given at 9 a. m., and 1:30 p. m., and the tube was extracted at 2:20 p. m. Recovery.

CASE XXI.—April 28, 1900. J. C., a man, thirty-eight years of age, weight about 240 pounds, had had a circumtonsillar abscess for five days, which had been incised. At 6 p. m. the day before, the attending physician noted a membrane on the uvula and some dyspnoea, and administered 3,000 units of antitoxine. I saw the case at 1:30 a. m., and enlarged the incision in the tonsil, which was considerably swollen, in the vain hope that it might benefit the dyspnoea. At 2 a. m. laryngeal dyspnoea was very marked and there was marked cyanosis. The patient was hastily intubated with a 12-year tube, as I did not have an adult tube with me, and the string was left attached to prevent it from falling into the trachea. This greatly relieved the dyspnoea and about five minutes later the patient coughed out the tube, which was contained in a cast of the entire larynx and trachea down to and including the commencement of the bifurcation of the bronchi. In spite of this he was still cyanotic, there were harsh, dry râles over most of the chest, and signs of commencing œdema below and behind. Dr. Dillon Brown was called in consultation, and at his advice 50,000 units of antitoxine were administered,

and the patient apparently improved somewhat for a time. At 3 p. m. an adult tube was inserted on account of apparent laryngeal stenosis. It failed to do good and was removed after fifteen minutes. At 4 p. m., 50,000 units more of antitoxine were administered, the oedema of the lungs and cyanosis had considerably improved, and our patient was decidedly brighter. In spite of the apparent improvement he died suddenly at 2 a. m., April 29th, after having complained of pain over the pericardium for several hours.

CASE XXII.—*May 11 1901.* E. D., a girl, aged four years and two months, had been complaining of sore throat for six days. The family physician was called two days before, but had not given antitoxine. Hoarseness was marked the previous night for the first time, but careful inquiry showed that there had been slight hoarseness at times for several days.

Laryngeal obstruction noted for the first time at 9 a. m. When I saw the patient at 8 p. m., there was marked retraction of the supraclavicular regions and intercostal spaces and breathing was very labored. A gold-plated O'Dwyer tube was inserted without difficulty and 4,000 units of antitoxine were administered by the board of health. Two days later (*May 13th*) I was called in the morning and again at night on account of sudden attacks of dyspnoea. I was urgently called at 2 a. m., *May 14th*, and found the child struggling for air. The lips and hands were cyanotic and the pulse very feeble. The whole posterior aspect of the throat was now covered with a very thick membrane, which was not the case in the beginning. The tube was immediately removed and found to be blocked with a long narrow piece of membrane; stimulants were freely administered. Breathing, however, was not satisfactory; it was very noisy, with a distinct flapping sound on expiration. After waiting an hour I replaced the tube, when the breathing became very much worse, so that the string was not removed. A teaspoonful of raw whiskey was given, which caused a violent attempt at coughing, and during the paroxysm the tube was suddenly withdrawn and a piece of membrane expelled at the same time. About two hours later dyspnoea became very bad and the lungs were not filling properly, so the tube was reinserted; it now acted satisfactorily. At this time loud dry râles were noted over the lungs below and behind. I had advised the attending physician on the previous day to administer more antitoxine, but he did not consider it necessary to do so.

The following day the tube was unobstructed, but the child was cyanotic, the submaxillary and sublingual glands on both sides were enormously swollen, the heart failed, and the patient died *May 16th*, at 11 a. m.

This death, in my opinion, was due entirely to extension and sepsis, and might possibly have been avoided had the attending physician had more faith in the efficacy of antitoxine.

CASE XXIII.—J. N., a boy, aged four years,

had cough night before last, was seen last afternoon by family physician for croupy cough. Two thousand units of antitoxine were administered at that time. There was no membrane. Two thousand more units were administered this morning on account of increasing dyspnoea. When I saw the child, at midday, the face was pale, the lips blue, the extremities blue and cold, and the pulse very rapid, respiration was a slow, occasional croak and the child was apparently moribund. O'Dwyer tube, 4-5, was inserted without difficulty. Improvement began at once. On the morning of the fourth day the child coughed out the tube and had no further trouble. The Casselberry method was employed successfully. Recovery.

CASE XXIV.—R. F., a girl, three years and nine months old, had had slight symptoms of croup for four days. The symptoms were worse the previous night, so that the family physician was sent for and administered 3,000 units of antitoxine. When seen by me, twenty hours later, there was no membrane on the tonsils, but aphonia was complete, and there was great dyspnoea with marked retraction of the soft parts. I failed to insert the tube at the first attempt, due to inefficient holding, but succeeded easily on the second trial. Dyspnoea was at once relieved. The child could take fluids with but little difficulty erect, but could not be made to assume the Casselberry position by her stupid parents. Semi-solids could be taken with practically no difficulty. The tube was removed five days later. There was a slight croupy cough from time to time, but no more dyspnoea. I learned that the physician in attendance gave 5,000 units the morning after I intubated. Recovery.

CASE XXV.—G. F., a girl, aged seven years, ill four days, membrane on both tonsils, no antitoxine had been administered before I saw the case. Had had symptoms of laryngeal obstruction for twenty-four hours; respirations 40 when seen, pulse 140, temperature 101° F. There was marked retraction. Gold tube inserted without difficulty, the string broke on withdrawal and a piece was left attached to the tube but gave no difficulty. There was a flapping sound in the tube after insertion and later a piece of membrane was coughed up. The tube was removed on the sixth day. Recovery.

CASE XXVI.—T. F., a girl aged eighteen months, had measles two weeks before, and had had dyspnoea for twenty-four hours. Tube 2 inserted; 6,000 units of antitoxine given. There was a sudden and marked cyanosis on the first introduction of the tube; a second attempt was successful, when the child coughed out a piece of membrane. Extubation on the sixth day. Recovery.

CASE XXVII.—F. F., a girl, aged two years and one month, had measles two weeks before and had had hoarseness and a croupy cough since. For twenty-four hours previous to my visit, the child had had symptoms of laryngeal obstruction. An unsuccessful attempt had been made to intubate by a doctor in the neighborhood, who had been hurriedly summoned by the family physician. As the patient

coughed up considerable bloody mucus, he desisted. When seen by me, the girl was greatly prostrated, very pale, with cyanotic lips. I rather expected some difficulty, owing to possible laceration of the larynx, but did not experience any. On the sixth day the family physician, without advising me, removed the tube; the symptoms of dyspnoea soon became marked and he could not get the tube back. I was hurriedly sent for and arrived in time to reintubate. Extubation on the ninth day. Recovery. Five thousand units of antitoxine were administered on the day of intubation and 3,000 more on reintubation.

CASE XXVIII.—J. de A., a girl, aged twenty months, had had symptoms of laryngeal obstruction since evening. Two thousand units of antitoxine were given in the morning. When seen by me, about 4 p. m., there was extensive membrane on the tonsils, and dyspnoea had been very marked since morning; the respirations were very rapid; there was a croupy cough and inspiration seemed slightly longer than expiration. There was no marked dulness and the case suggested bronchial diphtheria. I was in doubt about the advisability of intubating. Nevertheless, an O'Dwyer tube relieved the dyspnoea markedly, so that the patient fell asleep, which she had been unable to do for many hours. Death resulted from bronchial diphtheria on the third day after operation.

CASE XXIX.—E. T., a girl, aged eighteen months, had had croup for two days, cough for three days, dyspnoea, at times severe, for thirty hours, which was unrelieved by emetics except for a short time; no aphonia, pulse 140, temperature 101° F.; inspiration prolonged, no membrane visible. No. 2 tube relieved dyspnoea. On the fourth day after intubation dyspnoea commenced about 2 o'clock in the afternoon and the patient coughed up considerable mucus. She was unable to take nourishment, which had previously been administered without difficulty in the Casselberry position. There was a sudden attack of cyanosis about 4:45 p. m., after which the breathing was very bad. I arrived about 5:30 p. m., and extubated. The tube was found to be almost completely blocked by partially disintegrated membrane. The patient had to be reintubated in about an hour. The tube was removed five days later. Recovery.

CASE XXX.—W. S., a boy, three years old, had had measles for eleven days; seen first by the physician in attendance three days before operation. He then made a diagnosis of pneumonia by the great rapidity of respiration. He had not been able to discover signs of consolidation until the previous day, when he found dulness and bronchial breathing over the lower left lobe behind. The day of operation aphonia and prolonged inspiration were noted. The nose was completely obstructed and there was an excoriation of the upper lip. When seen by me the pulse was too rapid to count, respirations were 60 to the minute, but inspiration was not prolonged; the patient was semiconscious, cyanotic, and aphonia was complete. There was a history of several attacks of general cyanosis with

absolute cessation of respiration for a time, which was started again by titillation of the pharynx. There was considerable question in my mind as to whether intubation was indicated. The patient did become less cyanosed after intubation, but died about two hours later of oedema of the lungs. A culture from the throat showed the presence of the Klebs-Loeffler bacillus, and the father contracted diphtheria a few days later.

CASE XXXI.—February 7, 1902. T. G., a boy, aged four years and five months, had measles two weeks before. Three days before a croupy cough with hoarseness was noticed. The previous night, about midnight, dyspnoea became pronounced and grew progressively worse. When seen by me, at 4 p. m., there were general cyanosis, pulmonary oedema with bloody froth from the mouth and nostrils, absolute unconsciousness, and exophthalmia. Tube 5 was inserted. The child was held out of the open window dependant and artificial respiration performed. Then the chest was cupped and stimulants were freely administered. For the first time antitoxine was administered, 3,000 units. Five days later, February 12th, the tube was removed, but was reinserted after half an hour on account of return of dyspnoea, croupy cough, etc. Four days later, February 16th, the tube was removed, but reintubation becoming necessary after a short time; the next smaller tube was inserted. February 20th, the tube was finally removed. Recovery.

CASE XXXII.—R., a boy, aged eighteen months, was intubated a week ago to-day by Dr. Dillon Brown, and 3,000 units of antitoxine were administered. Extubated this morning by the attending physician. Dyspnoea became severe after six hours, and after twelve hours I was requested to reintubate, as Dr. Brown was out of the city; 3,000 units more of antitoxine were administered. Extubated five days later. Recovery was uneventful.

CASE XXXIII.—R., a girl, seventeen months old, had had croup for seventy-two hours and severe dyspnoea for twenty-four hours; had not slept for two days. The family refused operative interference until they saw that death was imminent. Respiration 60, pulse 150. Intubation relieved dyspnoea somewhat, but did not relieve frequency of respirations. The tube was removed after a few minutes and reintroduced without improving matters. No lung complications could be discovered on physical examination. Three thousand units of antitoxine were administered when the child was seen by me. This child was very pale and waxy; its urine had not been examined by the physician in attendance. Klebs-Loeffler bacilli were present in the throats of other children of the family.

CASE XXXIV.—M. B., a girl, six years old, had bronchitis with a croupy cough five days ago, which cleared up in twenty-four hours, but became croupy again yesterday and coughed up some blood. She had marked dyspnoea this morning and aphonia; when seen by me, at 5 p. m., there was stridor with marked retraction of soft parts of the thorax. Tube

6-7 relieved the dyspnoea, and the patient at once coughed up considerable membrane.

Six days later the patient was extubated; the cough was loose at first, then became croupy, and within half an hour there was marked dyspnoea. I again intubated with a built-up tube, 4-5, which was removed in five days. There was a croupy cough on its removal, which disappeared in about an hour. The parents remarked that the child could swallow more easily with this tube than with the former one. Recovery.

CASE XXXV.—*October 15, 1902.* R. T., a boy, aged five years, had had croup for a week, which live syrup and other household remedies failed to relieve; two days before a physician was sent for, who administered 3,000 units of antitoxine the day I was called. There were restlessness, dyspnoea, aphonia, stridor, retraction, pallor and a rapid pulse. There was no membrane to be seen on the tonsils and pharynx. The tube was inserted on the second attempt. Owing to bad holding by a fleshy woman with no lap, I first put the tube into the oesophagus. The epiglottis was quite large and had to be held out of the way. Gold tube, 5-7, inserted. Tube removed on the sixth day. Recovery. No difficulty in feeding in Casselberry position.

CASE XXXVI.—*October 31, 1902, 12 m.* A boy, aged two years, large for age, has been sick with a bad cold and croupy cough since October 26th. Croup was severe last night, when a physician was sent for, who administered 2,000 units of antitoxine. The doctor saw the case again this morning and gave 2,000 units more of antitoxine and sent for me to come as quickly as possible. When I arrived the mother said that she had laid the child out for dead shortly before my arrival, but that later he had commenced to make efforts at respiration again. I found the child in a semiconscious state, very pale, with blue lips and hands; there were loud stridor and marked retraction of the soft parts of the chest. Tube 3 was easily inserted at the first attempt; the epiglottis had to be held out of the way. Respirations were 50 to the minute before intubation, and remained at the same rate for an hour thereafter, but were not so labored. Pure whiskey assisted in raising mucus, which was present in large amount. When seen by me in the evening respirations were normal, the child had slept well and taken food readily in the Casselberry position. The tube was removed on the sixth day. Recovery.

The Confederation of Reciprocating State Medical Licensing Boards.—A meeting of the confederation of members of reciprocating State medical examining and licensing boards will be held at the Great Northern Hotel, Chicago, on Thursday, April 23rd, at 10 a. m. The object of the meeting is to take further action whereby practical and effective reciprocity may be had in the near future between the different States of the Union. Invitations have been sent out to all the State boards inviting them to send delegates to the meeting and to cooperate in bringing about the desired reciprocity.

FOOD AND NUTRITION IN DISEASE.

By L. H. WATSON, M. D.,
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Upon the intake of food and its proper assimilation, we depend for the perfect maintenance of health and the conservation of that energy necessary to perform the mental and physical labor imposed upon us during conscious existence. Waste and repair are constant factors in all animal life. The equilibrium established through normal nutrition we call health. Neither I who write these lines, nor you who read them, ever have led, or ever will lead, a perfectly natural life. No person or people can be so taught or governed as to lead a true physiological existence. Climatic changes, economic conditions, and social environment constantly war against mankind in the struggle for life. While exact living may not be attained by civilized man, an approximation to this ideal state is not denied us. Nature is so helpful and lenient that lapses and abuses of her gifts, unless flagrant and persistent, are not held out against us. In an article so limited as this must naturally be, it is not possible to deal with food and nutrition except under conditions not entirely normal. Physiological chemists and vivisectionists have furnished us with a fund of knowledge in regard to food values, which physicians appreciate highly in their effort to establish health, where perverted secretions and abnormal waste have sapped the vitality of their patients. It is more in the technical journals of physiology than in our regular medical journals that we must look for the work of Chittenden, Bunge, Pawlow, Heidenhain, and a host of others to whom we are greatly indebted. The government itself, with a care verging upon paternalism, has fostered the formation of experiment stations, where the problem of proper nutrition has been, and is being, studied with great assiduity. The chemical composition of the body is quite similar to the composition of the foods which nourish it. Protein, fats, carbohydrates, mineral salts, and water are the compounds we need in our foods, and they are found in flesh foods and vegetables. The most important of these is protein, which we derive mostly from meat foods, eggs, and milk; although some vegetables furnish it also, as beans, peas, and the gluten of wheat. But for the sick we usually select our protein from the meat foods, milk, and eggs, on account of their more perfect digestibility. There are too many extraneous substances, like hulls, husks, cellulose and woody fibre, for the nitrogen of vegetable products to be used when digestion is weak and abnormal, as among the sick. Vegetable foods are useful, and necessary even, but not for their nitrogen content.

The extractives are included in the nitrogen compounds, but they neither build tissue nor furnish energy; they are rather appetizers and stimulants. Beef tea comes under this class. Fats, both animal and vegetable, are extremely useful. We find them in meat, fish, milk, eggs, and some cereals, as well as in the olive and nuts. Both protein and fat become in the system, body protein and body-fat. The carbohydrates include such compounds as the sugars, starches, cellulose, and the fibre of plants. They are found chiefly in vegetable foods, like cereal grains, and also in fruits. Potatoes, sago, farina, and arrowroot, furnish us with a large supply. The use of fats in the treatment of disease requires careful consideration. In cases of hyperchlorhydria, it is unquestionably the fact that butter fat and vegetable oils lessen the amount of the HCl secretion. Hydrochloric acid has been pronounced by Pawlow to be the natural exciter of the pancreas. When we give fats as food, we exercise an inhibitory action upon the HCl secretion, and, as this is an exciter of pancreatic secretion, we should infer that the inhibition would extend to the secretion of pancreatic juice; but Dr. Walther observes that the secretion of fat splitting ferments in the pancreas is increased, and it has also been noticed that the amylolytic ferments are lessened. It is more and more strongly impressed upon physicians, that through diet rather than drugs they must look to relieve and cure the many forms of indigestion which afflict mankind. The system recognizes the character of the food introduced, and pours out or represses the digestive juices, renders them more intense, or larger in quantity, as the fat, protein or carbohydrate ferments may be most needed.

I have spoken of the proteins and fats. The carbohydrates we obtain from the starch of wheat, corn, oats, barley, and other cereals. Potatoes and most vegetables, as well as sago and tapioca and the sugars, also furnish a large amount of the carbohydrates. These carbohydrates are transformed into fat in the body and furnish energy. They act as heat producers and spacers of protein. Bulk for bulk with protein food, they contain much less nourishment, furnish a larger refuse, and are not so easily digested, but they supply fuel to the body and protect it from waste, allowing the albuminoids to build up tissue and furnish secretions. Thus the potential energy in the sugars and starches, becomes kinetic energy in the system through oxidation. This energy is measured in calories of heat, the unit being the heat required to raise the temperature of one kilogramme of water 1° C. Although the fuel value of food is not the most important thing to consider in disease, it is necessary

that we should, in arranging a diet for the sick—especially those compelled to work—pay some attention to the waste entailed, and the digestibility of the foods selected to supply that waste. The fuel value of protein and the carbohydrates is about the same; four calories of heat to the gramme or 1820 to the pound. Fat is estimated much higher, 8.9 to the gramme, or 4040 to the pound. The ordinary man at light work would need about 3600 calories. If we can furnish this, or possibly a little less, to those not confined to the house or doing simply clerical work with no great expenditure of physical force, we can properly nourish the body. Correct assimilation, especially in chronic diseases of the stomach or nervous system, is not to be expected, and our ingenuity is taxed to prevent loss of weight, which usually means loss of strength and increased mental depression. In acute diseases extending over a period of not more than from three to six weeks, no great effort should be made at forced nutrition. I do not include physiological childbirth. Here, after a few days of rest, proper feeding should be instituted at shorter intervals than the ordinary three meals of normal living. Thin soups in large quantities should be avoided. The stomach will only be flooded with innutritious watery solutions of meat extracts. I have said that, in acute diseases, feeding is not necessary until the crisis is passed. It is unnatural to introduce food into the stomach in periods of physical or mental suffering. Appetite is wanting, and without it, imperfect assimilation will only add to the physician's worries and the patient's discomfort. The mother will plead that the child be fed, but before taking food must come the desire for it. To put the simplest food into the stomach during a period of high fever or great physical pain, is as unscientific as to withhold it when the appetite craves it. Pawlow has shown us, by his experiments upon dogs, the absolute necessity of appetite in the form of desire for food, before the digestive function can be physiologically accomplished. "We are justified in saying," says Pawlow, "that appetite is the mightiest exciter of the secretory nerves of the stomach; a factor which embodies in itself a something capable of impelling the empty stomach of the dog in sham feeding to secrete large quantities of the strongest juice." A good appetite is equivalent from the outset to the secretion of the strongest juice. Where there is no appetite this juice is absent. The psychic moment must be seized upon to present food to the convalescent. The time when, through conversation in presence of the invalid concerning some dainty dish, interest is aroused and saliva is more freely secreted, is the moment to present the food in an attractive

form. The experiments of the Russians, in the physiological laboratory at St. Petersburg, showed that the passing of an attendant through the room with food which a dog likes, immediately started a copious secretion of saliva, and in five minutes after the food was placed in the dog's mouth—only to drop through the cut cesophagus into a receptacle—the secretion of gastric juice commenced. It has generally been taught that meats and other nitrogenous foods cause a greater secretion than fats and the carbohydrates. This has been disproved by Dr. Chigin, who has shown that the greatest digestive power belongs to the juice poured out on bread. Its mean proteolytic power is represented by 6.64 m. m., and flesh alone excites a digestive power of 3.99 m. m.; while milk produces a juice of only 3.26 m. m. digestive power. The total acidity is greatest with meat foods, 0.56 per cent., and bread foods produce an acidity of 0.46 per cent. The gastric juice is more concentrated with meats, and more protracted and excessive with carbohydrates.

In studies of the ferments of the pancreas, it was found that the amount of secretion was dependent upon the quality of the food. With bread the amount of the amylolytic ferment was greatest; with meat the proteolytic; and with milk the fat-splitting ferment was in excess. Up to the present time, while we have known the pancreas to be of great use as a secretor of ferments, it has hardly been viewed as the principal digestive gland of the body. We know now that without the pancreatic secretion it would be absolutely impossible to nourish a human being, even in a condition of health, for any length of time. We may do without a stomach, but we cannot do without a pancreas. When we heard of the removal of a stomach on account of a malignant tumor filling its entire cavity and the joining of the cesophagus with a loop of the small intestine, we jumped at the conclusion that the stomach was really only a receptacle for food until it should be moistened and triturated, to prepare it for active digestion in the intestine. We were encouraged in this view by the surgeons, who saw their patients recover their health, put on flesh, and again enter upon their occupations, with only great care exercised in their diet. We also reflected upon the fact that in atony of the peptic glands and glandular gastritis, there were no digestive juices in the stomach, and yet nutrition continued! But we have learned more. Acids are found in these physiological experiments to be great excitors of the pancreatic secretion. We have in the stomach a fine laboratory where HCl is manufactured continuously. The pancreatic secretion is at once more active, and all ferments are poured forth in abundance mingling

with the chyme which has passed into the intestinal tract. Again, we learn that alkalies, even as mild a one as lime water, have an inhibitory action upon the secretion of the pancreas. We have been too much in the habit of drenching the intestinal tract with alkaline waters in cases of constipation, torpid liver, and diseases of the gall bladder. Here is a reason why we should refrain from this indiscriminate flushing of the stomach and intestines with these waters. Another reason which may be mentioned here, is that this active and strenuous purgation hastens the peristaltic movements of the bowels to such a degree, that food, which in the form of chyle is passing slowly through the small intestine and being gradually absorbed, is hurried along into the large intestine and out of the body before alimentionation is completed. It is for this reason that obesity cures, which include active purgation, should be discouraged; for while we are lessening the weight, we are starving the body. It is too much the habit of the American people to resort to all forms of purgation when they feel "out of sorts." Laxative and purgative waters, while of great value properly used, are sources of danger when taken indiscriminately and copiously, as the busy man takes them rather than bother his physician. If taken at all, they should be taken in the morning, at least an hour before breakfast. This will obviate the introducing of food into a stomach flooded with an alkaline water, and the accelerated peristalsis will remove from the bowels only the waste products of alimentionation and not partially digested food. At Carlsbad, where the water is impregnated with a large amount of sodium sulphate, this rule is strictly adhered to, and the patient is advised to walk leisurely for half an hour or so immediately after drinking the waters, which are all taken in the morning. In those cases where there is enfeebled digestion, and especially where free hydrochloric acid is wanting, the alkaline waters should be omitted. In the selection of foods for the sick the preference has usually been given to milk. It has been considered the one perfect food. There are many exceptions to this rule. It is the ideal food for the young, especially for infants. For the adult it is, when used alone, wanting in many respects. The quantity necessary to be taken to nourish the body, that is, to furnish the proper amount of proteid, fat, and carbohydrate, would be so great that in many cases of disease of the stomach when taken alone, the same trouble would arise which is found among the beer drinkers of breweries—dilatation of the stomach. Where 400 grammes of carbohydrates, 400 grammes of proteid, and 100 grammes of fat are required to nourish a man, it is easy to compute the amount of milk

necessary with only from 12 to 13 per cent. of solids to supply the nourishment necessary for the maintenance of health. Again, it does not agree with all people. It often causes nausea with extreme acidity and distress, from the coagulation of too large curds, thus prolonging digestion. Cooked with rice, it furnishes the most easily digested food, with the largest amount of nutrients contained in moderate bulk, of any combination of foods with which we are familiar.

In arranging a diet for those ill with stomach troubles, not alone digestibility, but the occupation in life must be considered. Many people with serious disease of the stomach must work. This continuous labor, even although it be not severe, requires a diet which shall maintain the strength. In conditions of malnutrition from indigestion, we cannot say, arbitrarily, So many grammes of fat, and protein, and carbohydrates must be given; but What fats, proteins, and carbohydrates may I use, which, while sustaining the strength, will be most easily digested and readily absorbed? The leguminosæ contain a large amount of protein, and in health will furnish nitrogen enough without meat to sustain the body. Woroschiloff lived for thirty days entirely upon beans or peas, bread, and sugar, performed 8528 kilogrammeters of work, and lost no protein. I have seen in Bavaria and Bohemia working men who lived upon rye bread, cheese, lentil and pea soup, well nourished while engaged in arduous labor; but we cannot use leguminous food in indigestion with the safety that we can meat, and fortunately wages are high enough in America to permit of the use of the more digestible meats, where nitrogenous foods must be taken to prevent loss of strength. As some one has well said, "it is not how much we eat, but how much we absorb," that must be considered in nutrition. It will not always do to use meat foods alone, for any great length of time.

Our long intestinal tract requires cellulose to excite peristaltic action. The carnivora, with a short bowel, can live on meat, but mankind requires a mixed diet. Another reason is, that as nitrogen is all but entirely eliminated through the kidneys in the form of urea, we put too much of a strain on them, and they do not resent it so quickly as the stomach does overfeeding. Of all the carbohydrates which man uses in his diet, rice is probably the most extensively employed, and the most perfect in its composition for the use of the sick. It contains six times less potassium than other cereals, and consequently requires the use of less salt. In hyperchlorhydria we must limit the amount of salt. Salt meat and salt fish should be avoided. Physiologists have questioned seriously whether we do not use too much salt, and overtax the kidneys in

its elimination. Large vegetable eaters require it constantly, but where meat-eating is the rule it is not desired. In Finland, the Russian government, upon one occasion, required the people to salt their fish, and sent salt in large quantities for that purpose, but the people buried their fish in large holes in the ground, until it became rotten, and refused to eat fresh or salted fish. It is said there is no word in the Finnish language equivalent to our word salt. The Indians did not use it until they became vegetable eaters. Carnivorous animals do not care for it, but the herbivora eat it freely and seek for it.

These facts cannot be overlooked in preparing our diet tables, especially for the sick. The more vegetables we use, the more potassium is taken in, and chloride of sodium by a double decomposition is displaced and excreted, necessitating a constant renewal of the sodium salt. Judicious selection of vegetables will neutralize this change and loss. Potatoes for this reason are not so available for food in indigestion, as some other vegetable foods, on account of their large potassium content. Another reason also exists. The cell wall containing the starch germ requires great heat to break it. Boiled potatoes are, therefore, specially unfit as food for dyspeptics. Baked or twice baked are better, but can easily be dispensed with. I am aware that these references to foods and food values are somewhat sketchy, but they may be of service to the general practitioner in treating cases of indigestion. I have not referred to the part the nervous system plays in this continuous act of feeding, absorption, and excretion, by which animal life maintains its standard of health. Its rôle is so important, so indispensable, that it cannot be considered in this article, without extending the paper to too great a length.

100 STATE STREET.

The Naval Medical School.—The first commencement exercises of the United States Naval Medical School were held in the assembly hall of the National Museum at Washington on April 3rd. Medical Director R. A. Marmion, president of the faculty, presiding and delivering an address. An address to the graduates from the surgeon general was read by Dr. Marmion. Following is a list of the graduates: Dr. R. A. Bachmann, Pennsylvania; Dr. F. M. Munson, Delaware; Dr. E. M. Brown, California; Dr. H. F. Strine, Pennsylvania; Dr. R. E. Hoyt, New Hampshire; Dr. J. P. Traynor, Maine; Dr. M. W. Baker, Virginia; Dr. J. H. Holloway, Kentucky; Dr. J. L. Neilson, Massachusetts; Dr. R. H. Michels, Illinois; Dr. H. Shaw, Massachusetts, and Dr. B. F. Jenness, Massachusetts.

METHODS WHICH RENDER SOME THERAPEUTIC AGENTS MORE PALATABLE.

By SAMUEL E. EARP, M. S., M. D.,
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A knowledge of the physiological and therapeutic action of a remedial agent is necessary in order to obtain good results; but there is one more thing needful, and that is to render it palatable so far as possible. The appearance and odor might also receive consideration; however, sometimes it is advisable to disguise the taste even at the expense of its attractive appearance. Of the two evils, choose the lesser one. If unpleasant medicine is made more inviting, it is an important factor in the management of the diseases of childhood and is also more acceptable to the adult.

To give castor oil or cod liver oil in coffee or milk creates a prejudice against these beverages, and the taste of the oil is still prominent. Whiskey and glycerin, given with each dose, may partly answer the purpose, or either one separately; however, some object to the whiskey for moral reasons.

To give castor oil in one dose as a purgative, probably the "castor oil sandwich" is the best method. It is made as follows: In the bottom of a glass put a small quantity of glycerin, then the oil, lastly half an ounce of sherry wine, and take at one draught. This will also apply to the single dose of cod liver oil.

In case either agent is dispensed in quantities, an emulsion in which the flavor of cinnamon or gaultheria predominates generally serves the purpose.

Perhaps every one is familiar with the story of the young woman who asked a soda fountain clerk to prepare a dose of castor oil for her and also a glass of soda, and when she was informed later that she had drank the oil with the soda, replied, "but the oil was for my sister." While the soda in this instance acted well, so also will it answer as a vehicle for Epsom salts, but the ordinary "soda pop" is better.

The attempts to disguise quinine have generally been only partially successful. Chocolate, yerba santa, and licorice in the form of a heavy syrup may be used, but I think the most preferable to be one grain of tannic acid to each three grains of quinine in a vehicle of syrup of tolu. The iodide and bromide of potassium and salicylic acid may be given in milk, which also prevents gastric irritation. However, some prefer in the case of iodine

derivatives to use the iodated starch or the liquor iodi compositus.

In case copaiba and turpentine are not used in gelatin capsule form, an emulsion flavored with gaultheria comes next in order.

For chloral hydrate I think peppermint water superior to cinnamon. Equal parts of peppermint water and simple syrup make the best solution for salicylate of sodium. Unless there is an objection to the intensely sweet taste, the syrup of glycyrrhiza answers best for sodium salicylate.

If the mouth is flushed quickly with a small quantity of whiskey, the medicinal oils may be taken immediately afterward, and the disagreeable taste is not so perceptible.

A few grains of table salt taken upon the tongue will produce a copious flow of saliva, and then if swallowed with medicine which has an objectionable taste it may in a measure be disguised. Care should be taken, however, that no chemical incompatibility exists.

If lemon ice is held in the mouth for a moment only, then a teaspoonful of a preparation which would otherwise seem nauseous may be taken with very little unpleasant effect. In the last instance it is understood that both the medicine and the ice are swallowed at the same time.

Quite frequently medicine is taken into the mouth when the secretions are inactive, and therefore the membranes parched and dry, thus giving an opportunity for the bitter principles to remain in contact with the tongue and create an immediate unpleasant taste, but more especially an after-taste.

Sometimes simply a drink of water will obviate this condition, or perhaps a lump of ice held in the mouth or water acidulated with dilute phosphoric acid, to be taken before the medicine. A combination of syrup of red raspberry and glycerin makes an unusually palatable vehicle.

At a time when salicylate of sodium was unknown, it was very popular to combine sodium bicarbonate of salicylic acid, and the last mentioned menstruum is considered the best for this combination. In fact, I might include its use for the administration of sodium salicylate.

Presentation to Dr. Stewart.—The faculty of the Western Reserve Medical College at Cleveland, Ohio, recently gave a banquet to Dr. George N. Stewart, who has resigned the chair of physiology at the Western Reserve College, to accept the chair recently vacated by Professor Jacques Loeb, in the faculty of the University of Chicago. Dr. Stewart was presented with a large silver loving cup by the members of the faculty as a token of their esteem.

Our Subscribers' Discussions.

A SERIES OF MONTHLY PRIZE ESSAYS.

[Questions for discussion in this department are announced once a month. So far as they have been decided upon, the further questions are as follows:

XXIII.—How do you treat ingrowing toenail? (Answers due not later than April 10, 1903.)

XXIV.—How do you treat delirium tremens? (Answers due not later than May 11, 1903.)

XXV.—How do you treat the summer diarrhœa of children? (Answers due not later than June 10, 1903.)

XXVI.—How do you treat "habitual abortion?" (Answers due not later than July 10, 1903.)

Whoever among our subscribers (with the limitations mentioned below) answers one of these questions in the manner most satisfactory to the editor and his advisers will receive a prize of \$25. No importance whatever will be attached to literary style, but the award will be based solely on the value of the substance of the answer. It is requested (but NOT REQUIRED) that the answers be short, if practicable, no one answer to contain more than six hundred words. So far as our space will allow, we shall publish the substance of such of the answers as seem to us most likely to prove interesting to our readers, and we reserve the right to publish any of the answers in any department of the JOURNAL.

Only subscribers to the NEW YORK MEDICAL JOURNAL (including regular and volunteer officers of the medical corps of the United States Army, Navy, and Marine-Hospital Service, commissioned or under contract) will be entitled to compete, and all persons known to be engaged in medical journalism are disqualified. This prize will not be awarded to any one person more than once within one year. Every answer must be accompanied by the writer's full name and address, both of which we must be at liberty to publish.]

The prize of \$25 for the best essay submitted in February has been awarded to Dr. Walter J. Cavanagh, of South Boston, Mass., whose paper appears below:

PRIZE QUESTION NO. XXII.

THE MANAGEMENT OF OCCIPITOPOSTERIOR POSITIONS OF THE PRESENTING HEAD.

By WALTER J. CAVANAGH, M. D.,
SOUTH BOSTON, MASS.

The management of these posterior positions should be for the most part what one might call prophylactic, as the majority of them require no treatment beyond a careful watching on the part of the attending physician, since the occiput, though originally posterior, when it reaches the pelvic floor rotates forward and assumes an anterior position. However, it must be remembered that rotation of the frontal end forward does occur when there is failure of proper flexion. Therefore the physician must be on his guard by making frequent vaginal examinations in order to detect any failure of proper flexion, for the successful management of these cases must depend upon the time when the diagnosis of

failure of proper flexion has been made and the manner in which the difficulty is remedied.

If the case is seen at the onset of labor, before the membranes have ruptured, it is frequently possible to avoid the dangers (if I may so speak) of a posterior position by a preliminary rotation of the head, which may be effected by having the woman assume the true genupectoral position and retain it as long as her strength permits or until vaginal examinations without alteration of her position show that rotation has taken place. Should the occiput, after once becoming anterior, show any tendency to return to the posterior position, rupture the membranes, in order to hasten the engagement of the head while the occiput is still anterior. If postural treatment fails, or if the patient is unwilling to maintain it for a sufficient length of time (as frequently happens in private practice), the case should be left to Nature, remembering that even after rupture of the membranes no treatment is necessary while good flexion is present. During the progress of the case the posterior fontanelle should always be easily reached, while the lower the head descends the greater the difficulty in touching the anterior fontanelle, on account of the crowding of the frontal end of the head against the symphysis pubis. If at any time the posterior fontanelle remains stationary, while the anterior fontanelle is becoming more and more easy of access, the physician realizes at once that a gradual extension of the head is taking place and it is at this time that proper interference with the case can be of the greatest value. The fingers of the right hand, if the occiput is to the mother's right, should be applied to the frontal end of the head and, during a pain, a firm resistance, not pressure, should be made to prevent any further descent, and the actual flexion of the head should be left to the pressure exercised on the occipital end by the uterine contractions.

Oftentimes the case is not seen until labor has so far advanced and the head has become so far extended that simple pressure is no longer practicable. Success is not attained often enough by the application of the vectis over the occiput, together with simple pressure to the frontal head in these late cases, although it may be tried. If it is tried and failure results, either one of the following methods may be adopted: 1. Etherize to full anæsthesia, pass the hand into the vagina, grasp the head, and steadily and gently push it up out of the pelvis, above the superior strait, then flex it and rotate the occiput forward, holding it so until the pains, aided by pressure of the other hand on the abdomen, push it down again into the pelvis, in its now occipito-anterior position. The forceps may be required to complete the delivery. 2. Delivery by the applica-

tion of the forceps reversed. Some physicians who have never tried this method are timid in regard to using the forceps in this manner, contending that it is difficult to apply it. One or two trials, I think, will convince them that it is an easy and safe procedure. Application of the forceps reversed means that the convexity of the pelvic curve is toward the pubes instead of toward the hollow of the sacrum, as is usual, the descent, flexion, and rotation of the head being accomplished by this method. The blades should be introduced so that the cephalic curve passes over the ears of the child, the tips resting on the occiput. When traction is made, which should be gentle and with one hand, the movements of the head being carefully watched by the fingers of the other hand, the occiput is naturally drawn down, the head, tilting on its attachment to the spinal column, yields to the leverage thus applied, and, the frontal end being forced up, flexion of the head is at once established and the occiput becomes the lowest part. The case can then be left to Nature, the ether stopped, and the forceps taken off. Rotation of the occiput soon takes place, and lacerations of the vagina and perinæum are far less often produced when rotation is brought about by the uterine forces than when procured by instrumental deliveries. However, if, owing to some emergency, immediate delivery is necessary, the forceps should always be taken off, after the head has been flexed, and then reapplied in the usual way, and delivery effected, the operator favoring during traction the forward rotation of the head. Should all efforts at restoring the normal flexion of the head fail, and the descent of the head become arrested owing to a want of adaptability between foetal and pelvic diameters, further delay may be avoided and a comparatively speedy result obtained to both mother and child by completely extending the head, thus converting a brow presentation into the most favorable variety of face presentation, viz., that in which the chin presents under the pubic arch, and extracting with the forceps.

Should the high arrest, at the brim of the pelvis, of the posterior occiput occur, version is the preferable operation unless the conditions of the uterus distinctly contraindicate it.

159 WEST BROADWAY.

First Lieutenant and Assistant Surgeon, Charles Norton Barney, of the Army, writes:

The reasons why delay is more liable to occur in occipitoposterior positions than in occipitoanterior are that rotation must take place through a greater arc in order that the occiput may be swung round forward to the pubic arch, and that flexion is less apt to be complete. Flexion is less likely to be com-

plete because during the descent of the head it is only the short anterior half of the wall of the pelvic canal which is resisting the long arm of the cranial lever—the frontal half of the head—while the long posterior wall of the pelvis is resisting the short end of the cranial lever—the occiput; whereas in occipitoanterior positions the long arm of the cranial lever is in contact throughout descent with the long half of the pelvic wall. With good pains and resistant pelvic walls good rotation is dependent upon good flexion, and when difficulty occurs in occipitoposterior positions the trouble usually is that rotation has failed because flexion has not been complete. But there is another danger, and that is, that the head may become more and more extended and be converted from a vertex presentation into a brow or face.

Where the pelvis is roomy and the child's head is small, the head may be forced down and out in almost any one of the diameters of the pelvis with little or no rotation. Rarely the occiput settles back into the hollow of the sacrum and the head is born face to pubes, with the occiput remaining posterior. In many cases something—a hand tucked down between chin and chest, for example—interferes with perfect flexion, and exhaustion of the mother, or child, or both sets in before rotation has been accomplished. But in most cases forward rotation does finally occur, though it is likely to be low down upon the perinæum just before the head is born.

Postural treatment to convert posterior positions into anterior positions before engagement of the head is rarely applicable. In a very few cases, seen early in labor, before the head has engaged, the back of the child may possibly be made to swing round forward if the woman is put into the knee-chest position, and may rarely be kept anterior if the woman is then made to lie on the side opposite that toward which the occiput was originally directed. Few women will endure such treatment. If partial extension has already occurred, the head will revert to its posterior position. (In second stage labor, with a posterior occiput, I have the woman lie on the side where the occiput is, as this position tumbles the breech to this side and causes the succeeding pains to shove down more through the spinal column and in that way flex rather than extend the head.)

The cardinal rule, then, in the management of occipitoposterior positions, in order to avoid delay from faulty rotation and danger from conversion of the vertex presentation into a brow or face, is, keep the head well flexed. The position must be recognized early. If the forceps is applied to a posterior occiput which is supposed to be an occiput anterior,

the tips will be applied so far forward that they will pull down on the frontal end of the head, extend the head, and possibly convert the presentation into brow or face.

Not only must the position be diagnosticated early, but extension or a tendency thereto must be recognized early. Therefore, examine often. If the head is well flexed, in either anterior or posterior positions, the anterior fontanelle, the one where the four sutures meet, cannot be reached, but the posterior fontanelle, where only three sutures come together, can easily be felt. In a case where the posterior fontanelle has been felt and then begins to move out of the field while the anterior fontanelle comes within reach, the head is becoming extended.

Care should be taken not to rupture the membranes—at any rate before dilatation is completed and the head is thoroughly engaged. The bag of waters dilates the os better than the head does, and if the case should come to version the operation would be more difficult with the waters gone.

I treat delay in first stage labor as in anterior positions, except that I do not rupture the membranes when the os is nearly dilated, but only when it is fully dilated and the head is well engaged. Encouragement, stimulants, and friction to the fundus, for inertia; catheter and enema for full bladder and rectum; for spasm of the cervix, fifteen grains of chloral in checkerberry water every twenty minutes for two or three doses, immediately repeating any dose which may be vomited; for rigidity of the cervix, gentle partial manual dilatation during pains, rarely hot douches; if there are adhesions between cervix and membranes, breaking them up with the finger; and if the anterior lip of the cervix is caught down and jammed, pushing it up over the head during pains.

If the membranes have ruptured before full dilatation and the head has been partially extended for an hour, ether should be put on, the os manually dilated, the head flexed manually, and kept flexed, if possible, by strongly opposing with hand in the vagina the descent of the forehead during pains; but if there is any reextension of the head or any exhaustion in either mother or child, the forceps should be applied as described below, preferably after complete manual rotation.

Second stage labor; High Arrest.—In high arrest I make a thorough examination, under ether if necessary, after one hour of strong second stage labor in which there has been no progress. For inertia I use the same means as have been described in considering first stage labor. If the pains are strong and delay is due merely to a rather large head and firm pelvic soft parts, I wait for the head

to mould, unless retraction or constriction rings should be found to be forming or the pulse rate of mother or child is steadily rising. I operate if there has been no progress after three or four hours, or if there is any sign of exhaustion.

In the operative treatment of high arrest of the vertex I prefer manual rotation and forceps to version, unless there exist any of the usual contraindications. I prefer using the ordinary curved short forceps in connection with Reynolds's axis traction rods, to any specially devised traction forceps. In the absence of the rods the principle of axis traction may often be carried out by the use of a very strong tape passed through the fenestræ of the ordinary forceps. If manual rotation is performed before the forceps is applied, the operation is simply that of high forceps to an occiput anterior.

If I should have a case of high arrest in which operation was indicated and for any reason manual rotation had failed in spite of the fact that the head could be pushed up and disengaged, and if there remained any amniotic fluid, I should do version rather than apply high forceps to the non-rotated occiput posterior; but such a case is not likely often to be met with.

If manual rotation fails and version is contraindicated, high forceps may be applied to the occiput posterior. But with the occiput posterior it is difficult to get the forceps on the sides of the head; and it is unwise to try to do so, as the tips are very apt to slip forward toward the face and extend the head. So, when high forceps is applied while the occiput is posterior, the blades should be applied along the sides of the pelvis, thus fitting diagonally on the head. After the brim of the pelvis has been passed the forceps should be taken off and reapplied as described below.

Passage of the Excavation.—While the head is coming down through the excavation, in a case where operative measures have not been used for high arrest, the important thing is to maintain flexion, and, if there is any tendency for the head to extend, to resist the descent of the forehead with hand in the vagina during pains, at the same time allowing the uterine contractions to force down the occiput.

If the head has become at all extended, flexion may often be reestablished by pushing up the forehead and drawing down the occiput by means of the whole hand in the vagina, assisted by pressure on the child's breech through the mother's abdomen.

If this does not succeed, the forceps may be applied with the curve, not in the axis of the pelvis, but reversed, provided the greatest precautions are taken not to allow the forceps to slip sufficiently

to injure the mother's soft parts; though in such cases I prefer to apply the forceps in the axis of the pelvis and allow rotation within the blades as described later. If the forceps is applied reversed, leverage is not to be used, but traction only; and, as the tips are applied near the occipital end of the head, this traction will produce flexion. The reversed forceps is extremely apt to slip, and every safeguard must be used to prevent injuring the mother's soft parts. After the head has become flexed, the forceps must be reapplied in the curve of Carus, and extraction done as described below.

If the head has come down all right without operative measures, but rotation is delayed, rotation may be assisted by grasping the head with the whole hand in the vagina and twisting the occiput forward between pains and then holding during pains what has thus been gained. But as rotation may take place at the very last moment, care should be taken not to interfere by means of "meddlesome midwifery" unless there are indications for interference, such as prolonged delay, tendency to extension, or exhaustion of mother or child.

Low Arrest.—In low arrest, if the woman has been in second stage labor for two hours and there has been absolutely no progress for one hour, I apply the forceps for the simple relief of distress, even though there may be no immediate sign of exhaustion, or the formation of retraction and constriction rings.

Most cases which come to forceps will require simply the application of low forceps to the sides of the head, with the tips pointing anteriorly, while the head is still in posterior position. In this case the tips should be applied as near as possible to the occiput, by means of elevating or, rather, drawing forward the handles so that the tips go back to the mother's sacrum. Traction at first should be backward or, rather, directly downward. It should be intermittent. Rotation of the forceps with the head during pains, and also rotation of the head within the forceps between pains, should be allowed. When a uterine contraction comes on, hold the forceps lightly at times, and the direction which the handles take will indicate the direction in which the traction should be made. In other words, the tips should be kept in the axis of the vagina. When the head has rotated half around, the handles will be pointing to the mother's side—to the left side in right positions, and to the right side in left positions.

When the head has rotated half around, the forceps should be reapplied so that the tips are anterior again, unless the head has rotated so much within the blades that rotation is sufficient, even though at

the same time the blades lie in the curve of the pelvis.

In low forceps to a persistent occiput posterior, where the occiput cannot be made to rotate forward, the forceps may be applied to the sides of the head with tips anterior, and the child extracted with face to pubes by means of what is called "pump handle traction"—that is, continuous downward traction in combination with traction, first backward till the perinæum is distended, then forward till the posterior fontanelle appears and the perinæum slips over the occiput, and finally, downward and backward, *i. e.*, toward the floor (or the back of mother), till the chin appears at the vulva.

Dr. George B. Twitchell, of Cincinnati, writess

Occipitoposterior positions occur much more often than is ordinarily supposed or than one might infer from the study of textbooks. A great many occur in the practice of midwives, and in the practice of physicians, where the diagnosis is not made or only made as the head turns on the perinæum. This means that as a rule Nature takes care of the poor position and corrects it as it should be corrected. Ordinarily the rotation of the head occurs when it is in contact with the perinæum. This is the natural way in which this abnormality should be corrected. The true obstetrician tries to help the natural process and not to try to have his little conceit device methods to improve on Nature. The mechanism of this peculiar turn of the head and body does not come within the scope of this paper. The only thing that must be remembered with regard to this mechanism is that the rotation of the head occurs very low and often occurs absolutely without help.

When and how must we help Nature?

It may be that when a patient is in an hospital, with all the assistance that the modern hospital affords, manual (let us hope never the modern instrumental) help may be offered to correct this position. But women are not ordinarily delivered in hospitals.

A left occipitoposterior position should be corrected before the head comes down, if possible. Once in a while one will be called to see a woman in labor. On examination the os will be found so far back toward the sacrum that it will be felt only with great difficulty; it will be found undilated or nearly so, and, worst of all, the obstetrician will fail to find a bag of waters. The membranes have ruptured. A more careful examination permits the finger to feel the anterior fontanelle through the anterior segment of the cervix. These are bad cases. The os should be dilated as rapidly as possible by Barnes's bags, or in any way possi-

ble, and the child extracted. As a rule these are not cases in which the position can be safely corrected; indeed the only cases in which instrumental, manual, or postural treatment is likely to lead to success are cases that can with very little help correct themselves.

There is a tendency for a delay in the progress of labor in an occipitoposterior case. The delay occurs before the head reaches the perinæum. A study of the mechanism of labor easily explains this delay.

However, the rotation must occur when the head reaches the perinæum, but for all that the ischial spines may have some influence. If the head does not reach the perinæum (on account of the delay mentioned) until the perinæum becomes hot and dry, rotation is not likely to take place. It is the duty of the obstetrician to see that the head arrives on time. Of course this means forceps. Ordinary forceps will not do, because while traction is being made the head cannot turn, but must move just as the operator pulls. With the axis traction forceps the rotation of the head goes on undelayed, and, indeed, helped, because it is held against the resistance that causes rotation. This forceps does not interfere with rotation. The writer has often seen a head turn while he was pulling on the traction handle. Indeed, nothing so clearly shows how this occurs as does the application of the axis traction forceps. It has been suggested that while traction was being made a hand might be used to help cause rotation, that is, the handles of the blades might be gently urged to turn with the head in them. This need not be done. Get the head on the perinæum in time, and the handles will do all the turning needed, and this while you are pulling, and seemingly almost of the volition of the head itself.

The forceps should be put on correctly, by preference on the sides of the child's head, but according to the pelvis is easier. It need not be removed, no matter how placed, when the head is on the perinæum. Here is where the axis traction forceps, allowing its blades to twist and turn, does its best work.

Occipitoposterior positions mean nothing to a man accustomed to the use of the axis traction forceps.

(To be concluded.)

Therapeutical Notes.

Oxalic Acid as an Expectorant.—Dr. V. Poulet (*Bulletin général de thérapeutique*, cxlix, No. 16; *Merck's Archives*, March), who for a long time has been using oxalic acid in cases of asthma, capillary bronchitis, and even tuberculous bron-

chitis, continues to obtain good results from the administration of this medicament, which he considers an excellent expectorant.

He prescribes it as follows:

- R. Oxalic acid.....2 grammes (30 grains);
 Infusion of tea.....190 grammes (6½ ounces);
 Syrup of bitter orange.....75 grammes (2 ounces).
 M. A tablespoonful hourly.

This mixture is said promptly to remove all the symptoms of threatening capillary bronchitis, distress, suffocation, and cyanosis.

For Infantile Diarrhœa with Green Stools, the *Practitioner* for January, citing the *Revue critique de médecine et de chirurgie*, says the following formula may be employed:

- R. Lactic acid.....1 to 2 parts;
 Syrup of orange flowers.....30 parts;
 Distilled water.....70 parts.

A teaspoonful of this mixture may be given every two hours or more frequently, up to every quarter of an hour, according to the severity of the case.

For Tetanus in Children.—*Progrès médical* for February 7th ascribes the following to Bérenyi:

- R. Sulphonal.....0.20 grammes (3 grains);
 Yolk of egg.....No. 1;
 Warm water.....30 grammes (1 ounce).
 M. For a rectal injection.

The following is attributed to Comby:

- R. Potassium bromide } of each 3 grammes (45 grains);
 Chloral hydrate.... }
 Syrup of orange flowers....30 grammes (1 ounce);
 Tilia water.....100 grammes (3¼ ounces).
 M. ft. mist. A tablespoonful every two hours.

Amylene Hydrate for Nervous Insomnia.—The *Revue médicale de Normandie* for December 10th, ascribes the following to Mering:

- R. Amylene hydrate.....7 grammes (105 grains);
 Syrup of bitter orange peel...30 grammes (1 ounce);
 Distilled water.....100 grammes (3½ ounces).
 M. ft. mist. Two tablespoonfuls to be taken at bedtime.

The Treatment of Gonorrhœa.—Lieutenant-colonel Zacarias Rojos de Molina, delegate from the Mexican army to the Association of Military Surgeons (*Journal of the Association of Military Surgeons*, March) limits himself to local treatment, avoiding all internal medication. He has used an injection of zinc sulphate, 1 part, in water 300 parts, for over thirty years. From actual comparison he prefers this to potassium permanganate, protargol, and other treatments which have been lauded greatly during recent years. He orders the patient to inject a small syringe of urine every time after passing urine. To subdue the pain after micturition, he orders the patient, after the urethral washing, to inject some of the following solution with a straight dropper into the urethra:

- R. Zinc sulphate.....20 milligrammes (⅓ of a grain);
 Cocaine hydrochloride...20 centigrammes (3 grains);
 Distilled water.....20 grammes (300 minims).
 M.

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THE SIGHT OF SCHOOL CHILDREN.

The recent access of activity on the part of the board of health of New York city in the matter of medical examinations of school children will undoubtedly result in the accumulation of data of much value concerning the physical condition of the average city child. That life in the city is unfavorable to development and maintenance of sight of a high degree of efficiency has generally been conceded. The dwellers on plains have much keener vision as a rule than those whose horizon is limited by the immediate proximity of tall buildings, so that their distant sight is rarely called into use. The examinations have been carried on in New York for too short a time, however, to make the data of much value as yet. One good result of the more careful examination has been the recognition of the grave importance of the epidemic of trachoma. The knowledge gained by means of the medical examination has led to the establishment of a special hospital for the treatment of this disease, which, while it seems not to have diminished the total number of cases, certainly must have been of value at least in preventing the marked increase in the number which would have occurred but for this special provision.

It is interesting to note that the oculist of the London school board has found a larger proportion of children with good sight than had been expected. In the seventh grade (presumably primary) 80 per cent. of the children examined have normal vision. In London those whose sight is defective are given cards which inform the parents that the child should be sent for treatment to a hospital. Unfortunately, however, the public hospitals seem not to have dealt

thoroughly with the cases sent to them, so that the results have been discouraging alike to the patient and to the medical examiners. This complaint, however, does not hold good of the ophthalmic hospitals, where, as a rule, better service has been rendered. The fact that most of the cases were examples of simple errors of refraction seems to have been overlooked or ignored on account of the tedious character of the work required in correctly ascertaining the errors of refraction.

It is suggested by the *British Medical Journal* that the oculists of the school board and not those attached to the hospitals, are the proper persons to determine the errors of refraction in each case, and this suggestion would, we think, apply equally well in our own school system. When the medical examiner finds any marked error of refraction, he should be able to send the pupil to an oculist provided either by the health board or by the board of education, whose special duties would be to examine the child and write a prescription for the correction of the errors.

THE SIX YEAR MOLAR TOOTH.

It is not always practicable to consult a dentist as to the care of the teeth, and practitioners of medicine should therefore take pains to inform themselves on certain points with which they may readily make themselves quite competent to deal. In the management of the teeth of a growing child there often arise questions which can be settled by the physician without his possessing the dentist's technical skill or his special appliances, but, of course, we do not counsel avoidance of the dentist's advice when he is accessible. Many a physician has to extract teeth, and he should certainly have an approach to definite knowledge of when he ought to do so and when he ought to advise the retention of a tooth.

An interesting contribution to the physician's knowledge in regard to the first permanent molar tooth (the six year molar), by M. Mahé, was published in the *Presse médicale* for March 21st. This tooth, the foremost one of the permanent molars, differs from the others in not being preceded by a temporary tooth. Its calcification begins in the fifth month of intrauterine life, though it does not emerge through the gum until the child is five, six, or seven

years old, and, as a consequence of this long period of evolution, it is subject to damage in its nutrition from nutritive troubles that few children escape. It is therefore the most vulnerable of all the teeth and, of all the permanent teeth, the one oftenest lost from caries early in life.

M. Mahé gives somewhat minute directions for distinguishing this tooth, and then lays down some general rules as to whether or not it should be extracted in case it is attacked with caries. Occasional pain in the affected tooth, traceable to such causes as pressure upon it in chewing or its coming in contact with cold water or sugar, does not call for its extraction. In such cases the caries is not extensive and probably has not reached the pulp. But if there are spontaneous and protracted attacks of toothache, and especially if there is any inflammatory action in the vicinity, the caries is so extensive and the probability of its being already accompanied by alveolar infection is so great that the chance of saving the tooth is precarious, and it ought to be extracted. Even if the disease has not proceeded to this extent, there is no advantage in preserving the tooth until the second permanent molar has completed its eruption, for the second molar will take the place of the first, and the third the place of the second, if the first is lost early, and thus the accidents that so often happen to the wisdom tooth may be postponed, and a permanent gap in the dental arch be avoided.

THE PET DOG.

Whatever may be the dog's virtues—and we have no intention of denying or ignoring them—the dog is an unclean animal; as a lady correspondent of one of the newspapers recently put it, no matter how high his pedigree, he will delve in garbage. Indeed he will thrust his snout into all sorts of filth, and then caress his master or mistress by licking him or her with his tongue. He is a disseminator of disease. Not only is he virtually the sole bearer of the infection of rabies to the human race, but he often conveys to children the hydatid tapeworm, and from that parasite arises the hydatid cyst that so frequently proves fatal. In addition, he is the foul nocturnal depositor of excrement on the pavement.

There is a disposition in some quarters to extenuate the dog's agency in spreading rabies by calling attention to the rarity of that dreadful disease. This seems to us puerile. Better would it be to exterminate all dogs than run the risk of rabietic infection of a human being in a single instance—that is to say, if we confine our attention to city dogs, for we are quite willing to concede that the services of the country dog far outweigh the dangers to be apprehended from him. In a recent letter to the editor of the *New York Times* Mr. John P. Haines, president of the Society for the Prevention of Cruelty to Animals, defines the society's views as to "rabies and hydrophobia." Apparently Mr. Haines applies the term rabies to the disease as it occurs in the dog, and hydrophobia to the same disease in the human subject. So long as we understand Mr. Haines, this unusual distinction does not befog the situation; we all know what he means.

Mr. Haines properly insists upon the enforcement of the city ordinance requiring dogs on the street to be led by a leash not more than four feet long. In general he objects to the enforced muzzling of dogs, but he says: "Nevertheless, if such extreme necessity or the danger thereof [that of the propagation of rabies] is believed by the board of health to exist at this time, this society would be far from taking the responsibility of opposing the enactment even of a muzzling act, greatly though we should deprecate it in any other circumstances." He had previously said: "I myself have personally seen a dog tear at the muzzle with such violence as to lacerate its whole face and actually tear the claws out of its own feet." It is to be presumed that Mr. Haines was powerless to interfere for the distressed animal's relief. It all amounts to this, so far as we can see: Dogs do not like to be muzzled; therefore they ought not to be muzzled except under circumstances of extreme danger, but should be free to wallow in the garbage can, subject only to the volition of the holder of the four-foot leash, and then free to lick or bite according to their own will. The country dog, as we have said before, shows virtues that more than counterbalance his capacity for evil, but, barring the sentimental fondness for dogs as dogs, how can we justify the maintenance of these foul and dangerous animals in a great city?

THE BILL FOR THE ABOLITION OF CORONERS.

As we go to press, the passage of the bill for the abolition of the office of coroner by the legislature of the State of New York seems probable. For a short period it appeared doubtful if it would be enacted. It is all the more gratifying, therefore, to be able to announce the prospect of its speedy passage.

THE BOARD OF REGENTS OF THE UNIVERSITY OF THE STATE OF NEW YORK.

Since we last commented on the movement to make the regents supreme in educational matters throughout the State, a movement which we have cordially supported, evidence has accumulated to show that the great majority of the medical profession are in accord with us. We believe that this fact is likely to weigh with the legislators, and we earnestly hope that the regents' supremacy will speedily be established by law.

THE EMBALMER'S ART.

We are indebted to the editor of the *Embalmer's Monthly*, Mr. J. Newton Nind, of Chicago, for that exceedingly interesting and valuable publication, for a copy of the proceedings of the twenty-first annual convention of the National Funeral Directors' Association, as well as for much information concerning the status of the embalmer in a number of the States of the Union. We learn from these publications and directly from Mr. Nind that the *Monthly* is one of six journals devoted to embalming, and that in several of the western States the licensure of embalmers is in the hands of the State boards of health, which boards delegate the work of house disinfection largely to the embalmers. In this, as in many other matters, we of the East might well take a lesson from our brethren of the West. The publishers of the *Monthly* publish also an excellent little book on *Disinfection and Disinfectants*, by Dr. H. M. Bracken, of the University of Minnesota and the Minnesota State Board of Health, for a copy of the second edition of which we are indebted to Mr. Nind. Dr. Bracken is well known as an authority in materia medica and therapeutics, and his little book is one of several issued by the publishers of the *Monthly*.

INSTRUMENTAL REDUCTION OF CONGENITAL DISLOCATION OF THE HIP.

A recent newspaper dispatch from Boston contains a certain amount of truth mixed with a great deal of exaggeration and inaccuracy, concerning a mechanism for effecting the reduction. Many surgeons have employed a mechanical appliance of one

sort or another to stretch and pull down the leg in the more resistant cases of congenital dislocation of the hip. The Mr. Bartlett mentioned in the newspaper dispatch has made some modifications of the appliances in use which appear to have added greatly to their effectiveness. Boston orthopædists have tried it in four cases; three of the patients were under eight years old, and one was thirteen. As far as these gentlemen can determine from the four cases, the ecchymosis and bruising of the tissues were less and certainly the reduction was much easier than by the ordinary Lorenz method. It is their intention to try it in a series of cases and report its value after a more thorough trial. They assure us that they regret extremely that a newspaper reporter should have exaggerated the value and importance of what was only a modification of the methods already in use.

News Items.

Society Meetings for the Coming Week:

MONDAY, April 13th.—New York Academy of Medicine (Section in General Surgery); New York Academy of Sciences (Section in Chemistry and Technology); New York Medico-Historical Society (private); New York Ophthalmological Society (private); Gynecological Society of Boston; Burlington, Vt., Medical and Surgical Club; Norwalk, Conn., Medical Society (private); Medical Association of the Greater City of New York; Society of Medical Jurisprudence.

TUESDAY, April 14th.—New York Academy of Medicine (Section in Genitourinary Surgery); New York Medical Union (private); New York Obstetrical Society (private); Buffalo Academy of Medicine (Section in Medicine); Kings County, N. Y., Medical Association; Rome, N. Y., Medical Society; Medical Society of the County of Rensselaer, N. Y.; Newark, N. J., Medical Association (private); Trenton, N. J., Medical Association; Clinical Society of the Elizabeth, N. J., General Hospital and Dispensary; Northwestern Medical Society of Philadelphia; Practitioners' Club, Richmond, Ky.; Richmond, Va., Academy of Medicine and Surgery.

WEDNESDAY, April 15th.—Woman's Medical Association (N. Y. Academy of Medicine); Medico-Legal Society New York; Northwestern Medical and Surgical Society of New York (private); New Jersey Academy of Medicine (Newark); Philadelphia County Medical Society; New York Society of Dermatology and Genitourinary Surgery (private); New York Academy of Medicine (Section in Genitourinary Diseases).

THURSDAY, April 16th.—New York Academy of Medicine; Brooklyn Surgical Society; New Bedford, Mass., Society for Medical Improvement (private); Medical Society of City Hospital Alumni, St. Louis; Atlanta Society of Medicine.

FRIDAY, April 17th.—New York Academy of Medicine (Section in Orthopædic Surgery); Clinical Society of the New York Post-graduate Medical School and Hospital; Baltimore Clinical Society; Chicago Gynecological Society; Manhattan Medical and Surgical Society (private).

The Manhattan State Hospital.—Dr. L. Pierce Clark has been appointed consulting neurologist to the Manhattan Hospital in Central Islip.

Shorter Hours for Nurses.—A bill limiting the hours of work of nurses in the State service is now before the legislature of the State of Massachusetts.

The Eastern Medical Society held its annual reunion at the Hotel Marlborough, on Saturday evening, March 28th. A banquet and a dance were features of the occasion.

The Missouri Board of Examiners.—At the meeting of the Missouri Board of Medical Examiners held at Kansas City on April 1st, twenty-one applicants appeared for examination.

An American Woman an Assistant in Vienna.—Dr. Annie G. Lyle, of San Francisco, has been appointed an assistant to Professor Esrech, who fills the chair of pædiatrics at the University of Vienna.

Health Bill Killed in Minnesota.—A bill reenacting the health and sanitary laws of the State and providing for county boards of health has been killed in the lower house of the legislature of the State of Minnesota.

Roosevelt Hospital.—Dr. Victor C. Pedersen has recently been appointed anæsthetist to the first surgical division of Roosevelt Hospital. He has also been appointed assistant anæsthetist to the New York Polyclinic School and Hospital.

Fifty Thousand Dollars to Fight the Plague.—A contingent fund of \$50,000 has been set aside by the legislature of the State of Wisconsin to be utilized for the prevention of bubonic plague, Asiatic cholera, smallpox, and other dangerous contagious diseases.

The Rhode Island Hospital.—Dr. Edwin Edmund D. Chesebro, a graduate of the College of Physicians and Surgeons, of the class of 1890, was recently appointed a visiting physician to the Rhode Island Hospital at Providence, to succeed the late Dr. Byron Whitford.

A Price List for Practitioners.—The newspaper press have found a good deal of entertainment in the formal adoption by the physicians of Waukegan, Ill., of a scale of fees. The list as published in some of the Chicago papers embraces everything from an ordinary city visit to the amputation of an entire shoulder, including visits to diphtheria, scarlet fever and smallpox patients.

A Reception to Professor Ewald.—It is announced that Dr. C. A. Ewald is expected to reach New York City on May 4th, and Dr. Mark I. Knapp, 176 East Seventy-eighth Street, would like to communicate with his former pupils and assistants with a view to arranging a suitable reception for the distinguished visitor.

Medical Legislation in Minnesota.—On April 1st a bill changing the medical registration law in conformity with a plan approved by the State Medical Association was introduced in the senate of the legislature of the State of Minnesota. Two hundred persons appeared at a hearing before the Committee on Public Health of the Minnesota legislature in opposition to the measure making vaccination compulsory.

Touro Infirmary to be Remodeled.—The sum of \$100,000 has been secured for the purpose of remodeling the Touro infirmary at New Orleans. The annual report of the institution shows that it is in a very flourishing condition, and has done much good work during the past year in the care of indigent patients.

The Unification of the New York State Educational System.—The Albany County (N. Y.) Medical Society has adopted formal resolutions in favor of the unification of the State educational system by enlarging the powers and duties of the board of regents and abolishing the office of State superintendent of education.

Kansas City Physicians Dine.—The ninth annual banquet of the College of Physicians and Surgeons of Kansas City, Kan., was held at the Coates House, on March 26th, about one hundred physicians being present. Among the speakers were Dr. H. E. Pearse, Dr. Charles E. Stemen, Dr. Z. Nason, Dr. J. O. Ward, and Dr. P. S. Powell.

Dr. Charles V. Chapin.—Dr. Charles V. Chapin, who has been superintendent of health in the city of Providence, R. I., since January, 1884, and city registrar since 1888, has resigned his position as superintendent of health on account of his own ill health. Dr. Chapin has filled these very responsible positions to the complete satisfaction of the citizens and physicians of Providence, and the news of his resignation will be learned with regret by both the laity and the medical practitioners of Providence.

Trained Nurses in Public Schools.—There are at present thirty-one trained nurses engaged in the visiting one hundred and twenty public schools in New York City. Seventeen of these work in Manhattan, twelve in Brooklyn, and two in the Borough of the Bronx. Each of the one hundred and twenty schools is visited every day. The services rendered by the nurses have been so valuable as to fully justify the Department of Education in extending the service. Aside from prevention of epidemics the services of the nurses are of value in encouraging habits of cleanliness among the pupils of foreign parentage whose home surroundings are such as not to teach a sanitary mode of life.

Gas Plants to be Removed from Manhattan Island.—The officials of the Consolidated Gas Company have announced that final arrangements have been perfected for the consolidation of all the various gas plants now on Manhattan Island at Lawrence Point on Long Island. A site has been secured at Hell Gate comprising about three hundred acres, and it is planned ultimately to erect there a plant with a capacity of two hundred million feet of gas a day. The plants will be erected in units having a capacity of twenty million cubic feet, and as rapidly as the increased capacity of the new installation will permit the old gas works will be dismantled. There are now eight plants on Manhattan Island.

Mississippi Medical Association Changes its Place of Meeting.—Owing to the flood at Greenville the meeting of the Mississippi State Medical Association which was to have taken place at that city on April 15th will be held on the same date at Vicksburg.

The New York Academy of Medicine.—A stated meeting will be held on Thursday evening, April 16th, at 8 o'clock, under the auspices of the Section in Laryngology. Dr. Lewis A. Coffin will read a paper on The Upper Air Passages as Affected by the Diseases of the Gastro-Intestinal Tract, and Dr. C. G. Coakley will read a paper on Some Relations between Diseases of the Nose and Throat and Those of the Thoracic Cavity.

Medical Registration in Canada.—At a meeting of the Montreal Medical Society held on March 31st, the Roddick bill providing for a change in the methods of registration in medicine was discussed at some length. The report of the committee to which this subject has been referred was submitted by the chairman, Dr. Lesage. This report stated that there were two means of obtaining a license that would permit the licensee to practice in the different provinces, one of these being provincial legislation and the other federal legislation. By the former, desired results can be obtained in accepting the following principles: (1) A provincial license alone gives the right to a licensed student to practise medicine. (2) The College of Physicians and Surgeons is alone authorized to deliver the provincial license. (3) All students holding a diploma are held to pass a new examination before obtaining a license. (4) The College of Physicians and Surgeons is authorized to appoint a bureau of provincial examiners, composed of professors attached to the different universities, and of those not affiliated to the faculties or to the medical school. (5) This examining bureau will assume charge of written and oral examinations, at least once a year, of all those graduates who may desire a provincial license.

The report then proceeds to say that in the event of failure to obtain provincial legislation, federal legislation may be obtained in Dr. Roddick's bill as amended by the committee. "We submit, however," says the document, "that the bill is neither desirable nor possible in its present form. We submit, however, that the Roddick bill, as here amended, will meet with the desired results and safeguard the general and special interests of the province in matters pertaining to superior and secondary education." The following are the amendments suggested: (1) The province will name a certain number of representatives, selected either amongst the doctors, the members of the College of Physicians, or from the duly recognized universities. (2) These members to the number of forty, more or less, will constitute a federal board, which will have power to order an examination, and to deliver a federal license, which will be recognized by each of the provinces, on payment by the candidate of the provincial local license. (3) Only those will be admitted to pass their examinations who are licensed doctors in one of the provinces of the Dominion, or

a licentiate of a foreign university, duly recognized by the laws of their respective countries. (4) The medical students, duly inscribed by virtue of provincial laws at the moment the law comes into force, cannot be questioned upon other matters than those taught them in the schools or universities prior to this law.

Official News.

Infectious Diseases in New York:

We are indebted to the Sanitary Bureau of the Health Department for the following statement of cases and deaths reported for the two weeks ending April 4, 1903:

DISEASES.	Week end'g Mar. 28		Week end'g April 4.	
	Cases.	Deaths.	Cases.	Deaths.
Measles	314	12	285	11
Diphtheria and Croup.....	441	61	353	2
Scarlet fever.....	282	13	324	19
Small-pox	1	0	1	0
Chicken-pox.....	131	0	105	1
Tuberculosis	345	169	290	124
Typhoid fever	46	12	36	4
Cerebro-spinal meningitis.....	0	0	0	0

Public Health and Marine-Hospital Service Health Reports:

The following cases of smallpox, yellow fever, cholera, and plague, have been reported to the surgeon-general, Public Health and Marine-Hospital Service, during the Week ending April 4, 1903:

Smallpox—United States.			
Place.	Dates.	Cases.	Deaths.
Alabama—Mobile	Mar. 21-28	3	
California—Los Angeles	Mar. 14-21	2	
California—San Francisco	Mar. 15-22	8	
District of Columbia—Washington	Mar. 21-28	2	
Florida—Jacksonville	Mar. 21-28	2	
Illinois—Alton	Mar. 14-21	1	
Illinois—Chicago	Mar. 21-28	18	
Indiana—Indianapolis	Mar. 21-28	17	1
Iowa—Davenport	Mar. 21-28	5	
Kansas—Wichita	Mar. 21-28	1	
Kentucky—Lexington	Mar. 21-28	2	
Louisiana—New Orleans	Mar. 21-28	3	
Maryland—Baltimore	Mar. 21-28	2	
Massachusetts—Boston	Mar. 21-28	2	
Massachusetts—Fall River	Mar. 21-28	2	
Massachusetts—Lowell	Mar. 21-28	3	
Michigan—Detroit	Mar. 21-28	19	
Michigan—Grand Rapids	Mar. 21-28	4	1
Michigan—Port Huron	Mar. 21-28	3	
Minnesota—Minneapolis	Jan. 3-Mar. 28 ..	92	3
Missouri—Kansas City	Mar. 14-29	4	1
Missouri—St. Louis	Mar. 22-29	6	
New Hampshire—Manchester	Mar. 21-28	10	
New Hampshire—Nashua	Mar. 21-28	2	
New Jersey—Jersey City	Mar. 23-29	5	
New Jersey—Newark	Mar. 21-28	2	1
New York—Buffalo	Mar. 21-28	3	
New York—New York	Mar. 21-28	1	
Ohio—Cincinnati	Mar. 20-27	19	1
Ohio—Cleveland	Mar. 21-28	1	1
Ohio—Dayton	Mar. 21-28	5	1
Ohio—Toledo	Feb. 14-Mar. 21 ..	52	
Pennsylvania—Altoona	Mar. 21-28	4	
Pennsylvania—Butler	Mar. 14-28	2	1
Pennsylvania—Dunmore	Mar. 1-31	3	
Pennsylvania—Johnstown	Mar. 21-28	9	
Pennsylvania—McKeesport	Mar. 21-28	2	
Pennsylvania—Norristown	Mar. 21-28	1	
Pennsylvania—Philadelphia	Mar. 21-28	31	2
Pennsylvania—Pittsburgh	Mar. 21-28	42	4
three imported.			
South Carolina—Charleston	Mar. 21-28	1	
Tennessee—Greene County	Mar. 26	26	
Tennessee—Nashville	Mar. 21-28	1	
Texas—Galveston	Mar. 27	1	
Utah—Salt Lake City	Mar. 21-28	18	
Wisconsin—Green Bay	Mar. 22-29	1	
Wisconsin—Milwaukee	Mar. 21-28	1	

Smallpox—Insular.			
Philippines—Manila	Jan. 31-Feb. 7 ..	1	
Philippines—Provinces	Jan. 31-Feb. 7 ..	Prevalent.	

Smallpox—Foreign.

Austria—Prague	Feb. 28-Mar. 14 ..	18	1
Belgium—Antwerp	Feb. 21-Mar. 14 ..	5	3
Belgium—Brussels	Feb. 28-Mar. 14 ..		11
Belgium—Ghent	Mar. 7-14		2
Brazil—Rio de Janeiro	Feb. 13-20		1
Canada—Winnipeg	Mar. 7-14	1	
Canary Islands—Las Palmas	Feb. 14-Mar. 7 ..	86	
Formosa	July 1-Dec. 31, 1902	1	1
Great Britain—Birmingham	To Mar. 14	41	3
Great Britain—Bradford	Jan. 15-Feb. 28 ..	9	
Great Britain—Dublin	Mar. 7-14	9	1
Great Britain—Dundee	Feb. 28-Mar. 7 ..	1	
Great Britain—Leeds	Feb. 28-Mar. 14 ..	26	3
Great Britain—Liverpool	Feb. 28-Mar. 14 ..	172	13
Great Britain—London	Mar. 7-14	2	
Great Britain—Manchester	Mar. 7-14	23	1
Great Britain—Nottingham	Feb. 21-Mar. 7 ..	4	
India—Bombay	Feb. 24-Mar. 3 ..		64
India—Calcutta	Feb. 21-28		2
India—Karachi	Feb. 15-Mar. 1 ..	1	
Italy—Palermo	Feb. 28-Mar. 7 ..		1
Mexico—City of Mexico	Mar. 8-15	6	4
Netherlands—Flushing	Mar. 7-14	1	
Netherlands—Amsterdam	Mar. 14-21	2	
Russia—Moscow	Feb. 21-Mar. 2 ..	7	3
Russia—Odessa	Feb. 28-Mar. 14 ..	6	
Russia—St. Petersburg	Feb. 28-Mar. 7 ..	77	14
Russia—Warsaw	Feb. 21-Mar. 7 ..		6
Turkey—Constantinople	Feb. 22-Mar. 1 ..		1

Yellow Fever.

Brazil—Rio de Janeiro	Feb. 13-20	25	
Ecuador—Guayaquil	Feb. 21-Mar. 7 ..		33
Mexico—Vera Cruz	Mar. 14-21	6	3

Cholera—Insular.

Philippines—Cebu	Feb. 12	4	
Philippines—Talisay, Cebu	Feb. 12	6	
Philippines—Provinces	Jan. 31-Feb. 7 ..	169	103

Cholera—Foreign.

India—Calcutta	Feb. 21-28	71	
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Plague—Insular.

Philippines—Manila	Jan. 31-Feb. 7 ..	2	
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Plague—Foreign.

Brazil—Rio de Janeiro	Feb. 13-20	2	
Formosa	July 1-Dec. 31, 1902 ..	265	
India—Bombay	Feb. 24-Mar. 3 ..	1,297	
India—Calcutta	Feb. 15-28	468	
India—Karachi	Feb.-Mar. 1	90	83
India—Madras	Feb. 21-27		1

Plague—United States.

California—San Francisco	Mar. 17	1	
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Naval Intelligence:

Official List of Changes in the Medical Corps of the United States Navy for the Week ending April 4, 1903:

BRADLEY, G. P., Medical Director (retired). Detached from duty as a member of the Medical Examining Board, Washington, D. C., and ordered to duty at the Naval Hospital, Washington, D. C.

DEAN, R. C., Medical Director (retired). Detached from duty as president of the Naval Medical Examining Board, Washington, D. C., and ordered to duty as a member of the Naval Retiring Board, Navy Yard, Washington, D. C.

DEVRIES, J. C., Acting Assistant Surgeon. Ordered to recruiting duty.

DORSEY, B. H., Assistant Surgeon. Ordered to the Naval Hospital, Newport, R. I.

ELY, C. F., Assistant Surgeon. Appointed Assistant Surgeon from March 6, 1903.

GUNNELL, F. M., Medical Director (retired). Detached from duty at the Bureau of Medicine and Surgery, and appointed president of the Naval Medical Examining Board, Washington, D. C.

GRAVATT, C. U., Medical Director. Detached from duty as a member of the Naval Retiring Board, and ordered to report for examination for retirement, then home to wait orders.

HAAS, H. H., Passed Assistant Surgeon. Ordered to the Naval Hospital, Portsmouth, N. H.

HARMON, C. E. H., Medical Director. Detached from the Naval Hospital, Port Royal, S. C., and ordered home to wait orders.

HOEHLING, A. A., Medical Director (retired). Ordered to duty as a member of the Medical Examining Board, Navy Yard, Washington, D. C.

HURD, I. N., Pharmacist. Retired from active service on account of disabilities incurred in the service, March 28, 1903.

KERR, D. B., Passed Assistant Surgeon. Detached from the *Wabash* and ordered to the *Buffalo*.

MCCORD, D. P., Acting Assistant Surgeon. Ordered home to wait orders.

PAYNE, J. H., Assistant Surgeon. Detached from the Naval Hospital, Newport, R. I., and ordered to the *Wabash*.

SPRATLING, L. W., Surgeon. Detached from the Naval Hospital, Portsmouth, N. H., and ordered to the Navy Yard, N. Y.

STONE, M. V., Assistant Surgeon. Ordered to the Naval Hospital, Mare Island, for treatment.

STREETS, T. H., Medical Director. Commissioned a medical director from January 31, 1903.

The following Assistant Surgeons have been detached from the Naval Museum and Medical School of Washington, D. C., and ordered to their homes to wait orders: **R. A. BACHMANN, M. W. BAKER, E. M. BROWN, R. E. HOYT, J. H. HOLLOWAY, R. H. MICHELS, B. F. JENNESS, F. M. MUNSON, J. L. NEILSON, H. SHAW, H. F. STRINE, J. P. TRAYNOR.**

Army Intelligence:

Official List of Changes in the Stations and Duties of Officers serving in the Medical Department of the United States Army for the Week ending April 4, 1903:

DEVEREUX, THOMAS, First Lieutenant and Assistant Surgeon. Relieved from attendance at the Army Medical School, Washington, to take effect April 7, 1903, and ordered to San Francisco, Cal., for duty on the transport *Sumner*.

The following-named Assistant Surgeons, having graduated from the Army Medical School, have been ordered to duty as follows:

BARRON, NOEL I., First Lieutenant and Assistant Surgeon. Will proceed to Vancouver Barracks, Washington, and report to the commanding general of the Department of the Columbia for assignment to duty in the Philippines.

BLANCHARD, ROBERT M., First Lieutenant and Assistant Surgeon. Ordered to Fort Thomas, Kentucky, for duty.

BOURKE, JAMES, First Lieutenant and Assistant Surgeon. Ordered to Fort Sheridan, Ill., for duty.

CARSWELL, ROBERT L., First Lieutenant and Assistant Surgeon. Ordered to transport *Sheridan* for duty.

CLARK, JOHN A., First Lieutenant and Assistant Surgeon. Ordered to Plattsburg Barracks, N. Y., for temporary duty.

COFFIN, JACOB M., First Lieutenant and Assistant Surgeon. Ordered to Plattsburg Barracks, N. Y., for temporary duty.

COLLINS, GEORGE L., First Lieutenant and Assistant Surgeon. Ordered to Fort Adams, R. I., for duty.

CONNOR, CLARENCE H., First Lieutenant and Assistant Surgeon. Ordered to the Philippines for duty.

DAVIS, WILLIAM T., First Lieutenant and Assistant Surgeon. Ordered to transport *Logan* for duty.

DE LOFFRE, SAMUEL M., First Lieutenant and Assistant Surgeon. Will proceed to Fort Assiniboine, Montana, and report to the commanding officer for duty.

DUNCAN, LOUIS C., First Lieutenant and Assistant Surgeon. Will proceed to Vancouver Barracks, Wash., and will report to the commanding general for assignment to duty in the Philippines.

FIFE, JAMES D., First Lieutenant and Assistant Surgeon. Ordered to Plattsburg Barracks, N. Y., for temporary duty.

GAPEN, NELSON, First Lieutenant and Assistant Surgeon. Will proceed to San Antonio, Texas, and report to the commanding general for assignment to duty in the Philippines.

GILCHRIST, HARRY L., First Lieutenant and Assistant Surgeon. Ordered to Fort Screven, Ga., for duty.

GOSMAN, GEORGE H. R., First Lieutenant and Assistant Surgeon. Ordered to Fort Duchesne, Utah, for duty.

GREGORY, JUNIUS C., First Lieutenant and Assistant Surgeon. Ordered to Washington Barracks, D. C., for temporary duty at the United States General Hospital.

GRISSINGER, JAY W., First Lieutenant and Assistant Surgeon. Will proceed to San Francisco, Cal., and report to the commanding officer for assignment to duty in the Philippines.

HANNER, JOHN W., First Lieutenant and Assistant Surgeon. Ordered to transport *Sheridan* for duty.

HANSELL, HAYWOOD S., First Lieutenant and Assistant Surgeon. Ordered to Fort Monroe, Va., for duty.

HARRIS, JESSE R., First Lieutenant and Assistant Surgeon. Ordered to Fort Myer, Va., for duty.

HATHAWAY, LEVY M., First Lieutenant and Assistant Surgeon. Will proceed to Vancouver Barracks, Wash., and report to the commanding officer for assignment to duty in Alaska.

HUNTINGTON, PHILIP W., First Lieutenant and Assistant Surgeon. Will proceed to Vancouver Barracks, Wash., and will report to the commanding general for assignment to duty in the Philippines.

KILBOURNE, EDWIN D., First Lieutenant and Assistant Surgeon. Will proceed to San Francisco, Cal., and report to the commanding general for assignment to duty in the Philippines.

KIRBY-SMITH, REYNOLD M., First Lieutenant and Assistant Surgeon. Ordered to Fort Barrancas, Fla., for duty.

LAMBERT, SAMUEL E., First Lieutenant and Assistant Surgeon. Ordered to Fort Keogh, Montana, for temporary duty.

LE WALD, LEON T., First Lieutenant and Assistant Surgeon. Will proceed to San Francisco, Cal., and report to the commanding officer for assignment to duty in the Philippines.

MONCRIEF, WILLIAM H., First Lieutenant and Assistant Surgeon. Will proceed to San Antonio, Texas, and report to the commanding officer for assignment to duty in the Philippines.

MORRIS, SAMUEL J., First Lieutenant and Assistant Surgeon. Will proceed to Denver, Colo., and report to the commanding general for assignment to duty in the Philippines.

MORSE, CHARLES F., First Lieutenant and Assistant Surgeon. Will proceed to San Antonio, Texas, and report to the commanding general for assignment to duty in the Philippines.

MURRAY, ALEXANDER, First Lieutenant and Assistant Surgeon. Will proceed to San Francisco, Cal., and report to the commanding general for assignment to duty in the Philippines.

PIERSON, ROBERT H., First Lieutenant and Assistant Surgeon. Ordered to Fort Bayard, New Mexico, for duty at the United States General Hospital.

POWELL, WILLIAM A., First Lieutenant and Assistant Surgeon. Ordered to the transport *Thomas* for duty.

PURNELL, HARRY S., First Lieutenant and Assistant Surgeon. Will report to the commanding general of the Department of Colorado for assignment to duty in the Philippines.

PYLES, WILL L., First Lieutenant and Assistant Surgeon. Ordered to Washington Barracks, D. C., for temporary duty.

SCOTT, GEORGE H., First Lieutenant and Assistant Surgeon. Ordered to Fort Clark, Texas, for temporary duty.

SMART, WILLIAM M., First Lieutenant and Assistant Surgeon. Ordered to Fort Leavenworth, Kansas, for duty.

SNODDY, CARY A., First Lieutenant and Assistant Surgeon. Ordered to the transport *Sherman* for duty.

TALBOTT, EDWARD M., First Lieutenant and Assistant Surgeon. Assigned to duty in the Philippines.

Public Health and Marine-Hospital Service:

Official List of Changes of Station and Duties of Commissioned and Non-commissioned Officers of the Public Health and Marine-Hospital Service, for the Seven Days ending April 2, 1903:

McINTOSH, W. P., Surgeon. To proceed to Sabine Pass, Texas, for special temporary duty.

FRICKS, L. D., Assistant Surgeon. Granted leave of absence for three days.

ROBINSON, D. E., Assistant Surgeon. Granted leave of absence for three days, from March 23rd, 1903, under provisions of paragraph 191 of the Regulations.

ADAMS, F. B., Acting Assistant Surgeon. Granted leave of absence for twenty-five days, from April 7th.

BULLARD, J. T., Acting Assistant Surgeon. Granted extension of leave of absence, from March 15th to 29th, inclusive.

FRASER, A. C., Acting Assistant Surgeon. Granted leave of absence for thirty days, from March 27th.

Promotions.

Assistant Surgeon L. L. LUMSDEN commissioned as Passed Assistant Surgeon (Recess) March 31, 1903, effective March 14, 1903.

Pharmacist E. J. THURSTON, of the second class, promoted to be Pharmacist of the first class, March 13, 1903.

Boards Convened.

Board convened to meet at Washington, D. C., March 31, 1903, for the physical examination of chief Engineers of the Revenue Cutter Service. Detail for the board: Assistant Surgeon-General L. L. WILLIAMS, chairman; Assistant Surgeon-General H. D. GEDDINGS, recorder.

Board convened to meet at Detroit, Michigan, April 7, 1903, for the physical examination of an officer of the Revenue Cutter Service. Detail for the board: Surgeon H. W. AUSTIN, chairman; passed Assistant Surgeon H. S. MATHEWSON, recorder.

Births, Marriages, and Deaths.

Married.

BAWDEN—SWYGERT.—In Pontiac, Illinois, on Tuesday March 31st, Dr. F. C. Bawden, of Atlanta, Illinois, and Miss Lina Grace Swygert.

KOPETZKY—DOOB.—In New York City, on Thursday, April 2d, Dr. Samuel J. Kopetzky and Miss Annah Henriette Doob.

PAYNE—TOSTEVIN.—In Garnersville, N. Y., on Wednesday, March 25th, Dr. John B. Payne, of Stony Point, N. Y., and Miss Jennie Tostevin.

Died.

BERNHARDT.—In Three Springs, Pennsylvania, on Wednesday, April 1st, Dr. Dallas Bernhardt.

FRTZ.—In Buffalo, N. Y., on Tuesday, March 31st, Dr. William C. Fritz, in the thirty-sixth year of his age.

KELSAY.—In Roxbury, Massachusetts, on Monday, March 30th, Dr. Brookens C. Kelsay, in the forty-ninth year of his age.

NEGENDANK.—In Wilmington, Delaware, on Thursday April 2d, Dr. August Negendank, in the eightieth year of his age.

PERRIN.—In Durand, Michigan, on Monday, March 30th, Dr. G. H. Perrin.

PERRY.—In Boston, Massachusetts, on Tuesday, April 7th, Dr. Edgar Perry, in the forty-eighth year of his age.

SANBORN.—In Melrose, Massachusetts, on Wednesday, April 1st, Dr. John E. Sanborn, in the eightieth year of his age.

SCHUMACHER.—In Brooklyn, N. Y., on Monday, April 6th, Dr. Emil Schumacher, in the thirty-ninth year of his age.

SIEGEL.—In Richmond, Virginia, on Saturday, April 4th, Dr. Charles L. Siegel, in the thirty-fifth year of his age.

SINGER.—In Cornellsville, Pennsylvania, on Saturday, March 28th, Dr. James Jones Singer, in the fiftieth year of his age.

STEUER.—In New York City, on Saturday, April 4th, Dr. Oscar H. Steuer, in the fortieth year of his age.

STONE.—In Atlanta, Georgia, on Monday, March 30th, Dr. L. P. Stone, of Madison.

Pith of Current Literature.

PRACTICE OF MEDICINE.

Functional Claudication of the Suprarenal Capsules.—This name was proposed by R. Colón, in an address to the Argentine Medical Society, as descriptive of a special condition of the suprarenal glands, giving rise to the symptoms of Addison's disease in a mild form, and yielding, in a short time to opotherapy. T. Suarez (*La Semana Médica*, Buenos Aires, February 5th) reports two cases of this description, in one of which chronic alcoholism and malaria had given rise to cirrhosis of the liver, hypertrophy of the spleen, and gastric disturbances. The facts that biliary pigment was absent from the urine and that the fæces were well colored by the bile, led the author to the conclusion that the pigmentation present in the skin was due to Addison's disease rather than to icterus, as might have been supposed from the liver lesion. The hypothesis is advanced that although the function of the liver cells sufficed for the elaboration of bile, the defensive powers of that organ were weakened, and consequently noxious products of intestinal toxæmia and incompletely reduced waste products of nutrition gained access to the blood; and these, finally reaching the kidneys, acted as irritants to those organs; the suprarenals, in turn, by reason of their intimate relation with the kidneys, being affected through extension of the morbid process in the latter. In both cases, a complete and rapid cure was effected by injections of an extract of the suprarenal capsules according to the formula of Brown-Séquard.

Acute Inflammation of the Sigmoid Flexure Through Coprostasis.—Dr. A. Bittorf (*Berliner klinische Wochenschrift*, February 16th) reports two cases of this unusual character, which ran their courses with elevation of temperature, lassitude, headache and articular pains, constipation and the formation of a sensitive resisting mass in the region of the left iliac fossa. The temperature had a rapid rise, but after the bowels had moved, an equally rapid fall. Occasionally an abscess may form. Indican is always present in the urine. The cause of the illness is coprostasis in the sigmoid flexure. Through the local pressure the scybala occasion nutritive disturbances of the mucous membrane and inflammation of the peritonæum. The prognosis is usually favorable. Castor oil is the principal drug in the treatment, but occasionally surgical intervention is required.

Rhythmical Vibrations of the Head in Cases of Increased Arterial Tension due to Arteriosclerosis.—Dr. Menotti Bucco (*Riforma medica*, February 25th) discusses the "head pulse," a symptom which has been described a few years ago by Feletti as characteristic of aneurysms of the arch of the aorta. The author studied a series of cases of arteriosclerosis in which the arterial tension was markedly increased, and found that in all these cases the rhythmical vibrations of the head described by Feletti could be observed. A study of the tracings of these oscillations showed that they had the char-

acters of a true pulse-wave, consisting of a very sharp ascending line, almost vertical, of a fairly acute apex, and of an equally vertical descending line. A few secondary oscillations were observed at times between the principal vibrations. The wave rises with the carotid diastole. Clinically this pulsation is manifested by rhythmical anteroposterior vibrations of the head. The author's investigations proved that this symptom was not characteristic of aneurysm of the arch of the aorta, of aortic insufficiency, or of pleurisy, but that it was met with in diffuse arteriosclerosis. The vibrations consist of a series of extension movements of the head, with a slight motion from left to right or from right to left. It is impossible to say whether this symptom is due to an increased arterial tension or to a hypertrophy of the heart, but for practical purposes it does not matter, for these two conditions are closely related to each other. Experiments showed that a rise of arterial pressure alone did not suffice to produce these vibrations.

The administration of iodides and the use of Trunczek's serum diminishes these vibrations considerably, however, which shows that the arterial tension has something to do with this symptom. The author believes that these vibrations are due to a transmission of the heart-beat to the head when the contractions are pathologically exaggerated, especially when the arteries are rigid, either being too full of blood or being the seat of sclerosis. As regards the reason why the vibrations are usually directed slightly from left to right, the author suggests, that this may be the result of the tendency of the aorta to straighten itself at the moment of cardiac systole, thus placing the left carotid artery at right angles to the direction of the current, and therefore allowing the impulse of the heart to be felt more distinctly in that vessel.

Some Misconceptions with Regard to Diseases of the Liver. By Dr. W. H. White. (*British Medical Journal*, March 7th).—The author holds that cirrhosis of the liver, recognized clinically by its symptoms, and post mortem by the well known condition of the liver, really has but one cause, and that is alcoholic drinks. Alcohol by itself does not cause it, but is a very important contributory factor, and there is some other contributory factor at present unknown. Many other causes than alcohol will increase the fibrous tissue in the liver; in syphilis there may be great fibrous bands cutting the liver up into areas; sometimes there are gummata, sometimes the liver is lardaceous, and sometimes there is a perihepatitis. But none of these conditions can be confused with alcoholic cirrhosis of the liver. Malaria is given as a cause of cirrhosis of the liver, but the author has never seen an instance. Increased fibrosis of the liver is most often seen after passive congestion from heart or lung disease (nutmeg liver). But the fibrosis, even after the longest standing heart case, never leads to anything comparable with cirrhosis of the liver due to alcoholic drinks.

There is no proper distinction between atrophic and hypertrophic cirrhosis of the liver in the cirrhosis of the liver due to alcoholic drinks; they are simply stages of one and the same disease. The

condition is not a local disease of the liver any more than granular disease of the kidney is a local disease of the kidney. The chief trouble is not the mere development of the fibrous tissue, but perversion of function, probably of internal secretion; there is produced a toxine causing ascites, jaundice, coma, swelling of the feet, and a tendency to hæmorrhages. Cirrhosis of the liver is thus brought into line with fibrous atrophic pancreatitis, where the perversion of secretion leads to diabetes. In giving a prognosis, great attention must be paid to ascites. If, in an uncomplicated case of cirrhosis of the liver, the patient has ascites, he is near his end. The only benefit which will follow tapping of the abdomen in cirrhosis of the liver is when the distention of the fluid is so great that it hampers respiration and the heart's action. The cases benefited by paracentesis prove on autopsy to be complicated by chronic peritonitis. It is a common mistake to confuse cirrhosis of the liver with non-tuberculous, non-cancerous chronic peritonitis. There is a tendency to confuse partial and general hepatitis, but they are entirely distinct. The partial is unimportant, but the universal perihepatitis, with a thick white capsule over the liver (zuckergussleber) is much more important, as it is part of a general chronic peritonitis. In attempting to diagnosticate whether malignant disease of the liver is primary or secondary, it should be remembered that in primary cancer of the liver the course of the disease is very rapid, jaundice is usually absent, and the body temperature may be unusually high.

Diabetic Coma Treated by Transfusion. By D. Young, M. B. (*British Medical Journal*, March 7th).—The author reports the case of a man, aged thirty-nine years, who had suffered from diabetes for three years. Symptoms of diabetic coma appeared (headache, drowsiness, etc.) and the urine contained diacetic acid. A vein was opened, and, eight ounces of blood being first withdrawn, thirty ounces of normal saline solution were injected intravenously. Two hours later he had revived to a remarkable extent, but on the next day was worse again and was again transfused, being greatly benefited thereby. This was repeated six times during the next nine days, when he suddenly became much worse and died while instruments for transfusion were being prepared. Sodium bicarbonate, in drachm doses every three hours, was also given. The diacetic acid disappeared from the urine after the first transfusion. At the autopsy there was found extensive cirrhosis of the pancreas and a recent patch of pericarditis. The patient was weakly and could not stand heroic treatment, and the coma appeared to be of unusual severity; yet under transfusion he lived eleven days, showing marked improvement after each injection. The operation was performed painlessly under cocaine.

Bright's Disease: Anuria: Intestinal Hæmorrhage: Death. By Dr. L. Cole-Baker. (*British Medical Journal*, March 7th).—The author reports an interesting case of Bright's disease, occurring in a single woman, aged forty-three years. Following a long bicycle ride she had a sharp attack of epigastric pain; by the following morning the

pain had shifted below the umbilicus, no urine had been passed in twenty-four hours, and on palpation a distinct tender tumor could be felt in the region of the bladder, presenting all the symptoms and signs of a full bladder. No urine could be obtained on catheterization, however, so all the usual steps to promote diaphoresis and diuresis were taken, but without avail, the patient dying forty hours after the onset of pain. At the autopsy a coil of intestine, four feet in length, was found full of blood; this was the tumor felt during life. There was no strangulation or twisting of the intestine, and no point could be found from which the bleeding had occurred. The kidneys presented all the characteristics of large white kidney. The hæmorrhage was probably due to rupture of a small intramesenteric vessel. Remedial measures for the anuria had only aggravated the bleeding and precipitated the end.

A Case of Rheumatic Fever Complicated by Chorea, Iritis, and Endocarditis; Recovery. By F. C. Forster, M. R. C. S. (*British Medical Journal*, March 7th).—The case here reported was that of a girl, aged twelve years, who when first seen was suffering from amygdalitis following exposure to wet and cold. The next day, the right knee and elbow and the left ankle were inflamed and swollen, and the temperature had risen to 101° F. For the next two weeks the case was a typical one of rheumatic fever. Three days later a typical attack of chorea developed, lasting for four weeks, toward the close of which the patient had a severe attack of acute iritis. And finally, a cardiac lesion slowly manifested itself—a loud transmitted mitral murmur, with dilatation, cyanosis, and œdema.

The Nature and Anatomy of Enteroptosis (Glénard's Disease). By Dr. A. Keith. (*Lancet*, March 7th—the Hunterian Lectures).—In this paper the author tries to show that a knowledge of the respiratory movements of the viscera gives the key to the manner in which they are fixed or placed within the body; and that with any marked deviation in the action of the muscles of respiration there is a disturbance in the visceral movements, resulting in displacement and disorganization of function. The organs within the thoracic and abdominal cavities are poised between the muscles of inspiration and expiration; fixation to the abdominal wall plays but a small part. In most people the respiratory ebb and flow are so finely adjusted that the viscera remain rightly poised until the end of life. But in many individuals circumstances arise which upset this respiratory balance between the inspiratory and expiratory groups of muscles. In such cases (with the exception of emphysema) the inspiratory muscles triumph and the expiratory muscles yield. The viscera, not only of the abdomen, but also of the thorax, are displaced downward and the condition of enteroptosis is produced. The incidence of the disease may fall particularly on one organ, very frequently the kidney, sometimes the stomach, liver, or spleen. But a full examination will show that all the viscera are displaced, although to a lesser degree. Gallstones are commonly, if not always, present in cases of enteroptosis, as a strain

is thrown on the cystic duct and the bile enters and leaves the gall bladder with difficulty. A displaced stomach is nearly always an enlarged stomach, and such distention is usually a consequence, rather than a cause, of the enteroptosis. The author carefully explains the anatomical relations of the different sets of respiratory muscles, and discusses their functions, and how the facts fall into line with his theory of the causation of enteroptosis.

The Nature of the Infectivity of Phthisis: A Study of the Views of Koch, Flügge, and Others.

By Dr. A. Hillier. (*British Medical Journal*, March 14th).—The author holds it as conclusively established that both dried tuberculous sputum dust and the minute drops coughed out by the consumptive are capable of conveying infection. The minute cough-sprayed drops which contain a tubercle bacillus, contain that bacillus in a high degree of virulence. It comes straight from its natural soil and is probably more potent as an agent of infection than the bacillus contained in the dust which has been exposed to dessication and in most instances also, to light. While phthisis is an infective disease, yet the degree of this infectivity is not a high one. But against this must be set the fact that tuberculosis is a chronic disease, and the chance of conveying the disease lasts over years. Of those exposed to infection for brief periods only a very small minority are infected. Of those exposed for days, weeks, or even months, in a small confined atmosphere, many escape. But be the causes of apparent immunity what they may, no person can develop tuberculosis who is not exposed to the possibility of invasion by the tubercle bacillus.

Phthisis and House Infection. By J. R. Johnson, M. R. C. S. (*British Medical Journal*, March 14th).—The author's paper is based on a series of cases of tuberculosis occurring in Richmond, England. In not a single instance did a case of tuberculosis arise *de novo* in a modern, decently kept house. It is impossible to ignore the danger lurking in house dust; and particularly the dust of ill ventilated, dark, and basemented houses. The inhalation of septic house dirt by patients already phthisical, although the disease may be more or less dormant, is of the gravest consequences. The question of soil has little to do with the prevalence of phthisis. Such facts as are here stated throw light on the value of notification of tuberculosis, especially if such notification is followed by proper disinfection of the rooms or house.

The Dietetic Treatment of Pulmonary Tuberculosis from the Point of View of Its Hæmatology and Histopathology. By J. J. Galbraith, M. B. (*British Medical Journal*, March 14th).—A marked feature of uncomplicated tuberculosis is the total absence of a leucocytosis. This is probably due to the fact that there is a state of equilibrium, the reaction to the specific poison of tuberculosis not exceeding its production. So that our first endeavor should be to stimulate the system into a reaction against the disease—the existence of which reaction would be promptly denoted by the appearance of a leucocytosis. In late stages of tubercu-

losis there is usually a leucocytosis, but here it is due to mixed infection. Now, in cases treated by the open-air method and on a diet rich in animal nitrogen, the characteristic features of the blood counts are: (1) A moderate constant leucocytosis; (2) a large absorptive lymphocytosis; and (3) an almost constant eosinophilia, the eosinophile cells varying from 4 to 5 per cent. of the total. Now, the histopathology of the tubercle nodule is that each tubercle is surrounded by lymphocytes which in some way prevent the spread of the disease, whether mechanically or by directly attacking the tubercle bacillus, so that the digestive leucocytosis, caused by the nuclear substances of animal food, is an absolute increase in just that form of leucocyte which combats the tubercle bacillus and its toxins; and its existence may be taken to mean that the system is reacting—is making a fight against infection. If it is true that the leucocytes have a special antibacterial action and that changes in them are the evidence of a reaction to poisoning, common to all the tissues, but demonstrable only in the blood, then only those constituents of the diet which produce this reaction need be increased. A meat diet, rich in nucleins, meets the requirements. It has the further advantage that it also supplies organically combined iron to the system. Sufficient fat and carbohydrate must also be given to meet the physiological needs.

Epidemic Pleurisy with Effusion. Dr. Aristide Muratiri (*Gazzetta degli ospedali e delle cliniche*, February 1st) publishes some observations on an epidemic form of exudative pleurisy, having seen six cases which occurred in the same locality at the same time and presented the same symptoms. All the patients recovered. The occurrence of six cases of pleurisy with effusion contemporaneously in the same locality made the author think that a common cause might have been at work. This cause could not be rheumatism, but probably was some pathogenic germ. The most frequent germ which is said to cause pleurisy with effusion is the pneumococcus, which reaches the pleura from contiguous portions of the lungs, the pericardium, or the peritonæum. Eight times out of ten in cases of serofibrinous pleurisy either the pneumococcus or the bacillus of tuberculosis is present. Another organism which may be found in these cases is the streptococcus, which causes a seropurulent or a serofibrinous pleurisy, which is always secondary to infection in other parts of the body. The typhoid bacillus, the bacillus of influenza, the *Bacillus coli communis*, and other germs have been known to cause pleurisy. Pleurisy, therefore, may be the result of infection and it may occur epidemically, affecting individuals who are in some way predisposed through debility or disease to infection with the particular germs concerned. [No bacteriological examinations are appended to this report.]

SURGERY AND ANATOMY.

Some Points in the Anatomy and Pathology of the Vermiform Appendix. By W. McA. Eccles, F. R. C. S. (*British Medical Journal*, March 14th).—There are three positions in the abdomen in which the appendix generally lies. (1) Pointing

upward and inward toward the region of the spleen. (2) Pointing downward and inward toward the brim of the true pelvis. (3) Pointing directly upward behind the cæcum. This last position is the most common.

A normal appendix should present the following characteristics. There should be little if any actual twisting in the length of the organ. Any sharp kinking or coiling indicates an abnormality. The color should be yellow, but with a pinkish tinge. No actual blood vessels should be noticeable. The feel of a normal appendix is soft and velvety, and its surface should be perfectly smooth and regular, with no adhesions. Any sudden bulgings or enlargements suggest disease. Practically, nothing is known concerning the physiology of the tube. Inflammation of the appendix is always bacterial, so that it is impossible to say what will be the limits of any given attack; and, secondly, should the patient recover, there will remain bacteria ready to light up a fresh inflammation on the least provocation. Many varieties of bacteria may be found within the lumen of the appendix. Primary tuberculosis of the appendix is apt to be very chronic; secondary tuberculosis presents no marked symptoms of its presence.

Calculi are always formed *in situ*, and behave in the same manner as calculi elsewhere. Their malignity depends upon the presence of virulent micro-organisms, and upon their movement.

Secondary abscesses may occur at quite late periods after the complete removal of the appendix. There are two distinct changes in the blood associated with appendicitis—anaemia and leucocytosis. The anaemia is toxic in origin and may be of high grade. The determination of the presence of a leucocytosis is of assistance (1) in the diagnosis of suppuration before operation; (2) in the diagnosis of secondary suppuration after operation for abscess; and (3) in the diagnosis of appendicitis from other affections.

A Case of Gunshot Wound of the Abdomen.—Dr. G. I. Zvorykine (*Chirurgia*, February, 1903) reports a case of gunshot injury to the abdomen in which an operation was performed fourteen hours after the shooting, and was followed by recovery. Morton reports a mortality of 62 per cent. in cases of gunshot injury of the abdomen in which operations have been performed. Various other authors give figures varying between 46 and 88 per cent. The mortality in the different wars has varied considerably; thus, in the Boer war, conservative treatment was efficient in about 40 per cent. of abdominal wounds, but in the days before asepsis the mortality was much greater. Thus, it was 88 per cent. in the civil war, and 70 per cent. in the Franco-Prussian war. The author emphasizes the great necessity for early operation in these cases, no matter how small and clean the bullet wound may be. In the case he reported the patient was a policeman, who was admitted with a gunshot wound on the left side of the abdomen in the umbilical region. On opening the abdomen, the cavity was found filled with blood and fetid fluid. The large intestine was found wounded in two places. It was washed with a solution of bichloride (1:1000) and the openings

were sutured with silk. The bullet was not found, and the peritonæum having been thoroughly cleaned and dried, the abdominal wound was closed. The patient made an uneventful recovery.

A Case of Cachectic Aphthæ (Sublingual Tumor of Fedè) Treated by the Injection of Antidiphtheritic Serum. Recovery.—Dr. Monaco Concezio (*Gazzetta degli ospedali e delle cliniche*, February 1st) relates a case of sublingual tumor in an infant, in which the injection of antidiphtheritic serum effected a cure. This affection is prevalent in the southern provinces of Italy, but is very rare elsewhere. [No cases have been reported in this country.] It is characterized by the appearance of a small growth in the region of the frænum of the tongue, benign in character, and pathologically defined as a fibroma. Opinions vary widely as to the nature and origin of this tumor, some holding that it is infectious, others that it is merely due to mechanical irritation. The growth is found in the majority of cases in ill-nourished, emaciated children suffering from intestinal catarrh. Sometimes it appears during the last stages of athrepsia and precedes a fatal termination. In some cases the growth seems to be the primary affection, and the other symptoms, *i. e.*, the emaciation, the intestinal catarrh, etc., are secondary. In the case reported, the author tried injections of antidiphtheritic serum, as this remedy has been suggested by Sangiovanni and others in the treatment of these growths. In this case the patient was rapidly growing worse with advanced intestinal catarrh in spite of local and general treatment. The injection was given in the same way as it is usually administered in diphtheria. An eruption developed, but soon disappeared, and the child's general condition improved almost immediately. To the author's astonishment the sublingual growth began to disappear gradually until no traces of it remained. The author does not assert that the antidiphtheritic serum cures cachectic aphthæ directly, but it certainly has proved to be a valuable remedy in this condition.

OBSTETRICS AND DISEASES OF WOMEN.

Technics of Filling the Colpeurynter.—Dr. A. Kurrer (*Zentralblatt für Gynäkologie*, February 14th) advises having the colpeurynter in direct communication with a fountain syringe hanging rather high. This has the advantage of keeping the bag full as the cervix dilates and preventing its slipping out of the cervix before it is intended that it should. In two cases, complete dilatation was accomplished in four and eight hours, respectively.

The Modern Obstetrical Forceps.—Dr. N. I. Ratchinsky (*Journal Akousherstva*, etc., December, 1902) gives an interesting résumé on the subject of the obstetrical forceps. No instrument has suffered so many modifications as this tool of the accoucheur, and this alone is enough to convince anyone of the imperfection of the obstetrical forceps, as well as of the difficulty of devising a perfect instrument of this kind. In 1838, there existed no

less than 144 modifications of the obstetrical forceps, and since then the number has grown to over 300. Of the three types of forceps, the pelvic-curve type, the straight type, and the axis-traction type, the last-named has gained favor most markedly during the last decade, not only in France where it originated (Tarnier's), but also in England, America, Italy, and other countries. In Germany the coryphées of obstetrics still frown on the axis-traction forceps, considering it dangerous and cumbersome, but the younger generation of accoucheurs is employing it with preference. In Russia the axis-traction forceps is steadily, though slowly gaining ground. As a matter of fact, all three types of forceps have their advantages, though no particular type can be said to be perfect for all the purposes of obstetrics. The straight forceps admit of rotation, but can only be used low down in the pelvis. The pelvic-curve forceps do not admit of traction in the axis of the pelvis and force the head towards the pubis, so that a variety of manœuvres have been devised to avoid this. A type of these expedients is that of Oslander the elder, who proposed that pressure from above be made with one hand, directly downwards upon the lock, at the same time lifting the handles with the other hand during extraction. This expedient and all others hitherto devised do not obviate the difficulty, as can be demonstrated mathematically. The introduction of the axis-traction system of Tarnier marked a new era in the development of the forceps, robbed the high forceps operations of their chief danger, and made traction in the true axis of the pelvis possible. The objections against this forceps have been met by the consideration that the best instrument is not that which is least cumbersome, most easily cleaned, etc., but that which does the work properly without injury to the parts of the mother and to the foetal head.

The rules prescribed in the Paris clinics for the use of the Tarnier forceps may be reproduced here, as they are of great importance. (1) The forceps is applied only in the transverse diameter, even when the head is transverse at the brim (Pinard), although some (Budin) apply it in the oblique diameter in such cases. (2) The forceps is not only the instrument of extraction, but also one of correction for the position of the head. It is, therefore, used to correct anterior occiputs and transverse heads. As regards posterior occiputs, they are brought to the transverse, if possible by hand, and then with forceps the occiput is brought under the pubis. (3) Once the forceps are applied to the head it is not taken off and changed in position, even after the head has been rotated, and the head is extracted with the curve upward, if need be. (4) Pinard does not apply high forceps in pelvis with a conjugate diameter less than 9 centimetres. Three recent modifications of the Tarnier forceps have attracted attention. The first is that of the Turkish physician, Vlaicos, which has a scale on the compression-screw that gives the distance between the blades, so that, in cases where the diagnosis of position is uncertain the diameter indicated on the scale shows whether the forceps has been applied transversely, obliquely, or anteroposteriorly.

The second modification of note is the parallel forceps of Perret, of Paris, which has parallel blades and which therefore presents the usual advantages of parallel forceps. The most important innovation in this line is the modified axis-traction forceps of Crousat, of Toulouse. This forceps has a pelvic as well as a vaginal curve, and an axis traction handle. The pelvic curve begins between the blades and the lock, so that this instrument can also be used as a straight forceps, inasmuch as the blades are straight. The lock is permanent, secured by a simple screw. Thence, the arms of the forceps bend almost at right angles downward, and again at right angles parallel to the blades. In this last bend is a groove in which plays the compression screw. The handle is attached to this screw on a very movable joint. The greater the traction, the greater the compression of the head, as the screw slides in the groove with the traction, and pulls the arms of the forceps together as it does so. The force of compression is therefore automatically proportionate to the force of traction—a very desirable feature. The handle is provided with an indicator needle that points to another needle in the compression screw. When these needles are opposite each other the axis of traction is correct. The forceps can be used by a beginner with ease, as all that is necessary to do is to see that the indicator needles are opposite each other, and that the traction is steady and proportionate to the resistance offered. Numerous clinical reports confirm the claims of Crousat as regards the efficiency of this forceps.

Cæsarean Section with Supravaginal Amputation of the Uterus (Intraperitoneally).—D. S. I. Kousmine (*Journal Akousherstva*, etc., December, 1902) analyzes a large series of Cæsarean sections which he has collected from literature. Of 338 Cæsarean sections in the literature of the past five years, 262 were of the "classical" type, in 61 cases Porro's operation was performed, and in 15 cases there was a simultaneous castration, and supravaginal amputation of the uterus. The author devotes his attention particularly to the last group of cases. He reports an instance in which he performed this modification of the Cæsarean section. The patient was a primipara, aged nineteen years, with a conjugata vera of 6 centimetres, and an oblique diameter of 7.5 centimetres. The head was in the l. o. a. position and the labor began normally. The abdomen was opened, the uterus incised, the foetus delivered, and the supravaginal portion of the uterus was amputated, leaving the ovaries intact, and ligating the tubes. The patient made an uneventful recovery, and the child was healthy and strong. The great narrowing of the pelvis in this case was an unsurmountable obstacle to natural delivery so that Cæsarean section was indicated, the only choice being between this operation and embryotomy. The ovaries were left in place in view of the youth of the patient. Among the 338 cases of Cæsarean section, there was only one, that of Lepage, which was analogous to the present instance, and that terminated fatally.

MATERIA MEDICA, PHARMACY, AND THERAPEUTICS.

Old Methods of Treatment Which Are Not Necessarily Obsolete. By Dr. H. W. Syers. (*Treatment*, February).—In this article the author endeavors to show that old-fashioned remedies and modes of treatment are not yet superseded. Among the valuable remedies which have been neglected is opium—opium as such. It is of the greatest value in many conditions. In those cases of typhoid fever in which the nervous system bears the brunt of the disease, and in cases exhausted by frequent diarrhoea, opium is specially indicated. The best form of administration is solid opium given in the freshly made pill. The amount taken should be regulated by the effect produced. As a matter of fact, most typhoid fever subjects are over fed, and are given far too much stimulant. In cases in which bronchitis is a formidable feature of the disease, the use of opium is, of course, contraindicated.

In lobar pneumonia the omission of opium may be attended with disastrous results; this drug gives refreshing sleep and tides the patient over the anxious period just before the crisis.

In most cases of appendicitis, a cure will be brought about by keeping the patient in bed, restricting the diet, forbidding the use of purgatives, and by using opium freely. In chronic renal disease, again, opium is often the only drug that will relieve the sleeplessness due to orthopnoea—here it should be given hypodermically in the form of morphine.

Venesection is another mode of treatment which has been foolishly neglected. In all cases of engorgement of the right side of the heart, with restlessness and cyanosis, a timely venesection will prolong the life of the patient. The acute pain in the side in cases of pneumonia and pleuritis is most successfully treated by the application of leeches. Wet and dry cupping are often of great value, especially in chronic heart disease and in acute Bright's disease.

Elaeterium is a valuable drug but little used nowadays, yet its action in producing watery evacuations is an excellent one. Counterirritation should be more widely used; a return to the old method of flying blisters is demanded in many cases of phthisis, and would be of far more value than the administration of creosote and other nauseous drugs. Antimony, a drug of peculiar value in the early stages of pneumonia and bronchitis, has been ostracized. The old-fashioned methods of treatment of gout—purging and colchicum during the acute attack, together with the lowest diet; and exercise and regulation of diet in the chronic phases—are more likely to be effectual than modern methods of treatment by piperazine, etc. Resin of guaiacum is often of great service in gout—yet it is rarely used. In rheumatism, potassium iodide and the alkalies often give better results than the salicylates. Stimulating liniments should be more often used in the joint affections of gout and rheumatism.

Hypodermic Injections of Solutions of Iron Arsenate in the Treatment of Anæmia.—Dr. Nicola Fedele (*Gazzetta degli ospedali e delle cliniche*, February 1st) calls attention to the value of

subcutaneous injections of the arsenate of iron in anæmia. In a previous article he has shown that injections of iron salts, if continued for a sufficient length of time, produce very constant and trustworthy results in anæmia. He used the arsenate of iron because the addition of arsenic improves the action of iron. He has used this method of treatment in a large number of cases and considers it the best mode for administering iron. He employed the solutions prepared by Zambelletti, in which the arsenate was perfectly dissolved. The injections were made preferably into the nates, with the usual aseptic precautions, by means of a syringe with a rather long needle. The doses were gradually increased until about 60 or 80 injections had been given, when the doses were gradually diminished again. Toward the end of the treatment the injections were alternated with the administration of iron, arsenic, and phosphorus, as well as nux vomica or strychnine by mouth, the latter being continued for some time after the injections were abandoned. The results obtained with this method of treatment were uniformly satisfactory in a large number of cases.

The Sanatorium Treatment of Pulmonary Tuberculosis with Especial Reference to Nordrach Methods. By P. S. Hichens, M. B. (*British Medical Journal*, March 14th).—The author's conclusions are as follows: (1) The earliest possible recognition of pulmonary tuberculosis is of paramount importance. (2) The diagnosis once made, the patient should be put on the most thorough open air treatment his circumstances will allow. If possible, send him away to an open-air sanatorium. If not, then do the best for him at home with windows wide open day and night in all weathers, with a deck chair in the garden or under a shed, and with a nourishing and abundant diet which must be eaten. (3) It is essential, even in the slightest case, that a long period be devoted to treatment and rest from work. If possible the patient should spend many months at a sanatorium, after leaving which he should lead a modified open-air life for from one and a half to two years.

NERVOUS AND MENTAL DISEASES.

Chorea from a Modern Viewpoint.—Dr. Stefano Mircoli (*Gazzetta degli ospedali e delle cliniche*, February 1st) reports some cases of chorea which he uses as a text for a review of the various theories held at present on the question as to the origin of this disease. Chorea is a disorder of the motor sensory and psychical spheres resulting from an irritation, or possibly from an inhibition, or various nervous elements and functions. This irritation may be produced by autointoxication by the poisons of rheumatism, by parasites that enter from without, etc. The lesions which form the substratum of chorea vary within very wide limits from more or less severe encephalitis and myelitis to scarcely tangible alterations in the central nervous system. Murri was the first to recognize the clinical unity of the tics, of polyclonias, and of choreas. The author not only endorses the view of Murri, but also believes that we are not justified in separating epilepsy and paralysis agitans from this

group of diseases. In support of his view he cites the case of a boy, aged four years, in whom epilepsy developed as the result of fright induced by a large savage dog. In another boy the same cause induced attacks of chorea. The first child had been born of healthy parents, the second of syphilitic ancestry. The soil having been different, the same cause produced a different set of symptoms. The author emphasizes the fact that chorea and epilepsy not infrequently are excited by the same primary cause.

This can be understood if it is remembered that chorea, whether rheumatic or simply infectious, is always represented anatomically by an acute, sub-acute, or chronic encephalitis, and according to the modern conception, epilepsy is also the result of a congenital encephalitis or of an encephalitis which develops at an early age. An encephalitis may remain latent for many years, but at puberty it may explode in the shape of epileptiform attacks. In order to awaken it, some form of irritation is necessary and once the process has begun it continues increasing in severity. The only division between chorea and epilepsy, therefore, is that which can be made upon the basis of ætiology. According to Murri, the seat of the lesions which are the basis of the polyclonias, of chorea and the tics, is in the Rolandic zone, but the present author does not admit this hypothesis. Examinations showed that other portions of the brain were affected in these conditions, and that infection was present in every portion of the brain, as well as in the spinal cord. Besides, the choreic movements are not cortical in character.

A Case of Acute Tetanus with Certain Points of Interest. By L. D. Saunders, M. R. C. S. (*Lancet*, March 7th).—The author reports a case of tetanus occurring in a man aged thirty-eight years, who had sustained a lacerated wound of the leg. The symptoms of tetanus first appeared eleven days after the reception of the wound: tetanus antitoxine (10 cubic centimetres) was given the same day, twice the following day, and again the next morning. But the patient grew steadily worse and died thirteen days after receiving the injury. The points of interest in connection with the case are: (1) The antitoxine apparently had no effect upon the course of the disease. (2) No premonitory symptoms were complained of before the onset of the disease on the eleventh day after the accident. (3) Although the pulse gradually increased in frequency the temperature was normal, only rising to 101.8° F., shortly before death. (4) The opisthotonos spasms were comparatively slight and unaccompanied by pain and were only noticed a few hours before death. (5) The end came quite quietly and painlessly and apparently was due to sudden heart failure. The patient was conscious to the end and could swallow his nourishment without much difficulty.

HYGIENE AND SANITARY SCIENCE.

Report on the Influence of Sanitation in Checking Enteric Fever and Dysentery at Harrismith, Orange River Colony, South Africa, in the Years 1901 and 1902. By Dr. R. M. Le H. Cooper. (*Lancet*, March 7th).—The author's report has for

its chief object the demonstration of the remarkable results obtained by sanitation—more especially directed towards preventing the spread of infection by flies—in controlling both the extent and virulence of typhoid fever and dysentery in the above mentioned locality, in South Africa. The results obtained are shown by a comparison of the figures for two periods. (1) From August, 1900, to April, 1901—typhoid fever, 631 cases; dysentery, 219; percentage of deaths from typhoid, 11.7. (2) After sanitary precautions were taken. From August, 1901, to April, 1902—typhoid fever, 62 cases; dysentery, 30; percentage of deaths from typhoid, 3.8.

Water and milk could be ruled out as sources of infection; the sanitary measures adopted were in the main devoted to preventing the contamination of food with germs conveyed by flies and possible infection by dust.

In order to protect excreta from flies, powdered chloride of lime was used; its odor kept off the flies and being white it could always be seen after use. The disinfectant was also used in the urine tubs.

In order to destroy flies and prevent their breeding, all refuse was removed, and all waste ground cultivated as far as possible. Keating's powder was dusted over the walls and window sills of kitchens and other places where flies collect. Every kind of food was protected from flies by being kept in fly-tight boxes and safes of perforated zinc. Houses were also protected by window-screens. As regards the ultimate disposal of excreta, the soil buckets and urine tubs were emptied daily, being taken well outside the town for that purpose. A system of compulsory notification was also introduced, and the typhoid fever hospital removed outside of the town.

Sanatoria Plus Homes for Consumption. By Dr. W. R. Parker. (*British Medical Journal*, March 14th).—Consumptives in the advanced stages of the disease derive but little benefit from sanatorium treatment, and occupy the places of earlier patients who would be benefited by such treatment. But the advanced cases are fertile sources of infection, so that it seems obvious that there are needed, not only sanatoria for the arrest of the disease in its early stage, but also homes for the isolation of advanced cases from the rest of the community. And such homes should be supported in preference to sanatoria (where only one can be so supported) on the ground that the community benefits more obviously and immediately by the isolation of those dangerously infective, than by the problematical arrest of the disease in its early stage.

Human and Bovine Tuberculosis: the Possibility of Human Infection from Cattle. By Dr. N. Raw. (*British Medical Journal*, March 14th).—From the author's clinical and pathological observations he is inclined to think that primary intestinal tuberculosis, tabes mesenterica, and other tuberculous affections of the serous membranes in children, are probably bovine tuberculosis conveyed by milk, and are not related to human tuberculosis, although the bacillus of Koch is found in them all, and is indistinguishable under the microscope. But the

cultures from bovine sources have fairly constant and persistent peculiarities of growth and morphology, by which they may be distinguished from cultures from bovine sources. Why is it that in scrofula adenitis is so constant a feature, and in phthisis pulmonalis it is practically absent? The author suggests that scrofulous glands are produced by the absorption of tubercle bacilli in milk through the tonsils and pharynx. And again the cases of acute general tuberculosis occurring in persons suffering from an unhealed focus, are probably due to infection with the bovine bacillus. Tuberculosis of bones and joints, tuberculous meningitis in children, and even some cases of post-nasal adenoids, may have the same origin. Clinical appearances suggest that there is a distinct antagonism between the tuberculous manifestations in childhood and adult life. Since the two diseases cannot exist together in cattle, may it not be that they cannot exist together in man? And that the serum of a cow affected with tuberculosis might have a curative effect in a case of pulmonary tuberculosis exactly on the same lines as smallpox or cowpox? The remedy lies in the prevention of the distribution of tuberculous milk. The author thinks that all milk given to children should first be boiled, in order to destroy any tubercle bacilli that might be contained therein.

The Use of Salicylic Acid as a Preservative in Food. By Dr. C. J. MacAllister and Dr. T. R. Bradshaw. (*British Medical Journal*, March 14th).—The authors record their conviction that the allegation which has been made against the employment of salicylic acid as a preservative in moderate quantities cannot be maintained. They challenge the opponents of its use to bring forward a single instance in which it can be shown that bodily injury has resulted from its employment in such a manner, and they deny that, in the proportion in which they have met with it in articles submitted to them for examination, it could be taken by any rational beings to such an extent as to do them any harm whatever. They further maintain that the use of this substance enables manufacturers to place on the market wholesome, agreeable, and inexpensive articles of food which form an acceptable and beneficial variety in the diet of persons who cannot afford more costly luxuries, and which, above all, supply the place of intoxicating drinks.

LARYNGOLOGY, RHINOLOGY, AND OTOTOLOGY.

Adenocarcinoma of the Nose.—Dr. H. Cordes (*Berliner klinische Wochenschrift*, February 23d) reviews the few recorded cases of this character and reports a case of his own in a man seventy-five years of age. Treatment by electrolysis was especially beneficial, reducing the growth to such a degree that its total extirpation was easily accomplished. No recurrence has yet taken place after nine months. Among the early symptoms the author notes increasing difficulty in nasal breathing and more or less severe hæmorrhages. The growth usually involves the neighboring tissues and the prognosis is not, as a rule, favorable.

CUTANEOUS MEDICINE AND SURGERY.

The Cutaneous Manifestations of Malaria.—Dr. A. Vaccari (*Gazzetta degli ospedali e delle cliniche*, February 1st) calls attention to the fact that most treatises omit to mention the cutaneous symptoms of malaria, and a few only give the subject passing reference. The author has had occasion to observe, since 1895, three cases of malaria accompanied by eruptions. In all these the cutaneous eruption coincided with the fever and was cured by means of quinine. While the clinical history of these patients showed that they undoubtedly had malaria the diagnosis was not confirmed by blood examinations. In July, 1901, the author saw a fourth case in which the parasites of malaria were found present in the blood, and in which an urticaria appeared with the fever and disappeared after injections of quinine. The author concluded that this eruption depended directly upon the malarial infection. The cutaneous lesions observed consisted in wheals of varying sizes, of irregular shape, sometimes confluent, of a uniform pink color but becoming white on pressure, slightly elevated and diffused over the entire body, especially over the forearms and the legs. The face was free and the eruption did not itch. The appearance of these lesions was more like that of erythematous patches, and the absence of itching made the application of the term "malarial urticaria" impossible. In speaking of the nature of these eruptions the author reviews the various theories advanced in the attempt to solve this question. Among these the angioneurotic theory has gained the largest number of adherents, but the author favors the theory of Larredde, who believes that these eruptions are due to toxins which act upon the skin through the blood. These toxins produce alterations in the hæmatopoietic organs and thus influence the condition of the blood, which in turn gives rise to changes in the skin. There is no question, however, that these lesions depend upon malarial infection. This view is confirmed by the reports of Marchiafava, Bignami, and Masucci who have observed severe cases of malaria accompanied by eruptions resembling measles and scarlet fever and followed by desquamation. This has led to the conclusion that the gravest forms of cutaneous manifestations are found in the most severe cases of malaria and that, therefore, the gravity of the changes in the skin is to a certain extent valuable in prognosis.

PHYSIOLOGY AND PATHOLOGY.

Snake Venoms: Their Physiological Action and Antidote.—Dr. George E. Lamb has contributed (*Glasgow Medical Journal*, February) a very instructive article on this subject. Although there are many poisonous snakes, only four or five varieties can be said to offer any danger to man, and these are divided into two groups, viz., 1. colubrine, 2. viperine. The poison glands are the homologue of the parotid salivary glands of other animals. Each gland is enclosed in a dense fibrous capsule and so attached to the masseter muscle, that, when the jaws contract, the poison is, as it were, wrung out of the gland while the fangs are buried and

ready to convey the death dealing dose. The poison fang's structure is in the early stages that of a tooth. The outer hard enamel, however, during development, becomes flattened out and a groove appears on the anterior surface bounded by ridges on each side. These ridges soon fold over and form the poison duct by coalescing. While the mouth is shut, these fangs lie along the roof of the mouth pointing directly backward, and an interesting though highly complicated mechanism causes the erection of the fangs when the animal strikes.

A medium-sized cobra—that is, one from five hundred to one thousand grammes in weight—will give about one hundred and fifty to two hundred milligrammes of dried poison. Two hundred milligrammes will kill about five thousand ordinary rats. The horse is particularly susceptible to the poison, but the author has been unable to corroborate the statement of Calmette, that the lethal dose, weight for weight, increases as the animals increase in size.

Fresh liquid poison is straw-colored. Cobra venom is clear, daboia venom has usually a small quantity of undissolved suspended matter. The percentage of water is about seventy-two. All snake venoms are almost pure solutions of proteids and contain little else except a trace of organic salts, a small quantity of organic acid, and coloring matter.

Cobra poison acts directly on the central nervous system—there is no preliminary stage of excitement—and one sees the stricken animal completely paralyzed, the breathing still going on, the saliva trickling. Finally, the respiratory centres become involved, slight general convulsive movements, due to the accumulation of carbon dioxide in the system, takes place, and death ensues. The heart continues to beat for from twenty minutes to half an hour after the breathing has stopped. A hæmolytic action on the blood is of secondary importance.

Daboia poison acts mainly, if not entirely, on the circulatory apparatus. Calmette's serum is an antidote to cobra venom, but inefficacious in the case of daboia venom or the poisons of the Australian snakes. The aim should be to get the serum as quickly as possible into contact with the venom, and intravenous injection should be resorted to. The serum is obtained by immunizing horses with a mixture of snake venoms, of which cobra poison is the principal constituent. The author regards it as almost certain that antitoxic sera will ultimately be obtained for the poison of the other Indian snakes.

The Rise of Blood Pressure in Later Life. By Dr. T. C. Albutt. (*Lancet*, March 7th).—The purpose of the author's article is to urge an earlier recognition of rising blood pressure in later life, and the timely use of therapeutical means to prevent the strain and break up of the circulatory system. But such rise of blood pressure may be symptomless subjectively, for the reason that there is a corresponding hypertrophy of the muscular coat of the arteries. If the condition is allowed to progress until symptoms are produced, by that time the patient is beyond cure. But the first deviation from health is not arterial disease but rise of blood pres-

sure, the arterial disease being secondary and due to strain. On its first or second appearance this arterial plethora may be driven away, and even if advanced, it may be held in check. The author holds that in arteriosclerosis there is an increased viscosity of the blood, requiring higher pressures to force it through the arteries. He suggests three classes of arteriosclerosis. (1) The involutionary—common in old people, often hereditary, not necessarily or usually associated with rise of arterial pressure; the nature of which, intrinsic or extrinsic, is unknown, but does not lie in high living. (2) The mechanical—the result of long-persisting high blood pressure of whatever origin. (3) The toxic—the result of such causes as lead, alcohol, or syphilis; usually met with in younger persons.

One main cause of rising arterial pressure is excess of feeding: alcohol alone, probably, does not produce the condition, but combined with excessive food it is a potent factor. As high pressure becomes manifest, rigorous dieting, deobstruent remedies, and exercise, such as cautious hill climbing under careful regulation of a physician, are necessary, and necessary not only during a Homburg month and "after-cure," but also for the rest of the patient's life. Catch him early and he is quite curable; let him drift and cure may be out of reach.

Intestinal Putrefaction.—Dr. A. Albu (*Berliner klinische Wochenschrift*, February 16th) has investigated the question whether the ingestion of vegetable proteids is causative in diminishing the aromatics due to intestinal putrefaction. He administered to a diabetic for five days exclusively vegetable and animal proteids, in addition to fats and carbohydrates, and observed that, with both forms of proteid food, the quantity of putrefactive products was markedly diminished. The author draws the conclusion from his observations that the administration of vegetable proteids is not the only factor in the diminution of the aromatic gases of putrefaction, and that the whole question is not yet solved.

A Contribution to the Study of the Functions of the Cerebral Hypophysis.—Dr. Domenico Pirrone (*Riforma medica*, February 25th) concludes a study of the functions of the pituitary body as follows: All the phenomena which follow the excision of the hypophysis cannot be referred to the abolition of the functions of this gland. The symptoms which indicate the absence of function in the hypophysis are disturbances of motility; a marked depression of spirits, and apathy; a rapid emaciation; and finally death. The disturbances of the heart and the respiration and the rise in temperature which follow the removal of the pituitary body are, however, due to the operation itself. The total removal of the pituitary body does not change the chemical composition of the urine. While the exact functions of the pituitary gland are not known as yet, it may be considered as an organ of great importance in the economy. While life can go on after a partial removal of this structure, its total extirpation is followed by certain death, independently of any other injury incident to the operation.

Proceedings of Societies.

WESTERN SURGICAL AND GYNÆCOLOGICAL ASSOCIATION.

Twelfth Annual Meeting, held in St. Joseph, Mo., on December 29 and 30, 1902.

The President, Dr. JAMES E. MOORE, of Minneapolis, in the chair.

(Concluded from p. 574.)

Old Irreducible Dislocations of the Shoulder Joint.—Dr. A. F. JONAS, of Omaha, referred at length to the literature of such cases, and reported seven that had occurred in his own practice. His method of dealing with these dislocations consisted chiefly of: 1. Manipulation, using the forearm as a lever, rotating outward and inward, abduction and adduction, never forgetting for a moment a possible accident to the axillary vessels and nerves, and the possibility of fracturing the humerus. 2. If this plan failed, the capsule was incised, and all cicatricial tissue was extirpated. All muscular attachments that caused restraint were severed, the axillary vessels were protected with a broad, flat retractor, and the head of the bone was brought into place by means of an elevator, assisted by manipulation and traction. To avoid infecting the wound, in this last manoeuvre, it was advisable firmly to wrap the entire arm and hand with wet sublimate towels. Dry towels were apt to slip and become displaced, making it possible for the operator's hand to become infected. If the head could not be replaced, then (3) the head of the humerus should be resected, an operation to be avoided, when possible, on account of the resultant flail-like condition of the arm, and yet it must be done (a) when the humeral head and neck became too extensively stripped of their attachments, experience having shown that necrosis might occur in 16 per cent. of the cases; (b) when osseous union had occurred between the head and the ribs; (c) when, after a division of all restraining soft parts, the head rested against the point of the acromion process.

Case of End to End Anastomosis of the Popliteal Artery for Gunshot Injury.—Dr. ALEXANDER HUGH FERGUSON, of Chicago, reported this case. He gave a history of the injury, and described the physical findings and the operation which he performed.

The Treatment of Injuries of the Pelvic Floor Occurring during Parturition.—Dr. WILLIAM E. GROUND, of West Superior, Wis., read a paper with this title. His conclusions were that almost every woman during her confinement suffered injuries from which she did not recover unless she was subjected to a secondary operation for repair of lacerations of the pelvic floor; that immediate suture of apparent lacerations did not restore pelvic support in the vast majority of cases; and that from one to two months after labor the woman should be subjected to a thorough examination and any relaxation corrected, before it had time to impair her health.

Lung Surgery; Historical and Experimental.—Dr. B. MERRILL RICKETTS, of Cincinnati, present-

ed an elaborate contribution on this subject, which was illustrated by lantern slides, an abstract of which was begun in the *New York Medical Journal* for March 21st, p. 530.

The Disease that Remains after the Non-surgical Treatment of Peritonitis.—Dr. H. D. NILES, of Salt Lake City, read a paper on this subject in which he stated that 95 per cent. of all the survivors of the non-surgical treatment of peritonitis were left with infection without the peritoneal cavity and adhesions within this cavity. Well known anatomical peculiarities of the gall bladder, appendix, and Falloppian tubes favored the reception and imprisonment of infection from the alimentary canal and endometrium and its extension to the peritonæum. It was about one of these organs that the surgeon usually found the pathological condition, unless it had been mechanically removed. The greatest amount of infection came from a sudden rupture of an appendicular or tubal abscess or a perforation of the stomach, intestine, or gall bladder. The most virulent infection was either appendicular or from a pyosalpinx following a puerperal endometritis. The mildest was from a cholangitis or a gonorrhœal salpingitis. The author's experience led him to believe that about 40 per cent. of the possessors of infection and adhesions suffered from recurrent attacks of acute and subacute peritonitis, and less than 1 per cent. from mechanical obstruction of the bowels. It was to the remaining 59 per cent. that he invited particular attention, for while it was customary to point to these cases as sufficient proof of the efficacy of the drug treatment of peritonitis, he believed that all fair-minded, thoughtful observers were learning to regard the morbid conditions these patients carried within their abdomens as responsible for much distress and many deaths that were formerly attributed to other causes, or physicians were unable to trace to any well defined cause.

The Surgical Treatment of Tuberculous Peritonitis.—The author of this paper, Dr. D. S. FAIRCHILD, of Clinton, Iowa, drew the following conclusions:

1. If an intraabdominal focus of tuberculosis is diagnosed or is suspected, an abdominal section should be made with the view of more efficient treatment.

2. If a chronic tuberculosis of the peritonæum with ascites is diagnosed or believed to exist, a laparotomy is indicated as soon as it is found that medical and hygienic treatment has failed.

3. In fibrous tuberculosis of the peritonæum, the same course should be pursued, and if cheesy degeneration has not commenced, or progressed too far, a certain percentage of recoveries will follow.

4. In acute tuberculous peritonitis, with ascites and high temperature, laparotomy is useless.

5. In extensive adhesive tuberculosis of the peritonæum, with matting of the intestines, laparotomy is useless, and the attempt to separate the adhesions is dangerous in its immediate results.

Injury to Nerves Following Fractures.—Dr. A. L. WRIGHT, of Carroll, Iowa, read a paper on

this subject in which he reported a case of fracture of the humerus through the middle third, with injury to the musculospiral nerve or, rather, the incorporation of this nerve between the ends of the bone, due to its being caught and pressed upon by the callus thrown out during the reparative process.

He stated that the literature was replete with cases reported where various nerves, especially the ulnar and median had been severed by a stab or the falling of glass. The case presented by him had the typical clinical picture of injury to a nerve found at the end of a siege with a fractured bone, and taught a very valuable lesson regarding the prognosis and treatment.

The Treatment of Nævi.—Dr. JOHN P. LORD, of Omaha, followed with a paper on this subject. He discussed the varieties of nævus, their ætiology and pathology, and reported several interesting cases. He stated that the hot water treatment of cavernous angiomas, as suggested by Wyeth, was under trial, and would doubtless have a place in the treatment of selected cases. The treatment of port wine marks by electrolysis was too tedious and painful for large areas. The results were not perfect, in that they were seldom complete, and left some scarring. The x ray promised better, and hot air would seem to have possibilities. Electrolysis occupied first place in hairy nævi, and would probably continue to do so unless the x ray should produce permanent atrophy of the hair follicles. The operation of excision of very large tumors would probably never be supplanted by anything less radical, and hitherto "inoperable" tumors were rapidly yielding to the control of the operators of the new century.

Hypernephroma.—Dr. M. L. HARRIS, of Chicago, presented a paper with this title. He said that it was only during the last few years that our knowledge of tumors of the suprarenal capsule had made any material progress. Previous to this time, tumors were variously described as adenoma, sarcoma, carcinoma, mixed sarcoma and carcinoma, endothelioma, etc. The essayist referred to the literature of this subject and to cases previously reported, and after giving the details of a very interesting and instructive case presented the following conclusions:

1. The hypernephromata are tumors of adrenal tissue and therefore probably neither sarcomatous nor carcinomatous.
2. Such tumors may or may not form metastases. When they do, they are distinctly malignant.
3. When they are within the kidney capsule, or have perforated it by extension, the kidney should be removed.
4. When they originate in the adrenal tissue proper, they are usually separated from the kidney tissue by a connective tissue capsule, and however much the kidney may be flattened or fixed to the tumor, a line of cleavage may usually be found which will permit of the kidney being separated from the tumor and saved to the patient.

Dr. C. W. OVIATT, of Oshkosh, Wis., reported a case of hypernephroma which had come under his observation about four years before, but at that

time a diagnosis was made of sarcoma of the kidney.

Dr. VAN BUREN KNOTT described a case of hypernephroma in a woman, thirty-eight years of age. This case came under his observation about eighteen months ago. A diagnosis had been made by mistake of semisolid tumor of the ovary.

Dr. A. C. BERNAYS, of St. Louis, reported six cases of hypernephroma.

Two Cases of Acute Intestinal Obstruction following Contusion of the Abdominal Walls.—

This paper was read by Dr. J. E. SUMMERS, Jr., of Omaha. In the first case there was traumatic paresis of the lower part of the small intestine following kicks upon the abdomen. The patient was a man, twenty-six years of age, of good physical development.

The second case was one of retroperitoneal hæmorrhage following a contusion of the abdomen, resulting in a hæmatoma which compressed the descending and transverse portions of the duodenum from behind so as to cause intestinal obstruction. The patient was a rugged young man, twenty years of age, a farmer by occupation.

A New Method of Shortening the Round Ligaments Intraperitoneally for Retroversion of the Uterus.—Dr. HENRY T. BYFORD, of Chicago, read a paper on this subject and described this new method, as follows: "It consists in folding the ligaments anteriorly, according to Dudley, but in stitching the loop to the abdominal parietes, about opposite or behind and a trifle above the internal inguinal ring. The ligament is grasped with hæmostatic forceps, and pulled out of the abdominal incision until it is drawn as far out of the inguinal ring as possible, without doing violence to the tissues. Then a medium-sized catgut suture is passed through the centre of the ligament about a quarter of an inch from the uterine end, and the same suture is passed through the ligament about half an inch from the internal inguinal ring. The suture is then drawn tight and tied like an ordinary ligature, except that it includes only half of the ligament in its grasp. The inner edges of the loop thus formed should now be touched with a chemical irritant, such as Monsell's solution or 1-5,000 mercuric bichloride, in order to destroy the endothelium and secure firm adhesions. The irritant is then wiped off and the edges are sewed together by fine catgut, which entirely closes in and covers up the irritated peritoneal surfaces. The end of this fold is then touched with the chemical irritant, and stitched forward beside the bladder, about opposite and a little above the level of the external inguinal ring. This, of course, will be only a peritoneal attachment, and should be rather high, because the peritonæum is held in place here rather loosely. Thus there are practically two round ligaments on either side, one going from the uterus partly through the first catgut ligature to the attachment behind the external inguinal ring, and the other from the uterus to the ligature and from there to the internal inguinal ring, etc. The uterine half or quarter inch or inch, according to the place where the ligament is trans-fixed, is common to both of the newly formed round ligaments."

In case there was a tendency to uterine prolapse, the author sutured the whole side of the fold of the ligament to the peritonæum beside the bladder, or even sutured the portions of the round ligaments external to the folds to the parietal peritonæum in front. When there was decided prolapse, he also stitched the infundibulopelvic ligament forward, the fundus uteri itself, and even took folds in the sacro-uterine ligaments. When there was cystocele, he separated the remains of the urachus with a narrow strip of peritonæum, and after loosely twisting the flap thus obtained and drawing up the bladder, attached the flap into the abdominal wound.

Dermoid Cysts of the Intestinal Tract.—Dr. WILLIAM JEPSON, of Sioux City, Iowa, presented a paper on this subject and reported a case. The cyst occupied the anterior internal wall of the colon about three quarters of an inch above the ileocæcal valve. It was covered by peritonæum, through which the cyst wall was plainly seen. The cyst was removed by making an elliptical incision through the serosa and dissecting out the growth. Recovery was uneventful.

In explanation of the development of congenital cysts in the intestinal tract, the author stated that the following theories had been advanced: 1. Imperfect obliteration of the omphalomesenteric duct. 2. Torsion of a portion of the intestinal wall by the products of a previous peritonitis, etc. 3. Sequestration or implantation of epiblastic or hypoblastic structure, leading to the later development of an entodermoid or ectodermoid.

The points of interest which these cysts had for surgeons were (a) that in a large percentage of the cases the cysts, although innocent in themselves, ultimately led to a fatal issue, either through obstruction of the intestinal lumen, or because of their contents becoming infected from the intestinal canal, terminating in peritonitis; (b) if their removal was undertaken before such complications had resulted, a favorable termination could be looked for.

Appendicitis—Operation and Indication.—Dr. A. C. BERNAYS, of St. Louis, contributed a paper with this title in which he laid stress on the fact that we knew nothing definite relative to the pathological process which warranted delay in operating. We did not know enough before opening the abdomen to warrant us in following an expectant plan. He believed many lives were lost because the physician was lulled into hopeful security by an amelioration of symptoms. This amelioration could not be depended upon to last, as it might change, without a moment's notice, into a sad picture of collapse and sepsis, and the favorable time for operation be missed.

In so called intermediate cases a waiting policy was justified because the system was immunizing and fortifying itself against the toxins. An operation after the body had been immunized, which meant that the pus had been made less virulent, was less dangerous. Dr. Bernays thought that an operation was likely to be less dangerous on the seventh or eighth day than on the third or fourth, but made a strenuous plea for operation on the first or second day of the attack, and maintained that 98 per cent. of all patients operated on at that early period would

be saved. Operations done on the first day or second day of the attack were as safe as interval operations. The most brilliant and satisfactory results followed prompt operations in cases of severe appendicular peritonitis.

Hyperplasia of the Uterus.—Dr. C. G. GEIGER, of St. Joseph, Mo., read a paper on this subject. He stated that the frequent occurrence of enlargement of the uterus had been a great stimulus to the study of its underlying pathological conditions. The most frequent causes of hyperæmia were puerperal subinvolution of the uterus, which might be caused by too early getting up after childbirth, small or large lacerations of the cervix, and uterine trouble. Anything which interfered with normal involution predisposed to this condition. He mentioned three distinct stages of hyperplasia—hyperæmia, hypertrophy, and sclerosis.

It was impossible to determine at the bedside exactly when the state of subinvolution began to merge into that of hyperplasia, as it was a slow and insidious development. The two affections in clinical appearance resembled each other, and apart from the history the distinction was difficult. Chronic hyperæmia and hyperplasia might involve any portion of the uterus, neck or body, or certain portions thereof. For manifest reasons the neck of the uterus was the favorite focus of disease.

The treatment of the various conditions of enlargement was so dependent on their causation that each individual case demanded a separate investigation. He said the ideal way of approaching this subject was in the direction of prevention, which in a great many cases the attending physician was able to accomplish. But gynecologists must meet the disease already developed and devise methods which, if not curative, were palliative. Iodine and caustics in the hands of the essayist had not been of much service. In neurotic patients nothing was better than a change of climate and scenery. In some cases a change in the surroundings accomplished much good. To sum up the treatment briefly, the patient should be given rest, the cause removed, the diseased organ depleted, and the patient's general health improved.

Some Questions in Abdominal Surgery.—Dr. J. N. WARREN, of Sioux City, Iowa, read a paper on this subject.

Officers for the Ensuing Year.—The following officers were elected: President, Dr. Alexander Hugh Ferguson, of Chicago; vice-presidents, Dr. C. H. Wallace, of St. Joseph; Dr. C. W. Oviatt, of Oshkosh, Wis.; secretary and treasurer, Dr. George H. Simmons, of Chicago; members of the executive council, Dr. James E. Moore, of Minneapolis (chairman); Dr. A. F. Jonas, of Omaha; Dr. O. B. Campbell, of St. Joseph, Mo.; Dr. C. H. Mayo, of Rochester, Minn., and Dr. J. R. Hollowbush, of Rock Island, Ill. Denver was selected as the place for holding the next annual meeting, on December 28 and 29, 1903.

“The function of consciousness is to dislocate in time the reactions from sensations.”—*Charles Sedgwick Minot.*

Letters to the Editor.

THE FORMALDEHYDE TREATMENT OF SEPTICÆMIA.

72 WEST FORTY-FIFTH STREET,

NEW YORK, March 28, 1903.

To the Editor of the NEW YORK MEDICAL JOURNAL:

Sir: In your issue for March 28th there is a letter from Dr. C. C. Barrows objecting to two points in my paper on The Intravenous Injection of Formaldehyde. His first criticism relates to my brief résumé of his paper—in that the periods of time marking the various events of his case are not properly set forth to give true perspective.

At the time I wrote this synopsis, Dr. Barrows's case was being reported *in extenso* in so many publications, and seemed so well known, that I fear I may have gone to the other extreme in my efforts at compression. At any rate, I am quite willing to admit that, when one tries to condense the details of an important case into about eighteen of the short lines of the *New York Medical Journal*, one does run some risk of impairing the chronological values in the resulting picture. There is, too, a mistake in this résumé of the case in quoting the temperature the morning after delivery as 108° F., instead of 105° F., as it should have been. This came from inadvertently repeating an error originally made by your reporter on page 151 of your issue of January 24th.

Dr. Barrows's second criticism refers to an extremely important question—the actual bacteriological findings in the Bellevue Hospital case. It is evident that Dr. Barrows is impressed with the important part which accurate laboratory work must play in the elucidation of this entire subject, and the necessity for recording clearly in each case just what the laboratory results have been. That his attitude is scientific in the matter is shown in his original communication on formaldehyde, in which he says that he "wishes to warn the profession against its indiscriminate use where proper blood cultures have not been made." In my article I took the ground that in the few cases at our disposal it seemed noticeable that the patients reported as cured had not been those showing, by laboratory tests, a severe bacteriæmia; and in speaking of the Bellevue case I said: "The blood cultures, if I am correctly informed, did not indicate a severe bacteriæmia, as a majority of the culture tubes did not show any growth." To this Dr. Barrows replies as follows: "This statement is absolutely incorrect if the case was properly reported to me by those who undertook the bacteriological work. The report made to me was that all the tubes contained growths in great numbers, and that the case was one of profound general septic infection."

Now, before quoting my authority as to the facts, I want, in all friendliness, to criticize Dr. Barrows's criticism. Dr. Barrows was the only person in a position to publish Dr. Buxton's report of the blood cultures made in this case. If it seemed to him unnecessary to publish this report with his

original paper, I think it was at least due to me that he should present something definite in a communication in which he characterizes my statement as incorrect. Also Dr. Barrows's expression "that all the tubes contained growths in great numbers, and that the case was one of profound general septic infection," seems to me to involve, in the expression itself and without regard to the facts, a misleading deduction. I am sure that Dr. Barrows would not for a moment mean to convey the idea that the number of organisms in a broth culture could possibly throw any light one way or the other as to whether the original blood specimen did, or did not, show a profound general septic infection.

But to return to the laboratory findings in Dr. Barrows's case. As far back as January of this year, when this case was attracting wide attention, I was informed by several different medical men, whom I believed to be in position to know the facts, that in this particular case only one culture tube had shown any growth—the others remaining sterile. As I was much interested in the matter, I spoke about it to Dr. William H. Park, professor of bacteriology in the University and Bellevue Hospital Medical College, and he corroborated what I had previously been told—quoting as his authority Dr. James Ewing, professor of pathology in Cornell University Medical College. It did not seem to me, therefore, that there was any doubt about the matter, and I took it for granted that Dr. Barrows was, of course, aware of the facts but did not regard them as of importance enough to incorporate them in his paper. Upon reading Dr. Barrows's denial, however, I at once called up Dr. Park and asked him to communicate directly with Dr. Buxton about the matter. This he was kind enough to do, and has just informed me that Dr. Buxton has read to him over the telephone, from the laboratory minutes, the report of the case, and that the facts were as stated—only one tube showed any growth. If, then, we assume the laboratory findings to be as above stated, it will be seen that there is positively no evidence to show that the entire specimen of blood taken from Dr. Barrows's case contained more than *one single streptococcus*. This, of course, brings us to the question of possible contamination, and I am free to say that, if these cultures had been made by a bacteriologist of small experience, I should have little doubt that this was the explanation of the positive findings. With Dr. Buxton's experience and careful technique, however, it seems to me that we may safely eliminate any such probability in this case and assume that there were a few streptococci in the blood of Dr. Barrows's patient.

In closing, I wish to heartily reciprocate the kind feelings expressed by Dr. Barrows in his letter.

WILLIAM L. BANER, M. D.

Where Milk is Not Used as a Food.—According to the *Polyclinic* for February, Wallace, in his account of travels in the Malay peninsula, states that the Chinese Dyaks and Malays do not use milk as food.

Book Notices.

Diseases of the Eye. A Handbook of Ophthalmic Practice for Students and Practitioners. By G. E. DE SCHWEINITZ, A. M., M. D., Professor of Ophthalmology in the University of Pennsylvania, etc. With 280 Illustrations and Six Chromolithographic Plates. Fourth Edition, thoroughly Revised. Philadelphia and London: W. B. Saunders & Company, 1903. Pp. 5 to 773. (Price, \$5.)

This textbook has become so well known that a review is hardly necessary to bring the fourth edition to the notice of the profession, except to point out the great revision it has undergone. It would be impracticable to mention the changes in detail as they are scattered throughout the book, and it will suffice to say that a great deal of the previous edition has been rewritten and condensed in order to make room for much new matter, including many paragraphs on various subjects and the therapeutic uses of new drugs in connection with the diseases in which they are indicated. These additions bring the book abreast of the times and maintain it in its position as one of the leading scientific textbooks. But, still, the most valuable feature of the work, one which particularly marks it as fitted for students, is that which has always distinguished it, Dr. de Schweinitz's ability to express himself in easy, graceful, yet precise English, which it is a pleasure, and not a labor, to read.

The illustrations, by Margaretta Washington, the chromolithographic plates and also the smaller cuts, are remarkable for their excellence, and testify, not only to the artist's rare power of delineation, but also to her intimate acquaintance with the exigencies of the mechanical processes through which her productions must pass before they are presented to us. The six chromolithographic plates form an important addition to the work.

Year Book of the Medical Association of the Greater City of New York. June, 1902.

This volume contains the transactions of the society for the year 1902. Papers on surgical, medical and obstetrical topics were the features of the association's work, while some articles on x rays, **laryngology**, and orthopædics also appear. The association is evidently doing a large amount of good work, if a perusal of its year book can be the criterion.

Transactions of the American Otological Society. Thirty-fifth Annual Meeting, New London, Conn., July 16, 1902. Vol. VIII. Part 1.

This volume, like the preceding ones of the series, contains the papers read at the annual meeting, discussions upon them, reports of cases, descriptions of specimens, and new instruments, the business proceedings of the association, necrology for the year, addresses, etc. The papers form a valuable and extremely interesting collection of monographs on various subjects connected with nose, throat, and ear work; and the book itself as a book is excellently arranged and printed, and reflects great credit upon the secretary of the association, who edited it.

BOOKS, ETC., RECEIVED.

The Mycology of the Mouth. A Text-book of Oral Bacteria. By Kenneth Weldon Goadby, D. P. H. Camb., L. R. C. P., M. R. C. S., L. D. S. Eng., Bacteriologist and Lecturer on Bacteriology, National Dental Hospital, etc. With Illustrations. London, New York and Bombay: Longmans, Green & Company, 1903. Pp. xv-241.

Bacteria in Daily Life. By Mrs. Percy Frankland, Fellow of the Royal Microscopical Society, London, etc. London, New York and Bombay: Longmans, Green & Company, 1903. Pp. 216.

Practical Physiology. By A. P. Beddard, M. A., M. D., Demonstrator of Physiology, Guy's Hospital; Leonard Hill, M. D., F. R. S., Lecturer on Physiology, The London Hospital; J. S. Edkins, M. A., M. B., Lecturer on Physiology, St. Bartholomew's Hospital; J. J. R. Macleod, M. B., Demonstrator of Physiology, The London Hospital; and M. S. Pembrey, M. A., M. D., Lecturer on Physiology, Guy's Hospital. Illustrated by Numerous Diagrams and Tracings. London: Edwin Arnold, 1902. Pp. xiv-495.

The International Medical Annual. A Year Book of Treatment and Practitioner's Index. 1903. Twenty-first Year. New York: E. B. Treat & Company, 1903. Pp. xi-739. (Price, \$3.)

Clinical Treatises on the Pathology and Therapy of Disorders of Metabolism and Nutrition. By Professor Dr. Carl von Noorden, Physician-in-Chief to the City Hospital, Frankfurt-on-M. Authorized American Edition Translated under the Direction of Boardman Reed, M. D., Professor of the Diseases of the Gastro-intestinal Tract, Hygiene and Climatology, Department of Medicine, Temple College, Philadelphia, etc. Part III. Membranous Catarrh of the Intestines (Colica Mucosa). By Professor Dr. Carl von Noorden, with the Collaboration of Dr. Carl Dapper. New York: E. B. Treat & Company, 1903. Pp. vi-11 to 64. (Price, 50 cents.)

Materia Medica for Nurses. By John E. Groff, Ph. G., Professor of Materia Medica, Botany and Pharmacognosy, in the Rhode Island College of Pharmacy. Second Edition, Revised and Rewritten. Philadelphia: P. Blakiston's Son & Company, 1903. Pp. 5 to 169. (Price, \$1.25.)

Studies from the Institute for Medical Research. An Inquiry into the Ætiology and Pathology of Beri-beri. By Hamilton Wright, M. D., McGill, Director of the Institute for Medical Research, Federated Malay States. Volume 2. No. 1. Singapore: Kelly & Walsh, 1902.

Recherches anthropométriques sur la croissance des diverses parties du corps. Détermination de l'adolescent type aux différents âges pubertaires d'après 36,000 mensurations sur 100 sujets suivis individuellement de 13 à 18 ans. Ouvrage couronné par la Société d'anthropologie de Paris, 1902. Préface par M. le Dr. L. Manouvrier, Professeur à l'École d'anthropologie de Paris. Paris: A. Maloine, 1903. Pp. xiv-212. (Prix, 5 fr.)

La pellagre. Par le Dr. Georges Procopiu. Avec 11 figures et 1 planche. Paris: A. Maloine, 1903. Pp. 149.

Le cytodagnostic. Les méthodes d'examen des sérosités pathologiques et du liquide céphalo-rachidien. Par Marcel Labbé, Médecin des hôpitaux de Paris, etc. Avec 7 figures dans le texte. Paris: J. B. Baillière et fils, 1903. Pp. 5 to 95.

La journée du tuberculeux. Par M. le Dr. Coste de Lagrave, Médecin du Sanatorium de Gorbio. Paris: A. Maloine, 1903. Pp. 64.

The Manual Treatment of the Diseases of Women. By Gustaf Norström, M. D., of the Faculty of Stockholm. New York and London: G. E. Stechert, 1903. Pp. 5 to 230.

Chronic Headache and its Treatment by Massage. By Gustaf Norström, M. D., of the Faculty of Stockholm. New York and London: G. E. Stechert, 1903. Pp. 59.

Mechanical Vibratory Stimulation. Its Theory and Application in the Treatment of Disease. By Maurice F. Pilgrim, M. D., Professor of Psychiatry in the New York School of Physical Therapeutics, etc. New York: The Metropolitan Publishing Company, 1903. Pp. 5 to 152.

Report of the Commissioner of Education for the Year 1900 to 1901. Volume 2.

Miscellany.

The Late Dr. T. Gaillard Thomas.—Colonel John P. Thomas, of Columbia, S. C., published in the *Sunday News*, of Charleston, for March 22d a tribute to his late distinguished cousin, Dr. T. Gaillard Thomas, from which we make the following extracts:

"Dr. Thomas was, further, a great teacher of medicine and a marvelous lecturer, having a command of language, a wealth of illustration, and a power of thought, combined with an enthusiasm of nature and a buoyancy of spirits, that made him, in the Rev. Dr. Greer's opinion, the born orator; while Dr. Thomas's horsemanship, in which he delighted and excelled, led the doctor of divinity to pronounce his friend a born rider also. 'May I ask you, then,' said the Rev. Dr. Greer, in closing his response at the dinner to the toast, 'Let me be privileged, by my place and message, to be a speaker free,' 'to fill your glasses and drink the health of our honored guest and friend, the graceful rider, the famous physician, the skilful surgeon, the born orator, and, last, and best of all, the sterling and manly man.'

"And that Dr. Thomas wielded with consummate grace the pen of the ready writer, this goes without saying, as numerous illustrations of his power adorn his compositions and make them charming to the cultivated taste. His was the elegance of an Addison or a Washington Irving, with the strength and pointedness that come from the scientific spirit and the solid mind. He drew his apt words from the 'well of English undefiled.' In addition to his celebrated book, Dr. Thomas was the writer of many scientific papers on medical themes and many literary addresses. His tribute to his friend and contemporary, the great and good Dr. Agnew, was a superior piece of memorial literature, and hardly less fine is the language of his response to the toast of The Medical Profession on the great occasion of the visit of Dr. Oliver Wendell Holmes to the city of New York, when the physicians of that city met in their strength to give a royal greeting to the philosopher, the poet, and physician.

"South Carolina, to whom Theodore Gaillard Thomas was ever loyal, honors the man for the glory of his illustration of her name, and rejoices in the kindling thought that his great fame, not her exclusive property, is the heritage of our country and of the civilized world. How fortunate the man who, though no great statesman or soldier, leaves a memory such as men admire and women bless!"

A Proposed National Bureau of Medicines and Foods.—We publish the following by request: "The idea of establishing a board of qualified experts who should represent the interests and the support of the professions of medicine and pharmacy, and through the medium of such a board secure (1) more general conformity to the standards of the pharmacopœia, (2) drugs, chemicals, and food stuffs that will be actually as labeled and can be relied upon, and (3) deal in a proper professional and ethical manner with the large and ever increas-

ing number of proprietary preparations and mixtures that are being presented to the medical profession, was first suggested by Dr. F. E. Stewart at the meeting of the American Medical Association in 1881.

"This idea has been elaborated and plans have been formulated which, it is thought, will secure the objects desired. These plans have been approved by a number of representative manufacturers, physicians, and pharmacists, and it is evident that if the professional interests and the people of this country (and especially the members of the American Medical and the American Pharmaceutical Associations) really desire relief from the present unfortunate and distressing conditions of materia medica and pharmacy, and of adulterated and dishonest food stuffs, such relief is at hand.

"Primarily, this plan contemplates the voluntary association of honest manufacturers and pharmacists who will agree with the board of experts representing pharmacy and medicine upon standards of identity, purity, quality, and strength, to which their products shall conform, and will further agree to carry out these standards and to comply with the necessary rules governing manufacture, etc.

"Organization for the purposes indicated will be begun by the formation of a corporation on the membership plan—no stock issued and not for profit—under the name of the National Bureau of Medicines and Foods, and all the members of the American Medical and the American Pharmaceutical Associations are made members of this bureau. It is proposed that the board of directors governing this bureau be elected by these two associations, each having five directors, one from each association retiring annually and a successor elected for five years.

"In order to indicate to the physician, the pharmacist, or the purchaser such articles as conform to the standards of identity, purity, quality, and strength, and may in consequence be relied upon to conform truthfully to the labels affixed, and also to reward the honest manufacturer and pharmacist for his honesty and aid him in competition with dishonest or impure products, those manufacturers and pharmacists who affiliate with the bureau in this work will be authorized to print upon the label of such of their products as are placed under the supervision of this bureau a certificate of identity, purity, quality, and strength of a form to be indicated by the board of directors.

"All possible precautions in the way of frequent inspection, analysis, or assay will be taken by the bureau in order to keep certified products up to the standard and to protect the bureau certificate from fraud. In addition to the original analysis or inspection of each 'batch,' every article bearing the bureau certificate will be purchased in open market from time to time and submitted to analysis, assay, or comparison with standard samples.

"The bureau will also gather and diffuse reliable information relative to materia medica products, chemicals and food stuffs and to those who manufacture or deal in the same, and it is believed that in a comparatively short time such information will replace and do away with the one-sided and unreliable trade literature which is at present, in many

instances, the only available source of information.

"The work of the bureau will be purely commendatory and not in any way condemnatory, so that it can in no event become an agent of blackmail. As the bureau is not a commercial enterprise, is not organized for profit or for money-making, only the actual expense of doing the work required will have to be defrayed. It is proposed to assess this actual cost upon the various manufacturers and producers whose goods are certified by the bureau, each in proportion to the amount and value of the goods so certified. This feature of the plan has been considered satisfactory by those who have signified a willingness to affiliate with the bureau.

"In addition to the two associations already mentioned, any scientific society that may vote to affiliate with the bureau may do so, and its members then become members of the bureau; and, further, any person who so desires or who is willing to signify his approval of the aims and objects of the bureau may become a member upon the payment of one dollar per year."

The Professional Aspect of Medical Practice in England in the Fifteenth Century.—Thomas Morestede, of the Fellowship of Surgeons of the City of London, was surgeon to Henry IV, Henry V, and Henry VI, and served as the king's surgeon at the battle of Agincourt, in 1415. He died in 1450. The *British Medical Journal* for January 24th, citing some interesting articles by Mr. D'Arcy Power, in the *Saint Bartholomew's Hospital Journal*, says that Mr. Power attributes to Morestede the first serious attempt to make surgery a profession in London, for he took a leading part in the formation of a conjoint faculty of medicine and surgery, which was nearly five hundred years in advance of its time. The scheme of the faculty is preserved in a petition to the mayor and aldermen, dated May 15, 1423. "The petition prays that all physicians and surgeons practising in London may be considered as a single body of men governed by a Rector of Medicine, with the help of two Surveyors of the Faculty of Physic, and two Masters of the Craft of Surgery. The Rector of Medicine was to be a Doctor of Physic and a Master of Arts and Philosophy, or at the least a Bachelor of Physic of long standing. No surgeon was to be allowed to practise in London unless he had been examined by the Rector, the two Masters of Surgery, and the majority of the craft, after which he was to be licensed by the mayor and aldermen, under penalty of 100 shillings fine. Every surgeon called upon to treat a case which seemed likely to end in death or permanent disablement was obliged to call into consultation the Rector of Medicine or one of the Masters of Surgery within three days of his first attendance, and a like course was to be taken by every surgeon before he performed any serious operation. A surgeon duly convicted on credible evidence of malpraxis or of infamous professional behavior was to be brought before the mayor, who would punish him with fine, imprisonment, or 'puttyng him out from alle practice in chirurgery for a tyme or for evermore after the quantite and qualite of his trespass.' A patient needing a surgeon,

who had fallen into such poverty that he was unable to pay a fee, was to appeal to the Rector and the Masters of Surgery, who would assign him a good practitioner, busily to take heed of him without expense.' The Rector, the two Surveyors of Physic, and the two Masters of Surgery, associating with themselves two apothecaries, were to search the shops of suspected apothecaries for adulterated drugs. If the drugs were found impure or rotten they were thrown into the street to be trampled under foot, and the apothecary was haled before the mayor. The petition of the physicians and surgeons was duly granted on May 28, 1423." This conjoint college, however, does not seem to have survived very long, and no records of its continued existence are forthcoming after 1425. The association between the physicians and surgeons of London remained in abeyance for 458 years, in fact until 1883, when the Royal College of Physicians and Surgeons in London again formed a conjoint board of examination for the bestowal of a double license to practise medicine and surgery. The recognition of the professional obligation to look after the poor, and to oversee the purity of drugs is noteworthy.

Mind-Blindness for Objects.—According to the *Edinburgh Medical Journal* for March, Lépine (*Recueil d'Ophthalmologie*, Paris, 1902, tome vii) records a case which is interesting as being in a sense the converse of word blindness. It was that of a man who had had partial and transitory attacks of paralysis for some months. When Lépine saw him, there was no aphasia or amnesia, speech was perfect, and vision was also apparently quite good. It was not, however, quite normal, for, though he had no hemianopsia, he had some difficulty in "fixing" any object, and he could not read fluently at all. Objects which, in the course of his business (as a traveler for watches, etc.), had been very familiar to him, he recognized promptly and named correctly, but any other article, even if quite a common thing, he failed to name or even to recognize; he could not imagine, for example, to what use a measuring tape could be put when it was shown to him. He could write to dictation and copy perfectly, but if asked to draw a common object, such as a tree, he merely wrote down the word "tree," without being able to make the slightest effort to sketch it; he seemed to have completely lost the visual memory of it. The picture of an object he appeared to recognize more readily than the actual object. When he looked at an article he recognized its outline, form, relief, color, etc., but remained entirely ignorant of its nature or use.

The Primæ Viæ in Very Truth.—Dr. John Nelson Goltra, in the *Physician and Surgeon* for December, 1902, tells us that a short time ago when a school teacher in one of our western cities asked of the school the question, "What is the greatest canal in the United States?" a small boy promptly replied, "The alimentary canal!" "Out of the mouth of babes, etc."

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WHOLE No. 1272.

Original Communications.

THE THERAPEUTICAL VALUE OF THE RÖNTGEN RAY IN THE TREATMENT OF PSEUDOLEUCÆMIA.

By N. SENN, M. D., Ph. D., LL. D.,
CHICAGO,

PROFESSOR OF SURGERY, RUSH MEDICAL COLLEGE; SURGEON-IN-CHIEF, ST. JOSEPH'S HOSPITAL; ATTENDING SURGEON, PRESBYTERIAN HOSPITAL.

Very little is known concerning the ætiology and essential pathology of that strange disease known as pseudoleucæmia, or Hodgkin's disease. That it is an infectious disease there can be no doubt, but the microbe which produces it has so far successfully eluded detection. The lymphatic pathological product which characterizes this affection bears a strong resemblance to the granulomata; with this difference, however, that there is little or no tendency for the new tissue to undergo marked degenerative changes. The microbe of this disease appears to have a special predilection for lymphoid tissue, upon which it exercises its specific pathogenic effect. The relentless extension of the disease from gland to gland and from region to region demonstrates very clearly its infectious character, its microbic origin. The treatment, on the whole, has been extremely unsatisfactory. Curative properties have been claimed for many drugs, headed by arsenic. Bone marrow is another agent for which strong claims have been made. The writer has seen many cases of pseudoleucæmia and has never known one to be permanently benefited by either medical or surgical treatment. He has saturated the system of some of his patients with arsenic, administered internally and by parenchymatous injections, with nothing more than temporary, if any, improvement following. In two cases he excised the enlarged glands of one side of the neck during the early development of the disease, this being the only region involved. The disease returned after a few weeks, and extended in rapid succession to the opposite side of the neck, the axillary, and inguinal regions. The only instance of marked diminution in the size of the affected glands that has come under my observation was the case of a young man, the subject of far advanced pseudoleucæmia, who, while under treatment in the Presbyterian Hospital, contracted a

somewhat severe form of facial erysipelas. The glands of the neck were enormously enlarged, and became more so during the height of the erysipelatous inflammation. With the subsidence of the erysipelatous infection the glands rapidly diminished in size and remained small—less than one third of their former size—for a number of weeks, during which time the patient's general health improved materially. After this short period of latency the disease reappeared with its usual vigor and pursued a very rapid course. Such had been my personal experience in the treatment of this disease when the first patient of the cases reported in this paper consulted me.



FIG. 1.

CASE I.—F. B., forty-three years of age, a saloon-keeper and farmer by occupation. Residence Brillion, Wis. The glandular affection dates back a year, having commenced in the cervical region almost simultaneously on both sides, and involves now very extensively the glands of these localities as

well as of the axillary and inguinal regions. A macular eruption of the skin all over the chest, back, and abdomen. The increased respiratory movements and dulness over the anterior mediastinum indicate the extension of the disease to the bronchial and mediastinal glands. Spleen considerably enlarged, as shown in Fig. 1. Liver dulness slightly increased. No tenderness over the junction of the gladiolus with the ensiform cartilage of the sternum or epiphyses of the long bones. The patient is anæmic, but not emaciated. The blood examination shows anæmia, but no abnormal blood cells. At the examination made at 11 a. m., the pulse was 78, respiration 22, and temperature 99° F. I prescribed, as usual, arsenic and iron, and, in view of the heretofore hopelessness in such cases,

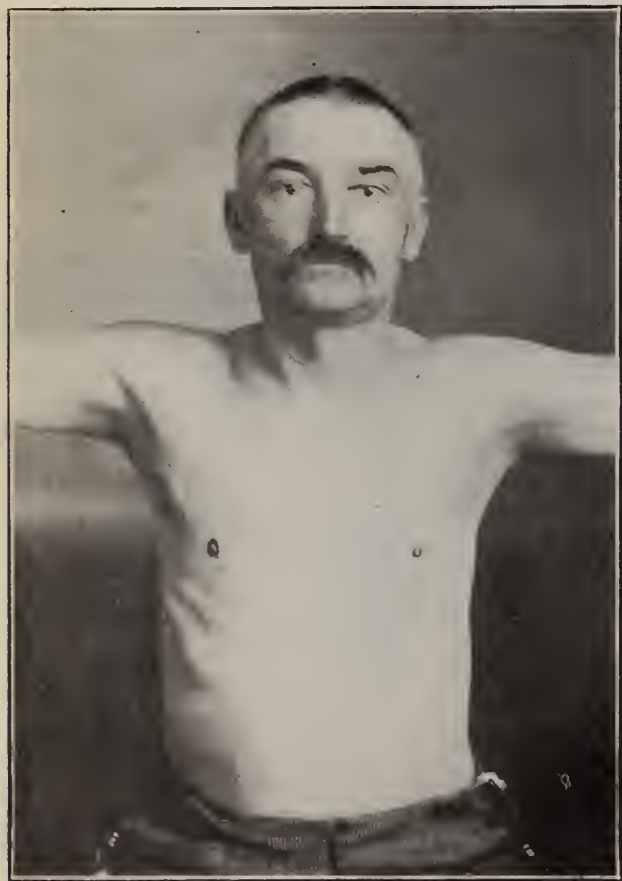


FIG. 2.

advised in addition the use of the Röntgen ray. The Röntgen therapy was referred to Dr. W. F. Buttermann, who is in charge of this department at the St. Joseph's Hospital. As this was the first case of pseudoleucæmia in the institution to be subjected to the x ray treatment, Dr. Buttermann took the precaution to inform the patient that in all probability the treatment would result in more or less severe burns, owing to the fact that glands in the chest would make it necessary to resort to somewhat vigorous use of the ray. Patient received thirty-four treatments as follows: right side of neck one minute, left side of neck one minute, neck from before backward one minute, neck from behind forward one minute, each axilla one minute, each groin one minute, spleen one minute. Daily

sitting for the first ten days; 60 volts 8 ampères were used each day; distance of tube from surface twelve inches, a medium vacuum tube being used. The treatment was commenced *March 29, 1902*. On *April 7th*, after ten treatments had been given, the glands had undergone a noticeable reduction in size. At this time the patient made complaint of an intense itching all over the chest and a uniform redness made its appearance over the chest and axillary regions. The voltage and ampèrage were reduced to 42 and 6 respectively. After the next six treatments the voltage was again reduced to 28, ampèrage remaining the same. *April 15th*. The itching became so severe that it kept the patient awake all night. The skin of the chest blistered. The skin of the neck, naturally very dark, turned dark brown. A five per cent. boric acid vaseline ointment applied twice a day relieved the itching.

From April 16th to 23rd, the exposures were limited to the neck, back and groins, as the chest and axillæ were the seat of quite an extensive burn. *April 24th*. All of the glands subjected to the x ray treatment have nearly disappeared. The face and part of scalp exposed to action of the x ray are devoid of hair. (Fig. 2.) Axillary and pubic hair has also disappeared. Skin of neck, dark brown and blistered. The skin of the chest from the neck down to about four inches below the nipples exfoliated in several places. The nipples are very sore, discharging pus. The treatment was suspended and the patient discharged from the hospital with instructions to continue the use of the salve and internal medicine. Two weeks later he returned to the hospital for more medicine and expressed himself as feeling well. His appetite was good and he was able to attend to his duties. No enlarged glands could be discovered. No elevation of temperature. Breathing much improved. The dermatitis had improved. He returned a second time on *August 1st* as he had recently noticed a slight enlargement of the cervical and axillary glands. He is feeling well and is able to attend to all of his business. Dermatitis has disappeared. Return of hair growth. Patient received ten daily treatments, 28 volts, 6 ampères; each group of glands was exposed for two minutes at a distance of twelve inches, tube the same as before. The glands disappeared promptly. No return has taken place since, the patient being in perfect health, with the exception of a joint affection which has no connection whatever with the pseudoleucæmic process.

CASE II.—The second patient, C. W., Balekon, Mo., presented himself at my surgical clinic, Rush Medical College, during the spring semester, 1902. He is fifty-three years of age and is a merchant by occupation. Family history, excellent. He has ten brothers and ten sisters, all of them in excellent health.

The patient has enjoyed good health until the beginning of the present illness. Ten years ago he noticed a slight enlargement of the glands of the neck. The enlarged glands were found on both sides of the neck, behind and below the angle of the lower jaw. The glandular swellings were hard but not painful and tender on pressure. Soon after-

ward the tonsils became swollen and painful. A little later the glands in the back of the neck, axillæ, and groins, became similarly affected. He lost his appetite, became anæmic, and lost forty-five pounds in weight. To regain his health he went to the mountains in Utah, where he lived an out-door life for several months. The physicians who treated him at the time prescribed arsenic, iodides, and cod liver oil, with no apparent effect. At the end of a year the glands became softer but did not diminish in size. His appetite improved and he gained in weight. The glands gradually increased in size until some of the cervical glands had reached the size of a hen's egg, when he applied at the clinic for relief. The condition of the glands of the neck and axillary regions is well shown in Fig. 3. A chain of smaller glands extended from the axillæ to the epitrochlear regions. Some of these trochlear glands had reached the size of a chestnut. The glands of the groin on both sides, above and below Poupart's ligament and along the iliac vessels, greatly enlarged. A gland the size of a hen's egg can be felt in the abdomen to the right of the umbilicus. Liver palpable below the costal arch, its surface and border smooth. Spleen enlarged but not palpable. Sternum tender on pressure, but no dulness on percussion. Both tonsils markedly en-



FIG. 3.

larged; mucous membrane of pharynx and cavity of mouth pale. Chest and urine examination negative. Blood examination: Hæmoglobin 73 per cent; erythrocytes, 3,875,000; white corpuscles, 208,000. A differential count of the white corpuscles gave the following result: Small uninuclear lymphocytes, 78.75 per cent.; large uninuclear lymphocytes, 14.25 per cent.; transitional forms, 2.00 per cent.; multi-forminuclear, 5.00 per cent. Increasing doses of Fowler's solution were given for ten weeks when,

owing to a gastric disturbance, the drug had to be discontinued. The x ray treatment was conducted by Dr. Joseph F. Smith, resident physician at the Presbyterian Hospital. The x ray was applied to the neck, axillæ, elbows, chest, abdomen, and groin of each side every alternate day. A fairly hard tube was used at a distance of three to four inches from the surface of the skin. The applications were continued for from five to seven minutes at each sitting over each area exposed. After



FIG. 4.

four or five sittings the patient noticed an unusual softening of the glands and a gradual diminution in their size. After fifteen treatments a slight dermatitis appeared; at the same time general symptoms pointed to a slight toxæmia. He lost his appetite and the anæmia increased. The treatment was suspended and the patient was advised to return to his home. In three weeks he returned much improved in his general health, having gained eleven pounds in weight. All the palpable glands were found very much diminished in size and the skin markedly pigmented over the areas exposed to the action of the x ray.

The blood examination made at this time showed: Hæmoglobin, 85 per cent.; erythrocytes, 4,450,000; white corpuscles, 76,000. The applications of the x ray were resumed in the same manner as in the first series of treatments, with the difference that the time of exposure was lengthened to seven minutes. After twelve treatments the patient developed again a slight dermatitis of the exposed areas, with very marked pigmentation of the skin and loss of hair and beard. The symptoms of toxæmia were more pronounced than after the first series of applications, so that it was deemed advisable to discon-

tinue further treatment. The appearance of the patient at this time is shown in Fig. 4. Only one small gland could be found above the right clavicle, and a second one behind the upper portion of the sternomastoid on the same side. A few small epitrochlear glands could be detected, but the axillary region on both sides was free. The glands in the groins had almost entirely disappeared, as well as the abdominal glands. The blood count now showed 46,500 white corpuscles. The spleen could be palpated below the costal arch and extended to within a finger's breadth of the crest of the ilium. No diminution in the size of the liver.

There can be but very little doubt that the constitutional disturbances which followed the prolonged use of the x ray, and which set in simultaneously with the progressive diminution in the size of the glands were due to a toxæmia caused by the absorption of the products of degeneration of the pseudoleucæmic product. This toxic condition unquestionably was likewise the cause of the increased enlargement of the spleen noted after the second series of applications. This patient has been heard from very recently and he believes that there are no indications of the return of the disease and considers himself in perfect health.

The eminent success attained in these two cases by the use of the x ray can leave no further doubt of the curative effect of the Röntgen therapy in the treatment of pseudoleucæmia.

Additional experience will give us more definite information as to the best methods of using the Röntgen ray in the treatment of this disease, with a view of preventing burns and toxic symptoms without reducing its curative effect.

A PLEA FOR THE NON-HOSPITAL OR OFFICE TREATMENT OF DISEASES OF THE RECTUM AND ANUS.

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The writer has been actively engaged in the treatment of rectal and anal affections for many years, and from his personal experience with the office treatment of these diseases he is firmly convinced that our hospitals annually receive for operation a very large number of these patients who should be relieved by the less severe measures. It is difficult to understand why surgeons continue to insist that patients forego business and social engagements, enter the hospital, and submit to operations requiring general anæsthesia, for the relief of rectal ailments which could be radically cured in the office by medicinal agents or by trivial operations under

local anæsthesia. Recently the writer has not sent more than one in ten of his private patients to the hospital, because he has found that they can be successfully treated in the office.

The object of this paper is to point out the many rectal diseases suitable for office treatment and to discuss the simplest, safest, and least painful procedures which accomplish the quickest and most certain results.

The *preparation* of the patient for examination, or when necessary for treatment, can be satisfactorily accomplished as follows: On the morning of the preceding day two ounces and a half of carabaña water should be taken to clear out the intestine. Three hours before coming to the office, the bowel is washed out with a copious high soap-suds enema, followed two hours later by the injection of from half a pint to a pint of warm water containing an ounce of glycerin; this latter enema must never exceed the amount stated, because a portion of a larger quantity remains in the sigmoid colon and may be discharged, soiling the parts and obscuring the field during the examination or treatment.

In the office treatment of rectal and anal diseases the patient may frequently be saved much unnecessary pain by the employment of *local anæsthetics*, of which the most efficient and reliable are the injection or application of a solution of β eucaine, 3 per cent., or cocaine, 4 per cent., or the freezing of the parts by means of ethyl chloride, kelené, or the ether spray. The writer prefers the eucaine solution because it is effective, can be reesterilized, and is not followed by unpleasant or dangerous symptoms.

EXTERNAL HÆMORRHOIDS.

When external hæmorrhoids are acutely inflamed the inflammation may be made to subside most quickly by means of the ice pack or cold astringent applications. But if there are frequent spasmodic contractions of the sphincter causing engorgement of the tumors, the pain and congestion should be relieved by soothing and causing the muscle to relax by means of hot stupes or poultices and ointments or suppositories containing opium, morphine, belladonna, and cocaine.

In the *operative treatment* of external hæmorrhoids the tumor is injected with three per cent. eucaine, and if the hæmorrhoid is of the *thrombotic* variety, it is then transfixated with a curved bistoury, laid wide open, curetted, and packed with a narrow strip of gauze, which is allowed to remain for twenty-four hours to arrest bleeding, or, if hæmorrhage should occur, to drain and prevent refilling of the tumor.

External *cutaneous* hæmorrhoids should be excised with the scissors or by means of an elliptical incision, the wound being closed with catgut sutures or

permitted to heal by granulation. In either variety the wound should be cleansed daily with warm water and a gauze dressing applied.

INTERNAL HÆMORRHOIDS.

The inflammation, strangulation, and painful sphincteric contraction accompanying protruding internal hæmorrhoids is most easily and quickly relieved by the palliative measures already suggested for acutely inflamed external hæmorrhoids.

Small, flat, internal *capillary* hæmorrhoids which bleed frequently are treated by anæsthetizing the tumors and applying the Paquelin or galvanocautery as many times as may be required; or they may be treated by the injection method described below. The intervals between the cauterizations should be at least a week and any resulting ulceration should be treated by cleanliness and applications of soothing and stimulating remedies.

Non-protruding internal *venous* hæmorrhoids and those which protrude during stool but remain above the sphincter when replaced may often be cured by the *injection* of solutions containing carbolic acid. To obtain the best results from the injection method and obviate the danger of abscess, sloughing, and unnecessary pain, it is essential closely to observe asepsis, carefully to inject the solution within the tumor and not into the deeper structures, and to press the finger over the opening as the needle is withdrawn to prevent the escape of the fluid into the bowel. For a number of years the writer has successfully used a solution containing one drachm each of carbolic acid, glycerin, and distilled water, which must be freshly prepared before each treatment. Of this mixture from five to fifteen drops are injected into small, and from ten to thirty drops into large piles by means of the Gant hæmorrhoidal syringe (Fig. 1).

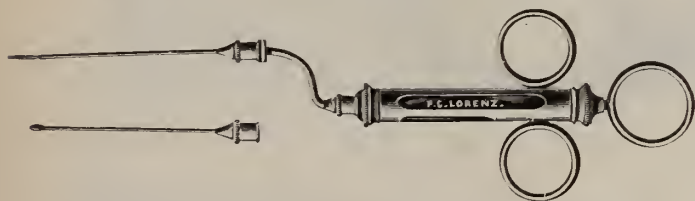


FIG. 1.—Gant's hæmorrhoidal and fistula syringe. The curved extension piece raises the needle above the body of the syringe and thereby prevents it from obstructing the view when an injection is made.

Should the inflammation become intense or strangulation or sloughing occur after the treatment, hot or cold applications are made to the anus and a suppository containing morphine, belladonna, and cocaine is inserted to relieve the pain. The injection method of treating piles is sometimes followed by annoying complications, and does not give such permanent results as the procedure described below.

The writer has recently radically cured in his office many cases of small bleeding and protruding

hæmorrhoids by eucaïnizing and *ligating* the tumors, the ligatures being applied in a shallow incision made around their bases. He has also successfully treated such piles by the clamp and cautery under local anæsthesia, but this operation is not so well suited for the office treatment, because the patients are frightened by the cautery.

In other cases diminutive pile tumors were injected with eucaine and removed with the scissors, and the bleeding was controlled by tying the larger vessels and packing the wound with gauze or applying adrenalin chloride on pledgets of cotton.

POLYPS.

Polypoid growths situated low down in the rectum can be easily removed in the office by ligating the pedicle and cutting away the tumor with the scissors; if high up in the rectum or in the sigmoid, a proctoscope or sigmoidoscope should be introduced, when the polyp can be grasped and removed by torsion with the forceps devised by the writer; or his valve-clamp (Fig. 2) may be applied to the pedicle of the tumor, which drops off in a few days because of the pressure necrosis, the clamp being expelled with the fæces.

ANORECTAL ABSCESS.—FOLLICULAR AND MARGINAL.

Abscesses may be transfixed with a curved bistoury and thoroughly incised, causing but little, if any, pain after anæsthetization of the skin, by the injection of eucaine. The abscess cavity is irrigated, bleeding is arrested by pressure or gauze compresses wrung out of hot water, and a gauze drain is left in the wound.

Intramural or submucous abscess requires spraying of the overlying mucous membrane with a six per cent. eucaine solution; a bistoury is then guided upward in the rectum by the index finger until the most prominent part of the swelling is reached, when the abscess is freely incised parallel with the long axis of the bowel, to avoid the large hæmorrhoidal vessels; the wound should be packed, a gauze drain being left protruding from the anus.

Ischio-rectal abscess must be treated radically to prevent the formation of a fistula. When the skin is tense and thin over the swelling it can be quickly anæsthetized by freezing with the ethyl chloride or ether spray, but if the pus is deep seated it is best to inject the parts to be incised with eucaine or cocaine. A small incision is never sufficient in these cases, and the abscess must be laid wide open with one long incision and counter cuts made, if necessary, to insure thorough drainage. The pus having been evacuated and the wound irrigated and dried, a second application of eucaine is made by spray or on cotton, the necrotic tissue is removed by the curette, and the cavity is again irrigated, dried and swabbed out with 95 per cent. carbolic acid followed immedi-

ately by alcohol. In order to prevent hæmorrhage, the wound should be packed with gauze and protected by gauze pads held firmly by a well adjusted T bandage.

FISTULA.

The methods which may be employed in the office-treatment of *fistula in ano* are complete division, ligation, and injection.

Complete division of the sinus is the best of these procedures, because it is followed by the quickest and most satisfactory results. This operation can be painlessly performed by injecting cocaine, three per cent., into the tissues over the entire length of

Future dressings consist in mopping out with boric or other antiseptic solution and laying a strip of gauze loosely in the bottom of the incision. If, for any reason, healing is retarded, the wound should be stimulated with strong solutions of silver, ichthyol, or balsam of Peru.

The *ligature* operation for fistula is occasionally justifiable in debilitated, phthisical subjects, because it avoids the loss of blood. Under the local anæsthetic an elastic ligature is carried through the sinus up into the bowel and down through the anus by means of a short probe, which is then detached and the ligature is tied tightly and secured with a

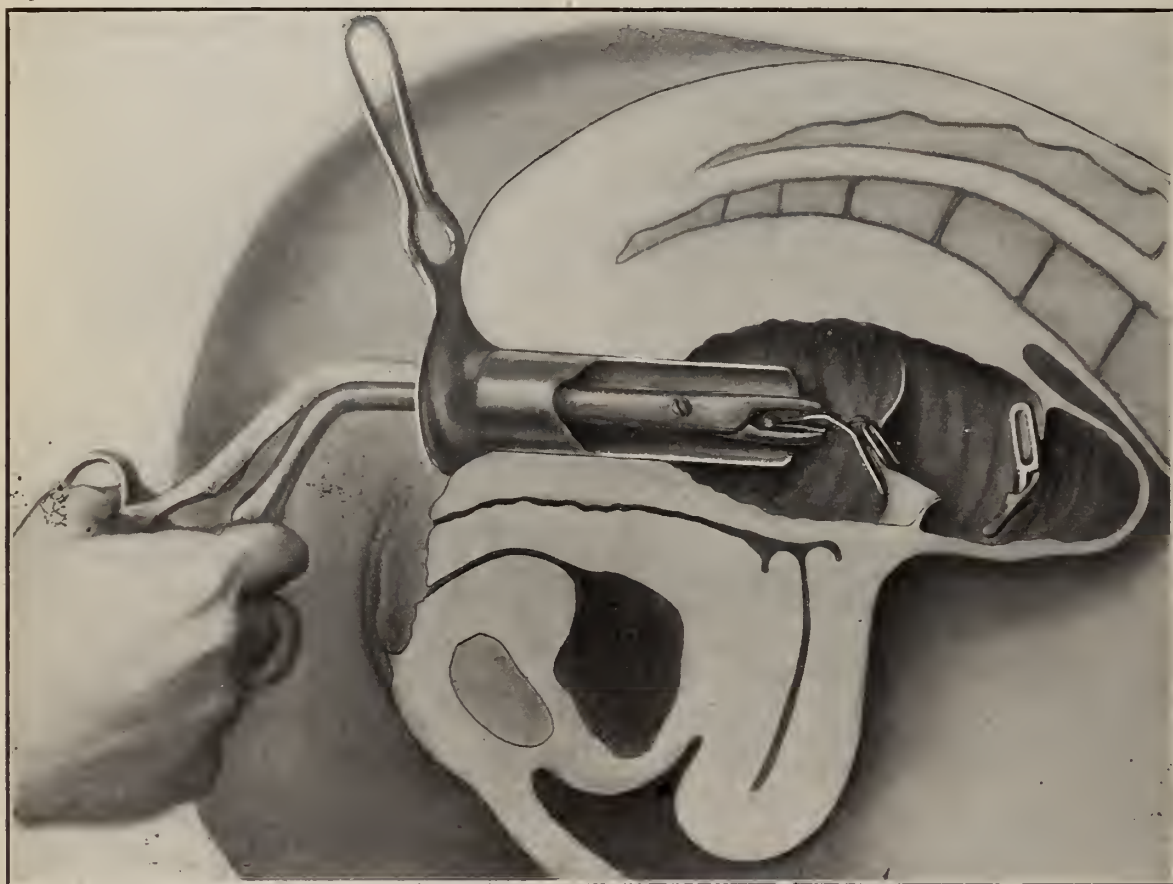


FIG. 2.—Gant's operation of valvotomy, with the proctoscope in position, showing the manner of using his applicator and valve clamps. One clamp is in position and the other is placed over a "valve," ready to be freed from the applicator.

the sinus, the first injection being made into the skin, and the last directly into the sphincter muscle. A grooved director is then introduced through the sinus and into the bowel until its upper end can be caught by the left index finger, when it is drawn down and allowed to rest across the anus. The overlying bridge of tissue is then quickly and completely divided with a bistoury and bleeding is arrested by pressure or by ligature if necessary. A suppository containing a quarter of a grain each of morphine and cocaine should be inserted into the bowel to prevent after pain. The wound is packed with strips of gauze and over this is placed a thick gauze pad held firmly by a T bandage.

The enclosed mass of tissue should be cut through in from four to ten days, after which the wound is treated as after complete division.

The *injection* method is not to be relied upon in the treatment of fistula in ano, and is serviceable only when the sinus is of recent origin. Before injecting the fistula its outer opening should be enlarged by divulsion or incision under local anæsthesia, to insure free drainage. The sinus is then injected with a very strong solution of zinc, ergotine, iron, ichthyol, carbolic acid, or iodine; a small strip of gauze should be inserted for drainage. The operation is repeated at intervals of two or three days during as long a time as may be necessary.

FISSURE.

Fissure of the anus of recent origin can frequently be cured by regulating the stools, daily cleansing of the ulcer, and applications of silver nitrate, four per cent. ichthyol in glycerin, fifteen to twenty-five per cent., or balsam of Peru. The pain caused by these applications is diminished by anæsthetizing the ulcer with eucaine by means of the spray or on a pledget of cotton.

Complete division of the sphincter is the most certain method of permanently relieving fissure, because it eliminates the spasmodic contraction of the muscle and allows complete rest of the parts. The writer has yet to encounter a failure in curing fissure by this procedure. The operation can be quickly and satisfactorily performed in the office as follows: After the muscle and the skin at the lower end of the rent are anæsthetized by the injection of eucaine, a probe-pointed bistoury laid flat upon the index finger is guided into the rectum and above the upper margin of the external sphincter, when it is directed backward, and with one stroke an incision is made at least half an inch deep, to insure complete division of the muscle and adjoining skin. If there is a cutaneous, or so-called "sentinel," pile at the lower angle of the fissure, it must be removed to prevent subsequent irritation and permit proper dressing and free drainage of the wound. At first the incision is packed with gauze to arrest bleeding, but thereafter it is cleansed daily with hot water, and a strip of gauze moistened with a solution of ichthyol or balsam of Peru is placed loosely in the bottom of the wound. Healing takes place rapidly after this operation and the patient is comfortable and is not detained from attending to his usual duties.

ULCERATION.

The *superficial* ulcers frequently encountered in the lower rectum may be speedily cured by securing soft evacuations, cleansing the parts and applying locally with cotton or gauze a solution of ichthyol, ten per cent; nitrate of silver, three per cent., sulphate of zinc, four per cent., or balsam of Peru, twenty-five per cent.

Deeper ulcers or those which do not yield to the above treatment, should be eucanized and cauterized with the galvano-cautery, stick silver, copper sulphate, pure ichthyol, or carbolic acid; or, if necessary, the sphincter muscle should be divulsed or divided to secure rest of the parts.

Extensive ulcerations higher up in the rectum or in the sigmoid colon are treated by regulating the stools and spraying or irrigating the bowel with weak astringent solutions; if this is not effective the rectum should be irrigated through the colon tube with nitrate of silver, thirty grains in a pint of water,

followed by normal saline solution if there is much pain; or the ulcerated surface may be curetted and cauterized with the Paquelin cautery. When the ulceration is persistent in spite of these more radical measures, it is probably tuberculous, syphilitic, dysenteric, or malignant in character, and, when indicated, constitutional remedies should be prescribed.

CANCER AND STRICTURE.

Because of the danger of peritonitis and the difficulty of controlling hæmorrhage, it is not advisable to attempt to operate for cancerous or other form of rectal stricture in the office, except when it is located in the lower rectum, where it may be divided and the wound packed under local anæsthesia. In most of these cases, however, by frequently cleansing the bowel with medicated solutions, regulating the diet, giving carabaña or other cathartic to soften the stools, making topical applications to ulcerated surfaces and introducing graduated bougies to increase the lumen of the bowel and prevent contraction, much can be accomplished by office treatment toward improving the local condition, preventing obstruction and straining, and diminishing the patient's suffering. Extreme caution must be used in passing bougies when the structure is located three inches or more from the anus, because of the danger of rupturing the bowel and causing peritonitis.

COLOPROCTITIS.

Catarrhal inflammations of the colon and rectum in most instances can be satisfactorily treated in the office.

In *acute* catarrh of the bowel the patient must rest as much as possible and restrict his diet to nourishing and non-irritating foods, such as milk, soft-boiled eggs, broths, etc., and abstain from cold, carbonated, acid, or alcoholic drinks, greasy and highly seasoned foods, and excesses of tea or coffee. The local treatment consists in frequent spraying or irrigating of the bowel through the colon tube with solutions of boric acid, three per cent., hydrastis, four per cent., or other mild antiseptic and astringent remedies. Pain due to tenesmus or spasmodic contraction of the sphincter muscle may be relieved by suppositories containing belladonna, morphine, and cocaine, or by injections of warm oil or starch water and laudanum; in rare instances it may be necessary to anæsthetize and divulse or divide the sphincter muscle to relieve the sphincteric neuralgia.

In *chronic* coloproctitis, the strength of the remedies used for spraying or irrigating the bowel should be increased, and if the inflammation does not yield to their prolonged use and *ulceration* occurs, accompanied by frequent stools mixed with pus, mucus, and blood, the following treatment must be substituted. Every other day the rectum and colon are irrigated with a pint of water containing thirty

grains of nitrate of silver, followed by an enema of normal saline solution if much pain is produced. On the alternating days an emulsion containing one drachm of bismuth subnitrate, ten grains of iodoform, and four ounces of olive oil, is injected high up into the bowel; this oil combination is very soothing to the mucosa, and will be retained for many hours, while other solutions remain in the bowel but a short time. After two weeks the silver nitrate injections are replaced by enemata containing half an ounce of fluid extract of krameria, half a drachm of sodium biborate, and one pint of water.

While the ulceration persists, the writer requires these patients to drink an abundance of milk and to consume large quantities of baked and mashed potatoes and plenty of fresh unsalted butter. The troublesome symptoms arising from the formation of gases in the intestine are usually relieved by powders containing four grains each of bismuth subnitrate and salol.

PRURITUS.

In most instances pruritus ani occurs in persons of diabetic, rheumatic, gouty, tuberculous, or syphilitic diathesis, or in those suffering from fissure, ulceration, hæmorrhoids, proctitis, polypi, or other anorectal disease accompanied by a discharge which keeps the skin about the anus and buttocks moist and irritated. Where indicated, constitutional remedies should be prescribed, but if local disease exists it must be corrected by operation or medication before or during the treatment instituted for the relief of the pruritic condition, and unless this is done no permanent results are to be expected. The writer has had almost universal success in curing this most persistent and annoying affection by arresting the discharge and carrying out the following plan of treatment.

Each morning, before coming to the office, the patient must thoroughly cleanse the parts with hot water, in order to remove any ointment previously applied, which may have become rancid. When the patient is on the table the parts are closely examined, and to each raw spot nitrate of silver solution (20 grains to the ounce) is applied and allowed to dry. A pad of several layers of gauze spread over thickly with citrine ointment (*unguentum hydrargyri nitratis*) is applied to the affected area, covered with oil silk to protect the clothing, and secured firmly in place by a broad T bandage (Adler method). This dressing must be worn all day to accomplish the best results. Should the ointment cause much pain, its strength may be reduced to twenty-five or fifty per cent. until the skin has become more tolerant. Before retiring at night the patient should again bathe the parts with hot water, dry thoroughly, and dust thickly over with a powder composed of boric acid,

zinc stearate and talcum powder; but if the parts are very sensitive, owing to the excoriations, then an ointment containing twelve grains of calomel to an ounce of vaseline may be substituted.

In addition, it is necessary that the patient should exclude alcoholic drinks, carbonated waters, excessive quantities of tea or coffee, condiments, pastries and highly seasoned, fried, or greasy foods from his diet. After this treatment has been persistently carried out for two or three months, it will be found that the itching has disappeared and the thick indurated parchment-like skin has assumed its normal color and suppleness.

CONSTIPATION.

In 1891 the writer discontinued the use of drugs in the treatment of constipation and has since that time employed the "non-medicinal method," by which he has been able to cure or materially to benefit nearly all patients applying to him for relief from this affection. Because of the limited scope of this paper, a detailed discussion of the non-medicinal treatment is impossible, but the following is a brief description of its principal features.

Massage is one of the most essential features in the treatment of chronic constipation. In addition to kneading of the colon, special massage should be given to the liver, small intestine, and rectum. In habitual constipation, massage is a valuable aid, because it improves the circulation, stimulates nerve centres, restores tone to inactive muscular fibres, loosens adhesions, dislodges and breaks up fecal impactions, excites the liver and intestinal glands to renewed action, and assists in establishing normal peristalsis.

Electricity is a valuable adjunct in the treatment of constipation and faradism has given the best results. The positive pole may be applied over the spine or within the rectum or sigmoid, and the negative is moved about over the small intestine, colon, and liver; the strength, duration, and frequency of applying the current are regulated to suit the individual case. When properly used electricity restores tonicity and stimulates peristalsis and glandular secretion.

Enemata of soap-suds or warm water are sometimes necessary *early* in the treatment of constipation, to secure evacuations and prevent accumulation of the feces until the bowel is able to relieve itself, but the continued daily use of injections is to be deprecated.

In addition, the patient must observe the following rules:

1. Go to stool at the same hour daily, devoting the time to securing an action and not making the toilet a reading room.
2. Correct errors in diet, take meals at regular

hours under pleasant conditions; abstain from over-indulgence, and take plenty of time to masticate the food properly.

3. Eat sufficient fruit and drink an abundance of water, especially before breakfast.

4. Take a cold bath every morning, to be followed by a thorough rubbing with a rough towel to open the pores of the skin and stimulate the circulation.

5. Indulge regularly in outdoor exercise and gymnastic movements, to improve the general condition and develop the abdominal muscles.

6. Change from a sedentary to an active occupation, if necessary.

Divulsion of the sphincter should be done at the earliest opportunity when the constipation is induced or made worse by hypertrophy or spasm of the muscle; this may be done under local anæsthesia and preferably with the fingers, rubber bougies, or Kelly dilator, in order not to lacerate the muscle.

Partial or complete division of the sphincter under eucaïnization is desirable in cases where the muscle is very thick and rigid and simple divulsion has not been effective. In the writer's experience this operation has proved entirely satisfactory and has not been followed by incontinence or other unpleasant sequelæ.

Valvotomy should be performed when one or more of the Houston's valves has become hypertrophied and offers an obstruction to the descent of the fæces. The rectal valves can be satisfactorily divided without pain, danger, or confining of the patient to his room, by means of the Gant valve-clamp (Fig. 2), which can be applied in a moment in the office, and which cuts its way out by pressure necrosis and comes away with the fæces in from four to six days, leaving the severed edges of the valve widely separated. Valvotomy has proved effective in many cases, but in some it has been necessary to combine the operation with the other procedures suggested, in order to obtain the desired result.

FÆCAL IMPACTION.

Purgatives are contraindicated in this affection, because the impaction is usually due to mechanical causes. If not too large and firm, the fæcal accumulation can be dislodged and evacuated by copious enemata, high or low, depending on its location; the writer prefers an enema composed of one pint of soap suds, one ounce of castor oil, and two ounces of glycerin, which is used as often as necessary, and may be injected through the colon tube.

When the impacted mass is large, very hard, and coated over with mucus so that water will not permeate it, the fæcal tumor must be broken up with the fingers, forceps, a spoon handle or a rectal scoop, after which it may be softened and quickly removed by irrigation. In cases where the impaction is lo-

cated in the sigmoid colon, massage will often assist in dislodging it; but in rare instances there are multiple large, hard, and nodular masses, and it becomes necessary to anæsthetize and divulse the sphincter muscle, in order that they may be withdrawn with the fingers used as hooks.

The *after treatment* following operations performed in the office consists mainly in keeping the wounds healthy by means of cleanliness, good drainage and topical applications, and in regulating the stools by prescribing two-ounce doses of carabaña water, to be taken daily before breakfast; and, finally, in the use of suppositories containing morphine, cocaine, and belladonna, alone or in combination, when necessary to relieve pain.

43 WEST FIFTY-SECOND STREET.

THE PRACTICAL USES OF HYPNOTIC SUGGESTION.*

By WILLIAM LEE HOWARD, M. D.,
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Gentlemen: The presentation of this subject before your society is only another evidence of the increasing recognition of the value of hypnotic suggestion in medical practice. But this interest, this spirit of inquiry into the subject, has another bearing of vital importance to science, the public weal, and the influence of physicians. I refer to the suppression of the horde of charlatans, quacks, "get mental influence over your fellow men" schemes, and the fake "colleges" throughout the land that delude the simple, rob the gullible, and mentally injure the hysterical adolescent and the neurotic old maid. When every physician understands the use of hypnotic suggestion and its limitations, when the family doctor can explain to his patients that there is nothing mysterious about hypnotism, that "animal magnetism" only exists in the minds of the ignorant, and that, instead of weakening the will of the subject, it will, when properly used, strengthen it, and that the hypnotic state is a physiological state and not a pathological one, then, I repeat, we shall be able to drive out of this country, as they have been driven out of the old countries, the fakirs, liars, and charlatans.

I have referred to the hypnotic state as a physiological state, and this calls for some explanation. According to Charcot there are three phases of the hypnotic state: lethargy, catalepsy, and somnambulism, each perfectly distinct, characterized by certain physical and psychical conditions, but easily changeable the one into the other. They are really

* A lecture delivered by request before the faculty and students of the College of Physicians and Surgeons, Baltimore, Md., March 23, 1903.

only variations of one type. Charcot considered hypnotism a pathological entity very nearly related to hysteria. But here we find another evidence of a brilliant mind being influenced by one-sided evidence, by enthusiasm, and through a long course of constant repetition of the same clinical material. Charcot made his studies almost entirely among the hysterics at the Salpêtrière, and if he was able to hypnotize private patients he called these patients hysterical because they were hypnotizable. I left his clinics with the same opinion, and many other erroneous ones, which further study and clinical experience have greatly modified.

Liébault and Bernheim, at Nancy, have studied hypnotism among their general patients, and hold that the hypnotic state is physiological and closely related to natural sleep, and that all its manifestations are the result of suggestion. This, I believe, is the consensus of opinion among psychologists of to-day, and is in accord with my laboratory and office experiments.

As most of us are busy, practical physicians, I shall, in considering this subject, exclude psychological theories. It is impossible during the time I shall talk to you to be anything more than suggestive.

To commence with the simplest demonstration of suggestion, I will use a pigeon and a hen. The reason I use a pigeon is to show you an interesting fact. Now, when I take this hen and place her head under her wing, holding it there a few seconds, what do I do? Simply suggest sleep, and she believes she is asleep. In fact, now you see as I lay her on the table she seems to be something more than asleep. Notice the gradual extension of the legs, the opening of the claws in a manner that suggests catalepsy. Notice that the eyes are closed. Now we will take the pigeon and put it to sleep, hypnotize it as the fakirs would announce, with mysterious passes and a jargon of meaningless nonsense about "animal fluid."

The only reason I have wasted a few minutes with these well-known demonstrations is to point out a fact but little recognized. The pigeon is in a state of hypnosis; so is the hen. The pigeon's eyes are wide open, yet it sees not. The hen's eyes are closed. I do not pretend to explain this fact. I have my theory, but we won't waste time on theories.

One of the first facts you should be impressed with is, that the high degree of suggestibility in a hypnotized subject depends upon the mind of the patient; it is in such a state that the judgment, the critical faculty, the higher mental powers, are in abeyance, or in a state of inhibition. As the psychologists would say, the higher centres—the objective mind—are inhibited, and we cause the lower

centres—the subjective mind—to respond to suggestion. When your subject is in this condition it makes little difference in what manner, method, or mode the suggestion is made. Whether it be made as a command, by gesture, or in writing, the result is the same. What I wish you to understand by the above remarks is this: I say to this patient: "You can't open your eyes! You can't open your eyes!" Now this condition is brought about by his state of mind, not mine. I am throwing no "will power," no "animal magnetism," or any other pseudo-scientific garbage into this man's mind. The subjective mind accepts as true what I say, and acts accordingly. One patient will accept one statement and respond to it; another will refuse the same suggestion but will readily respond to a different one. Some will accept the statement that they can feel no pain; that they are completely anæsthetized, as you notice this other patient is. In this latter condition minor operations can be performed and sometimes major. This patient, as you see, is insensible to the puncture of his ear by this large scarf-pin of Dr. Rosenthal. This insensibility to pain is not because I have prevented conduction of this irritation to the sensorium, but have merely inhibited the recognition of it.

It is the uncertainty of the depth of hypnosis, of its duration, and the personal factor which enters into every case, that will always prevent suggestion from being used, except in rare cases, in major operations. Also, in minor emergency cases it is seldom advisable, because we can never tell to what extent the patient may be controlled. But if you have had sufficient time to test the patient, if you have frequently hypnotized him and produced complete or local anæsthesia, you will find nothing in the practice of medicine so astounding or satisfactory. It is this possibility of producing local anæsthesia, at the same time making such suggestions as will cause the patient to assist you passively; such as telling him his arm is an iron rod, that it cannot bend or drop, as you see in this young man's case; that makes this method of controlling your patient far superior to any other. Remember, I say, in those cases in which this can be done.

This brings us to the question of the percentage of cases hypnotizable, and the kind of patients most amenable to hypnotic suggestion. To both of these questions every operator will differ in degree from his fellow worker in the same line, yet each will be approximately correct from his standard. According to this statement, then, facts regarding the percentage of persons hypnotizable must depend upon what the operator means by hypnotism. If he means the number of persons who can be controlled completely, put in the state of ambulant somnambulism,

then I would say that about three out of ten would be a reasonable percentage. The percentage of those who can be put into a state of lethargy is about five out of ten, while for practical therapeutical uses in mild cases of neurasthenia, morbid imaginings, and insomnia arising from slight functional disturbances, the percentage is greater. A very excellent illustration of the large percentage of persons hypnotizable is found in the subjects here to-night. Two men, strangers to me, were sent up yesterday from the out-door department. One goes into a state of lethargy at once, as you see when I say: "Sleep! You are asleep! You can hear no noise, no voice but mine!" This other case I can place in the third or somnambulistic state, almost as rapidly. And you will see later on that his mind will be like potter's clay in my hands. He will be completely or locally anæsthetized at my command. So you see that taking a broad view of hypnotism, this evening I have succeeded in 100 per cent., or for those who insist on complete control, 50 per cent of my cases. I will say here, however, that undoubtedly I could, by a few days' work, get complete control of all the senses of this patient you now see in the lethargic state.

Of course these figures are greatly changed by two powerful factors. The first is the object the patient has in being hypnotized. If you are going to try and hypnotize a man for a mere experiment, if he says he does not believe you can do it, and will not give you his mental attention, but remains subjectively antagonistic, you will generally, but not always, fail. Some of the best subjects I have ever had were of this nature. Perhaps such success was due to the fact that the more the individual subjectively fought, the more determined I became.

One of such cases I met with in a clinic in New York several years ago. I had hypnotized an Irishman, producing complete anæsthesia for the extraction of a tooth. When the tooth had been extracted and he was told to wake up, he looked me all over; then, with an oath of surprise and thanks, went away promising to return the next day. He returned as promised, and in the presence of a large number of medical students I proceeded to hypnotize him. My best efforts were useless, and after prolonged trial I said to him: "Rooney, what is the matter? You won't pay attention to what I say."

"That's all right, docther. I do me best, but I want to shtay awake and see you put me to sleep."

The second factor in success is the personal element of the operator, a factor which must always be taken into consideration. This is often forgotten when some unsympathetic physician, lacking in this undefinable personal equation, fails to hypnotize a patient, and then runs around decrying the whole

well-known physiological phenomena, and shouting "Nonsense!" Just as reasonable would be the man who, having seen a very delicate operation performed by a surgeon of great gifts and experience, should ridicule the operation because after one trial he failed successfully to perform the same operation. In hypnotism there is no routine application of any of the psychological facts, but a constant individualization.

Theoretically, every man endowed with normal intellect can be controlled by suggestion. We see these facts demonstrated daily in individuals and mobs; an interesting psychological study, but one which does not at present enter into our discussion. I say every man with a normal brain power can be hypnotized. The greater the mental activity, the quicker will the individual respond to suggestion, as would be expected. But also, this individual is capable of repulsing suggestion and will do so if the suggestions are repugnant to his teachings and moral nature. This statement brings up the question of the possibility of causing criminal acts by hypnotic suggestion. As I have elsewhere gone into this subject, I will here only state the facts we have in our possession.

There exist in all of us two personalities. A man appears and acts uprightly, is considered the soul of honor among his friends and business associates, and has never demonstrated any other character. By hypnotic suggestion we inhibit his powers of judgment, put in abeyance any knowledge of his responsibility to his fellow men and the fear of the law; temporarily take away from him the objective ego, and we have the true ego, the man himself. If there exists in this individual the potentiality of crime, if there remain immoral instincts, suggestions that will put these factors in activity will, I believe, cause him to carry out whatever criminal suggestions are made. On the other hand, if the man is subjectively what he appears to be objectively; that is, if the man has no latent and hidden criminal instincts, no amount of criminal suggestions will affect him, and usually in these cases the repugnant suggestions produce such a shock that the man will be aroused from his hypnotic condition. In a few words, these are facts which have been impressed upon me by careful experiments during the last ten years. So we see that hypnotism is a subjective phenomenon depending entirely upon the nature and state of the subject, the person hypnotized.

ITS USES.

The practical use of hypnotic suggestion is limited; yet in its narrow sphere it is invaluable. Scientifically understood and practised, it broadens the usefulness of an educated physician. For its great-

est success one must have the training and experience of a neurologist. It demands an association with the experience and the insight of the diagnostician in functional neuroses. I find its greatest value in making a diagnosis between functional and organic brain disturbances. It will often solve those protean puzzles which we find in the mental phenomena of the psychopathic. Remember that hypnotism will have no effect on organic lesions, but will often alleviate the mental suffering, the worry, insomnia, and introspection accompanying organic diseases.

The pains of locomotor ataxia, rheumatism, neuralgia, etc., may be relieved, but the relief is seldom enduring, and but few persons suffering from these diseases are good subjects. Nevertheless, it is always worth while trying the remedy. It is quite certain that in good cases the bowels may be regulated, appetite increased, and especially insomnia alleviated or cured.

That protean disease hysteria is the field for the practice of hypnotic suggestion. There is scarcely a symptom in all its multitudinous manifestations that has not been removed by suggestion during hypnosis. Pain is abolished and anæsthesia produced, paralysis, spasm, and contracture corrected, affections of the digestive and genitourinary system, Raynaud's disease, polyuria, anuria, affections of the special senses, and all the expected and unexpected disturbances arising from an unstable nervous organization are cured or modified by hypnotic suggestion.

The patient whom I now show you came to me suffering from excessive insomnia. The trouble had lasted about four years. Its cause was shock and domestic troubles. He has been the rounds of the physicians, and says he has swallowed everything from hot water to Blue's nervura. He weighed one hundred and twelve pounds last November, he now weighs one hundred and forty-two pounds, the heaviest he ever weighed. To cure him it was necessary to get rid of his worry; that is, to cause him to forget it, to build him up mentally. This is the way I did it. You notice I have only to command him to sleep and he becomes dead to the world. Every night he was put to sleep in this manner, but told to awaken at a certain hour, and that when he awakened he would feel rested, refreshed and hungry. Posthypnotic suggestions were made concerning his worry, and he was readily made to forget it.

The value of hypnotic suggestion in the treatment of dipsomania is through its indirect effect. Those of you who are familiar with my work¹ on dipsomania, will remember the distinction I draw between

dipsomania, the disease, and drunkenness and inebriety as a vice and habit. During the dipsomaniacal attack suggestions are useless. After the attack is the best time to attempt hypnosis. It is then that one can assist the discouraged by suggestion of cure, and the suggestion that the patient will see the doctor before he takes his first drink.

The impatience of results is one of the many obstacles that the physician has to encounter and battle against. Hypnotism has no power to create. What has been destroyed by disease remains dead.

The physician who uses hypnotic suggestion must have knowledge of technical conditions and understand hypnotic phenomena clinically. The method being largely a psychical one, his education should extend to a comprehensive study of physiologic psychology, so that he may early appreciate and discriminate between psychic states and their subtle manifestations in mind and body.

THE WORK PERFORMED BY THE DIAGNOSIS LABORATORY OF THE DEPARTMENT OF HEALTH IN CONNECTION WITH EHRlich's DIAZO REACTION DURING 1902.

By J. S. BILLINGS, JR., M. D.,
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Early in 1902 the department of health, believing that the presence in the urine of Ehrlich's diazo reaction furnishes an early and valuable aid in the diagnosis of typhoid fever, determined to make such examinations a part of the routine work performed free of charge, for the physicians of Greater New York. This was done on June 1, 1902. A circular descriptive of the reaction was prepared and distributed to the medical profession throughout the city.

Outfits consisting of a suitable stoppered bottle in a wooden case, a blank slip for the necessary data, with directions on its reverse side, for obtaining and forwarding the specimen of urine, were prepared and issued to the various drug stores, throughout the city which act as culture stations. The specimens are examined on the morning of the day following their collection, and the results of examination telephoned to the attending physician. Where his telephone call cannot be ascertained, the report is sent by mail.

The test is performed in the following manner: Equal parts of the suspected urine and the following solution (saturated solution of sulphanilic acid in 5 per cent. hydrochloric acid, 40 parts; 0.5 per cent. solution of sodium nitrite, 1 part) are mixed and well shaken. On the addition of a few drops of ammonia a brilliant rose pink color should appear, if the case

¹ *The Perverts.*

is one of typhoid fever. The twelve-hour sediment is also characteristic, consisting of a dirty-gray lower layer and a narrower dark olive-green upper layer.

The first specimen was received June 5, 1902. Between that date and January 1, 1903, 409 specimens were examined. Of these, 40 were second, or confirmatory specimens. Of the remaining 369, 158 showed a positive reaction, 46 a doubtful reaction, and 165 no reaction.

1. Cases showing positive diazo reaction:

Total	158
Physician's clinical diagnosis "typhoid"...	86
" " " "doubtful"...	72

DAY OF DISEASE ON WHICH REACTION WAS FOUND.

1	0	5	16
2	0	6-10	63
3	0	11-14	24
4	22	Over 14	11

In 91 cases the blood was examined for the Widal reaction. A positive reaction (1-20) was found in 43; doubtful (1-10) in 23; negative in 25. Albumin present in 77 cases.

2. Cases showing doubtful diazo reaction. (By doubtful is meant cases where the typical rose-pink coloration was not obtained, yet where a reaction was present.)

Total	46
Physician's clinical diagnosis, "typhoid"....	36
" " " "not typhoid".	10

DAY OF DISEASE ON WHICH REACTION WAS FOUND.

1	1	6-10	22
2	1	11-14	4
3	2	Over 14	3
4	4	Not stated	6
5	3		

In 19 of the doubtful cases confirmatory specimens were received. Of these, 14 proved negative and 5 still doubtful. In 14 cases there was a trace of albumin present. In 20 cases a blood examination for the Widal reaction was also made. A positive reaction (1 to 20) was found in 5 cases; doubtful (1 to 10) in 5, and no reaction in 10.

3. Cases not showing diazo reaction:

Total	165
Physician's clinical diagnosis, "typhoid"....	57
" " " "doubtful"...	108

DAY OF DISEASE ON WHICH SPECIMEN WAS EXAMINED.

1	0	6-10	51
2	6	11-14	24
3	7	Over 14	23
4	14	Not stated	22
5	18		

In 77 cases a blood examination for the Widal reaction was also made. A positive reaction (1 to 20)

was found in 7 cases; doubtful (1 to 10) in 11, and no reaction in 59. Albumin present in 30 cases. In 4 cases a confirmatory specimen was received.

Remarks.—That the examination of urine for the presence of the diazo reaction in cases of suspected typhoid fever is of value and fairly reliable is shown by the absence of complaints from physicians. It is stated in the circular issued in every outfit that the reaction occurs in other conditions than typhoid. But these conditions can be clinically distinguished from typhoid fever with comparative ease—*e. g.*, pulmonary tuberculosis, scarlet fever, measles, etc. The reaction is more constant in typhoid fever than almost any other sign or symptom, not even excepting the Widal reaction in the blood.

It is most marked between the fourth and tenth days, being found in the great majority of cases by the fourth day, and in not a few on the third. The more intense the infection the earlier the appearance of the reaction. It begins to fade after the tenth day, and in many cases has disappeared by the beginning of the third week. This accounts in part for the relatively large number of negative specimens—47 were sent in too late in the course of the disease.

Practically no advantage was taken by physicians of the offer of this department to examine microscopically specimens of urine from convalescent cases of typhoid fever for the presence of typhoid bacilli.

Comparison of the Widal and diazo results shows the following:

(a) Diazo, positive, Widal, positive, 43. In the majority of instances the two specimens from each case were sent in on the same day. In 7 the Widal reaction was not positive until 3 or more days after the finding of the diazo reaction in the urine.

(b) Diazo positive, Widal doubtful, 23. In 19 the case proved to be clinically typhoid; in 4 the clinical diagnosis was doubtful. In all but five instances the blood examination was made on or after the seventh day of the disease.

(c) Diazo positive, Widal negative, 25. In 19 the case proved to be clinically typhoid, and the Widal test was made on or after the sixth day of the disease.

(d) Diazo negative, Widal positive, only 5 cases. Of these, the examination in one was made on the fourth day (too early), in 3 after three weeks (too late), and in one on the tenth.

CONCLUSIONS.

1. The examination of the urine in cases of suspected typhoid fever is of value, provided that its limitations are recognized.

2. While not so absolutely pathognomonic of typhoid fever, yet the diazo reaction is even more constantly present in that disease than the Widal reaction. So that its absence at a period when it should

be present, if the case is one of typhoid fever, is of considerable value in making a negative diagnosis.

3. In a majority of instances the diazo reaction is present in the urine at least forty-eight hours earlier than the Widal reaction in the blood.

4. It disappears much earlier than the Widal reaction, however, and negative results obtained later than the second week are of little or no value.

5. "Doubtful reactions" have slight significance.

THE TREATMENT OF SOME OF THE SURGICAL COMPLICATIONS IN TYPHOID FEVER.*

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By request of your president, I shall limit my paper to the subjects of abscess of the liver, subphrenic abscess, perforation of the gall bladder, cholecystitis, and intestinal perforations. The surgical treatment of either of these conditions would be an easy matter to discuss if we were able to say definitely that this or that condition existed. When we consider the varied pictures presented by typhoid in any of its stages, we are confronted by a line of symptoms that, barring the question of pain, can be ascribed to a typical or atypical case of typhoid. One can then readily understand the difficulty that both the internist and the surgeon have to contend with in arriving at a positive diagnosis. I doubt if a positive diagnosis in any of the complications considered by me in this paper is ever made without exploratory operation. But that sufficient evidences are present to demand an exploratory operation for the good of the patient in all these complications cannot be gainsaid.

The border line, symptomatically considered, between subphrenic abscess and hepatic abscess is too closely drawn to make a diagnosis without some exploratory measure, either by means of the aspirating needle or by the knife.

The same remarks apply in certain cases of cholecystitis and liver abscesses involving the ventrad surface of that portion of the liver in the epigastric space. And, as will be noted in the case of perforation of the gall bladder reported in this paper, the symptoms, barring the site of greatest pain, were those of intestinal perforation.

Abscess of the Liver.—Osler, in his work *Practical Medicine*, fourth edition, 1901, states that solitary abscess of the liver is exceedingly rare, and occurred in but two instances in his series of 829 cases of typhoid fever. Subphrenic abscess is exception-

ally rare. The operative treatment of these can readily be considered under one head.

When the abscess of the liver is situated below or within the costal arch, the method of approach is that of an ordinary laparotomy, taking extra precautions to wall off the general peritoneal cavity with gauze in case natural adhesions do not exist.

Should the patient be in a markedly low condition, general anæsthesia is not to be countenanced, but local anæsthesia by means of cocaine or eucaïne should be employed.

When the abscess is behind the ribs, a subpleural or transpleural and diaphragmatic operation may be required. This is often best done by the excision of sections of one or more ribs, and careful dissection of the pleura from the costal wall and then from the diaphragm, with puncture through the diaphragm, constituting the subpleural operation. This is only feasible in those hepatic and subphrenic abscesses occurring low in the costal region.

Transpleural and transdiaphragmatic operations must be done in those cases in which the pus has collected high in the costal region. This operation necessitates the excision of a section of one or more ribs, with careful closure of the transpleural openings when no pleuroparietal adhesions exist, before the abscess is opened. This may be done by suturing the cut edges of the costal and diaphragmatic pleura so as to exclude the general pleural cavity, or by means of thorough packing with gauze. The cavity is then opened and free drainage established by means of a tube surrounded by gauze. This primary drain of tube and gauze is changed after forty-eight to seventy-two hours, and either gauze or tube and gauze used until the cavity is repaired. Irrigation of these cavities is contraindicated in the first forty-eight hours.

While packing, after excision of the ribs, with a view to producing adhesions between the costal and diaphragmatic pleura, is an excellent expedient, nevertheless, I do not believe in delaying the evacuation of the pus at the expense of the patient's vitality.

In a period of seven years at Gouverneur Hospital, we have had but one case of abscess of the liver complicating typhoid, and that occurred in about the fourth week of the disease. The patient, a man, about thirty-five years old, was operated upon by the attending surgeon on duty, who found one large abscess. After a lingering illness the patient died. Upon autopsy, multiple abscesses were found.

Recently I operated for appendicitis in a boy five years and a half old, with a temperature of 105° F., and a pulse of 156. The picture of appendicitis was clear—abdominal rigidity, McBurney's point well marked, and with these signs a condition of prostration not accounted for as appendicular. The

* Read before the Eastern Medical Society of New York, Symposium on Typhoid Fever.

cæcum was markedly inflated, the appendix congested, and upon opening the appendix, fully thirty thread worms and two ulcers of the mucosa were found. A fair quantity of serum was present in the peritoneal cavity. The abdomen was closed without drain. For twenty days the patient's condition was distinctly that of typhoid, although Widal tests were negative. He was seen by excellent internists, who pronounced the case one of typhoid complicated by appendicitis. There was a sudden elevation of temperature after a period of characteristic third week recession, and upon examination for the cause, a subphrenic abscess was found. This was opened by the transpleural method, through an incision between two ribs, with exclusion of the general pleural cavity by means of gauze packing. This child is still living, six weeks after an operation for subphrenic abscess.

Perforation of the Gall Bladder.—This subject was taken up by me in a paper read before the New York Surgical Society, February 11th (see *Annals of Surgery*). In reviewing the literature, with great help from my friend, Dr. W. W. Keen, of Philadelphia, I found thirty-three cases recorded, and, reporting one of my own, brought the recorded cases to thirty-four. In this series of cases, seven in which operation was undertaken, but for reason of shock was not completed in two, four recovered and three died. If we exclude the incomplete operations, we have a record of five completed operative cases with one death, or a mortality rate of but 20 per cent. Of twenty-seven patients not operated upon, all died. There can be no question of what course to pursue in these cases when we consider this mortality rate in operative cases as compared with that in non-operative cases.

As to the operative procedure, I repeat from the paper above quoted: "I prefer the incision through the rectus muscle rather than the one at its outer border or the one in the median line, as the exposure with this incision is without question the best, and the after probability of hernia is reduced to a minimum."

The question to me of what to do with the perforated gall bladder is summed up in one word, cholecystectomy. With our present knowledge of the necessity or not of a gall bladder, particularly one that is diseased, the sacrifice of this viscus cannot give us one moment's unrest. Nevertheless, the condition of the patient and the surrounding viscera must weigh some in the matter of the disposition of the perforated gall bladder; therefore cholecystotomy must be done when cholecystectomy is not a profitable undertaking for the patient's immediate welfare.

The repair of the perforation by suture is unwar-

ranted, first, owing to the friability of the tissues in these cases, and, secondly, the same objections arise as in the radical or ideal operation of cholecystotomy.

Recently L. Baldassari and A. Gordini (*Münchener medicinische Wochenschrift*, 1902), as a result of experiments upon animals, advise the use of a musculo-peritoneal flap from the abdominal wall, made in such a manner as to bring the muscular layer on the inside of the bladder. I am quite satisfied that this ingenious method of repair in gall bladder surgery is an operative curiosity only, and will never be used by the practical man.

The history of the case reported by me is as follows:

A woman, forty-six years old, married, mother of several children, passed through a typical prodrome which was followed by a five weeks' course of unquestionable typhoid fever. The eruption, although scanty, was evident and unmistakable. Headaches, enlargement of the spleen, the character of the stools, abdominal distention, dry, coated, and fissured tongue, delirium, followed by the manifestations of exhaustion, subsultus tendinum, and carphologia presented a clinical picture that even without the typical temperature, as shown by the chart, could be taken for the one thing only—typhoid fever. During the period of her third and fourth weeks, a left-sided phlebitis developed. Two attacks of pain in the back, described as being between the shoulder blades, were present in the third week, but at no time, according to the chart, were there any other symptoms present suspicious enough to call any attention or notice to the gall bladder. Her temperature reached a normal plane at the close of the fifth week. On October 21st, the day before I saw her, and about the second day of her sixth week, convalescence was sufficiently advanced to allow her to sit up in bed. On the night of this day, at 10 o'clock, she was seized with a severe pain in the abdomen, which required several hypodermics of a quarter of a grain of morphine before any comfort was obtained. The site of this pain was not specialized as to onset location when I saw her. She suffered considerable shock, and when seen by me, exactly twelve hours after the onset of pain, presented, in addition to those accompanying a protracted illness, the following symptoms: Anxious countenance, pulse 120, respiration rapid, temperature 102° F., abdomen somewhat distended, exquisitely sensitive all over, but more marked on the right side. Although rather later than usual for a perforation of the intestine, it was concluded best to explore the right iliac fossa. This was done by an incision through the right rectus. Upon incising the peritonæum, there was a gush of bile-stained, cloudy fluid, with no odor and no food particles, through the opening in the abdominal wall. Our tentative diagnosis of perforation of the intestine was then changed to that of a probable perforation of the duodenum or gall bladder; at the same time, all the small intestines were carefully gone over before extending the incision.

Fully a pint of bile-stained fluid was sponged out during the process of inspection of the intestines and enlarging the incision. The gall bladder and duodenum were easily exposed, and then it was seen that an opening, irregularly circular, fully a quarter of an inch in diameter, was present in the lower portion and inner aspect of the gall bladder, near the cystic duct, through which clear bile was flowing. The gall bladder on its outer aspect presented no other inflammatory manifestations, nor was it evident that it had been enlarged previous to the perforation. The mesentery and intestines were deeply stained with bile and were very friable, the peritonæum tearing upon the gentlest handling. I decided to do a cholecystectomy. This was very easily accomplished, the hepatic attachment being separated, owing to the very friable condition, with the greatest ease. A double catgut ligature was passed about the cystic duct, the bladder excised, and the mucous membrane presenting in the stump brushed with pure carbolic acid, a gauze drain leading down to the stump and also a gauze packing on the very freely bleeding hepatic surface from which the gall bladder had been removed were employed. The peritoneal cavity was sponged out with salt solution and gauze pads. The abdominal wall was then closed, except at the point of exit of the drain and at its lower angle, where another gauze drain passed into the iliac fossa and pelvis. This latter drain was removed in three days. The drain and packing in the region of the stump were removed at this time, but another small drain was placed in this opening. A perfect recovery and complete union was recorded in three weeks. Upon closer investigation after the operation had been done, we were told that her onset pain was situated at or about the usual surgical location for gall stone colic, and that the general abdominal pain appeared at or about the end of the sixth hour. Upon opening the gall bladder, two small stones, not considered factors in the cause of the ulceration, were found. The mucous membrane presented numerous small ulceration areas, and no opening to correspond to the opening seen on the peritoneal surface. There was a small ulceration area of about the size of the head of an ordinary pin, in the mucous membrane at a point almost directly through from that of the peritoneal opening, and upon passing a probe into this opening, it was found to pass obliquely through the gall bladder, making its exit through the peritoneal orifice, giving one the reversed picture of the funnel-shaped perforating ulcer usually seen. Cultures taken from the contents of the peritoneal cavity and from the gall bladder showed the colon and typhoidal bacilli.

Cholecystitis is a comparatively frequent complication. Camac (see Osler, 1901) pages 9 to 26, reports having records of 115 cases. That this complication is seen sooner or later in the hands of the careful internist, I do not doubt.

Recently I was called to see a young woman, twenty-four years of age, who had passed through a period of eight weeks of typhoid, and after one week's convalescence was seized with an attack of acute cholecystitis and a relapse of her typhoid. In

this instance the distended gall bladder was easily outlined upon palpation.

Operative interference in this condition depends largely upon the symptoms presenting. If marked rigidity of the upper rectus segment continues for thirty-six to forty-eight hours without any diminution, if the temperature and pulse can be definitely ascribed to a septic condition other than that of the toxæmia of typhoid, and if imminent rupture of the bladder is suspected, then an operation should be done—cholecystotomy, if the patient's condition is bad or if cholangitis is present; cholecystectomy if cholangitis is not suspected or the patient's condition warrants this procedure. When cholecystectomy is done, the abdomen can be closed without drainage, unless we leave the cystic duct open for drainage of the hepatic.

Intestinal Perforation occurred in twenty-three out of a series of 829 cases, 2.7 per cent., reported by Osler, in 1901. Nearly one half occurred in the third and fourth weeks.

Murphy, in *General Surgery*, of the *Practical Medical Series*, 1902, on pages 273, et seq., reports the cases of five operators. These number in all sixteen cases. Brown reports three cases in the *Annals of Surgery*, March, 1903, making a list of nineteen in the recent literature. The deaths number eleven, and the recoveries eight, giving us a mortality rate in these unselected cases of about 60 per cent. It is rather interesting to note that in this series six cases were in females, with four recoveries, while thirteen cases occurred in males, with but four recoveries.

The average time at which the operation was done after the diagnosis of perforation was made was nine hours. The earliest with success was three hours, in a female. The latest with success was thirty-seven hours, also in a female. This case seems so remarkable as to be incredible. The average age was twenty-seven, the youngest twelve, and the oldest forty-seven years. The perforations occurred from the fifth to the forty-third day, while the general average for perforation was twenty-five and three quarter days.

In all cases of perforation suture of some variety or other was employed to close the opening, no excisions of gut or ulceration area having been recorded.

The question of when to operate seems at present to be one of waiting six to twelve hours for shock to subside. And while it is admitted that in the nineteen cases quoted by me the average time of operation with recovery was nine hours and a half, and that in deaths was ten hours, it must also be remembered that one case of operative recovery was done at the end of thirty-seven hours, or thir-

teen hours longer than the longest time elapsing between perforation and operation in any case of operation followed by death, and that the cases of recovery, except the thirty-seven hour case, were operated upon in three, four, four and a half, five, five, seven and eight hours. In other words, the majority were operated under eight hours after the perforation was suspected. Of those terminating fatally, the average was ten hours in which operative time was mentioned. These cases were reported as being operated upon in the following time after the diagnosis, the figures representing hours: twenty-four, twenty-one, twelve, twelve, nine, eight, six (cause, acute obstruction), five, two (died in six days), one (shock). Once case, time not given.

With these statistics before us, I am inclined to believe that we should not give more than three or four hours for the shock to subside before operating. The suture to be employed is either the Lembert or the circular purse string when inversion is possible. The question of drainage can only be arrived at by experience. I am inclined to believe, if we can make a fairly clean toilet, no drainage should be used, as we can rely upon the leucocytes taking the same course here as in our work in appendicitis and septic peritonitis due to other causes.

60 WEST FIFTY-SECOND STREET.

IS THE COGNOMEN, "CHEMICAL PHYSIOLOGY," SCIENTIFIC? A STUDY OF VITAL PROCESSES.

By JOSEPH CLEMENTS, M. D.,
KANSAS CITY, MO.

The fact that Black, Faraday, J. B. Meyer, and others stood aloof from the schools, yet originated great scientific advances, has been recently noticed, and to this fact, and their consequent freedom from "traditional bias," the possibility and actual success of their achievements have been attributed. The late Rudolf Virchow, in his Huxley Lecture, made the imperative suggestion that physicians, "laying aside the dogmas of the schools, construct for themselves an objective picture of the nature of the vital processes." This may excuse the unorthodoxy of style in this essay.

The question in our title answers itself, and in the negative. Chemical physiology would be the correct nomen of a phenomenon essentially and distinctively chemical in nature, chemical force being its operating and dominating principle.

Physiology is a vital phenomenon, not merely a chemical, chemistry playing a secondary part. In the discussion of scientific questions terminology is of prime importance and the avoidance of misnomers essential to exactness. There is needed a term

in chemistry cognate to physiology, and chemistology well serves the purpose. Also there is need of a word in physiology synonymous with chemistry, which, however, is not so facile of coinage. Chemistry may express the phenomenon chemical; we have no word as the nomen of the phenomenon physiological. Professor Halliburton uses the term "physiologic work," which is the best he can do in our language; a more specific word is a desideratum.

Chemistry is a physical science, its sphere of operation is the inorganic world. Here its force is recognized as distinctive and "resident." It has to do with atoms and molecules and their relations and, especially in its active operations, to their juxtaposition and the adjustment of those relations. Here and in this chemical force is magisterial, autonomic, this is its province in the great cosmic economy. Chemistry, then, is recognized as related to physics, having its own special force.

Physiology is excluded from the group of physical sciences and is a branch of biology whose phenomena are on exhibition solely in the organic world.

The distinguishing characteristic of biological phenomena, and consequently of physiological, is in the nature and quality of their force and in the peculiarity of their operations. These are different, essentially so, from all other known phenomena, and their force or principle of operation is dissonant in special and marked particulars from any and all other known forces.

Nor is it competent to say that this has reference to its mode of operation merely, its phases of expression—a mode of operation of an ordinary force in this particular fashion. Vital, or life, force has qualities and properties other than this would include.

The so called laws and forces operating in physics are the correlated forces, in varying degrees of correlation. The forces operating in chemistry, and in all physics, are cognate, while life force, the acting principle in biology, is, in specific and essential property and nature, very unlike and cannot be classed and correlated with them, and a study of the vital force in its own operations will certainly evidence these to be the facts.

I do not forget that this is not an address to first year students, but these points have so evidently been overlooked, in part, that this uncollegiate method of treatment is pardonable.

The following is an epitomized statement of the cardinal facts the phenomena in vital physiology reveal. We have assumed a *special force* which is demonstrable and which cannot be correlated with the other forces that are said to be "resident" in the cosmos.

This force is local and can be localized in a sense not predicable of any other force or energy. This force has a "physical basis" with which it is invariably associated, hence its localization. The physical basis of life is the bioplasm or protoplasm of plant and animal; here its special force may be said to be "*resident*," but in a sense much more definite and specific than the correlated forces may be said to be "*resident*" anywhere.

In evidence of this latter statement I adduce the fact, incontrovertible as it is, that in the absence of this physical basis or depository of life power the special phenomena are nowhere found and up to this hour have been impossible of production.

Extinguish the force by destroying the protoplasm, and it is impossible of reconstruction or reproduction. Destroy all life on an island or certain area, and the specific depository of vital force, the seed, must be reintroduced before the drama of organic phenomena may be reenacted.

All the processes of an organism originate in and are operated by bioplasmic force and agency alone; in other words, vital force is sovereign in all organic phenomena.

With this fact of the sovereignty, and equally important in its bearing upon medical science, is allied the fact of the singularity of the vital force in organic phenomena. It is not only sovereign but singular; it is not only the active agency but the sole agency; and this, when evidenced, will exploit at once the error of active agency of microorganisms in disease and active principles in drugs operating to "cure." The relation of the former is simply causal and adjuvant in the pathological vital processes; that of the latter causal and adjuvant to the therapeutic processes of the superior organism; of which more later in the discussion.

A further point, noteworthy, here, is the fact that the specific substance, protoplasm, holds this special force as an endowment, the only example of the endowment of force of which we have knowledge in cosmic data.

These are cardinal facts which entify the special force vital in all physiological work, localized in protoplasm—not simply the "cell," but more specifically the cell's nucleus—of plant and animal, further evidence and illustration of which will appear as we proceed.

Preserve the seed of a plant for years, possibly centuries, then bring it into its normal environments and the phenomena of growth will originate there and then. Nor does the active principle in the evolution process consist in anything constituting the environment, the growth phenomena being solely the response of the germ potentiality to the stimuli the environment affords. Irritability is the property, not

of the "cell" or of any organic tissue, but solely of the bioplasm, or living matter, consequently there is no response to a mydriatic in a dead eye.

It is not germane, at least not necessary, to our purpose to discuss the hypothesis of epigenesis as to its bearing upon the phenomena we are considering, the reasoning of its ardent advocates failing to establish any magisterial function. The facts we have segregated and emphasized will evidence of themselves their entity and give a reasonable basis for their interpretation; while the effort to epitomize such a collection of facts as the foregoing as cognate in the inorganic realm would be futile and only emphasize their impracticability external to the organic sphere. Cosmic forces may be correlated and segregated, life force may not be classed with them, nor may any inorganic matter be instanced as holding, as an endowment, any one of the correlated forces in any such sense as we have shown in regard to bioplasm and vital force.

And further, neither may there be a statement made, of any one of the correlated forces, of varied qualities and properties such as have been fairly educed of life force in the organic world, and the facts we have set forth with the principles and qualities which distinguish all organic phenomena cannot be without important significance in the metaphysics with which we are dealing.

We have, then, before us two distinctive classes of phenomena designated chemistry and physiology, and the incompatibility of their union, in this operative and qualifying sense, is the position we assume.

Chemical physiology, if it means anything, treats of a series of organic phenomena in which chemical force is the operating force and agency.

Sovereign in the phenomenon organic, originating the processes and permanently dominating them, is chemical force, the all-sufficient agency in the operative phenomena. This certainly is untenable ground, and cannot be scientifically maintained. Other force besides chemical force is in evidence in physiological processes, without which chemistry, germane to physiology, is impossible. The distinction in kind and class of the respective phenomena is marked and evident and incomparable. True, there is some complexity in inorganic processes, as in the formation of crystals, for instance; but to the question, Do crystals grow? the answer is emphatically No!

In organic structures there is neither a "machine-like organization of the ultimate constituents," nor yet a "chemical organization of them" (Barker¹).

In the former—the machine—the various parts are made separately and put together, usually piece by piece.

¹ This is not Barker's position, but a speculative view used in his able discussion *The Unveiling of the Cell*.

In the latter—the crystal—no “organization” is discoverable, but formation by precipitation, condensation, addition, accretion, anything but organization or structural growth. No “structures agreeing in principle” with the organic have been found in the inorganic world, and the hypothesis that this is possible is not of more than its face value, which is not much in this instance.

Organic, or vital, phenomena in their essential processes are the exact converse of the inorganic. Every particle of organic tissue was once alive. In the life act—metabolism—a radical change and transformation takes place, the assimilated and vitalized nutrient substance becoming essentially different from what it was before the assimilation and vitalization occurred.

The conditions, first as nutrient matter, then as protoplasm, and again as formed tissue, structural, have no counterpart in inorganic matter; no merely chemical processes are synonymous with these, and, for the present at least, it is “necessary to assume that these structural relations form an unbridgeable chasm between the organized and the unorganized,” notwithstanding Butschli’s position to the contrary.

The late John Fiske² seems to have failed to see and appreciate the distinction in these phenomena, and quite unaccountably. He takes the ground that the shapes of crystals are due to the forces of attraction and repulsion acting upon the molecules of which they are composed, and also that the shape of a dog is due to the same potentiality, only that the process in the canine formation is immeasurably more complex, “the same in kind, differing only in degree.” The position is untenable and unscientific. The two classes of phenomena are well illustrated in the instances before us, the formation of a crystal and the, not mere formation, but evolution of a dog.

Inorganic, or chemical, processes have to do with the atoms and molecules of which matter is formed. The cosmic nebulous phenomena of corpuscular and atomic formation is farther back than we need to go. Corpuscular conception and the formation of atoms are purely mental phenomena, so far as the spectacular is concerned. Only “mental senses” can manipulate atoms, twenty-five millions of which form a line an inch in length merely. The processes bringing these by transposition, transformation and juxtaposition, with the varied qualities accruing, to their entity as metals, rocks, soils, water, etc., are specifically chemical. These chemical phenomena create nothing, destroy nothing; a chemical formula has its equation always. Into the formation of crystals there go preformed and unchanged molecules which by simple accretion and accumulation, under the attractive and repulsive force of chemistry,

come to their various shapes. Surely it cannot be that a dog comes to his shape by processes the *same in kind* as these, the phenomena being simply more complex, even if immeasurably so? The processes are *not* of the same nature or kind.

A dog is not “formed” in any sense comparable with crystal formation, speaking scientifically. A dog, including his shape, is developed by complex and multiplex and psychovitalistic evolution phenomena, absolutely incomparable with and immeasurably transcending crystal formation. Life phenomena—physiological processes, the cardinal spectacular phase—have little in common with the mere chemical process of crystal formation.

Nothing can be said to grow by accretion! Growth, physiological work, is a process from within outward, in its essential act or primordial operation, and by a force or principle, not merely “resident” in the organic world and peculiar to it, but localized as an endowment in the germ, which alone originates the processes and in which it alone is sovereign and dominant in all its varied evolution phases and grades. In the primordialism of organic phenomena none of the inorganic or correlated forces are in evidence, the process being independent of them, direction and tendency in vital motion being, as I said above, from within outward, centrifugal, as against the centripetal motion and tendency in inorganic incipient processes (Beale). Atomicity, molecularity, and crystal formation, the primordial cosmic and the later chemical processes, are specifically centripetal in conception and motion, while in the primordial organic phenomena, the life act, without which is no physiology possible, the special force is in evidence and is sovereign, its entity and sovereignty being manifest in the abeyance of the centripetal force, germane to chemical processes cognate to these conditions, and the centrifugal phenomena, specific in organic or physiologic work, obtain. The shape of a dog, or any organic thing, is not obtained by processes centripetal, in accretion of performed and unchanged and homogeneous matter. That constitutes crystal formation. A dog, a tree, a microbe even, comes to its shape by processes not merely immeasurably more complex, but absolutely different in kind.

In organic evolution there is not merely chemical transposition of atoms, but a vital process in which lifeless substance becomes life-full, every part of the tissue constituting the organism entering by that portal. This ultimate organic process is incessant in enactment of the drama of life and death. The bioplasm—not the “cell”—passes on its endowment of force to the nutrient matter of its environment, which it takes up and in the act “dies,” the “resurrection” appearing in the vital property of its pro-

² *Outlines of Cosmic Philosophy*, Book ii, Chap. viii.

toplasmic successor, a further, and now spectacular, phenomenon, expressed in the well known transfer of vital property from the parent to the daughter cell. Physiology involves the presence and operation of the principle of life, its primordial phenomenon—metabolism—being the exponent of the life force.

Is there, in all the inorganic realm, anything analogous to this organic phenomenon, metabolism, the primordial and specific phase of it? In, specifically, the nature of the processes, with the multiplexity and multiplicity of them, there is nothing in the former comparable with the latter, nor is it possible that "the action of bioplasm can be accounted for by the properties and processes of chemism."

Nor have we more than begun in our use of dog physiology, for we have not yet heard him bark! That phenomenon would open up fields for investigation which time forbids our entering, hence we keep him muzzled.

Strictly speaking, metabolism is organic phenomena and has to do with organic matter. There is a metabolism having to do with inorganic elements and matter, but its phenomena are not simply chemical, it is more than chemical: it is chemical plus the vital force as seen in all plant physiology.

Animal metabolism is of organic nutrient matter, substances having come to their organic condition by processes of plant physiology, vital force the operating force. Inorganic elements and substances are metabolized in and by processes of vegetable physiology, the elements of the inorganic world being lifted up into the vegetable kingdom by the metabolism of the plant. The kingdoms are distinct and closed, hermetically sealed one from the other as you ascend. Open from above downward, the plant enters the world beneath; so of the animal with the vegetable beneath. And this order must be observed in the phenomena; a kingdom cannot be skipped by animal physiology utilizing inorganic elements in its own metabolism and nutrient supply.

These facts have quite an important bearing upon medical science, especially in its therapeutic branch, which can only be briefly glanced at.

The impossibility of chemical physiology seems absolute, and the chemistry in physiology is necessarily biochemistry, that is, chemistry plus the life force, the latter being the sovereign and dominating principle.

The distinctive quality and grades of plant and animal physiology, evidenced in the study of the two classes of phenomena, will make to appear the importance of the recognition of the part played in drug therapeutics, and of the difference between the nutrient and the dynamic relation, of the various substances in the vital processes. As we have seen, in-

organic elements and matter are metabolized in vegetable physiological phenomena; they are assimilated and vitalized, rendering them fit and competent to animal physiological metabolism, the plant metamorphosis of inorganic matter being absolutely necessary to animal assimilation. Metabolism, inclusive of metamorphosis of elemental matter, is a comprehensive term and process, the primordial phenomena in which, however much we may object to the term, must be characterized as mystic. Electrons, corpuscles, atoms, are mental conceptions, without spectacular entity; there is necessarily a species of mysticism in their conception and in the phenomena of their composition and conformation. Why make a bugbear of the use of the term vital in organic phenomena? Mysticism is as marked in the inorganic world, in its grade, as in the organic; it cannot be escaped from. The nature of the vitalistic equally with the psychic factor in organic processes eludes research and scrutiny, but is real nevertheless, and cannot other than be recognized. It might do in the days of Paracelsus, or even of Stahl, to dub him a "mystic," and squelch him, but it will not do to-day. The microscope reveals too much and brings too plainly under visual scrutiny biological processes to allow of this.

Constructive phenomena, solely due to protoplasmic force, absolutely not to be accounted for on any merely chemical or inorganic hypothesis, are demonstrable and of rational interpretation, on the theory of a psychovitalistic force whose entity may be localized in protoplasm and evidenced in metabolic activities.

The position taken by Professor Halliburton that "because there is that in organic phenomena which we cannot understand is no reason for calling it vitalistic," to say the least, seems weak as a scientific deliverance. Is it a sufficient reason for ignoring it that there are elements of mysticism regarding its nature, its entity being impossible of denial? It is certainly correct that "organic phenomena are not seen in structureless matter," and just as certainly a fact that they are never seen without it, in its absence, nor are these specific processes in any measure possible of laboratory production. *Omne vivum ex vivo*, as John Fiske ably, even if equivocally, maintained.

In the ultimate organic phenomena the mystic phase of it cannot be evaded or escaped from. As to the ultimate, or anatomical, unit: What is it? What is its conformation? A "cell" describes it as well as any other term, perhaps, yet how unsatisfactory the conception! It is a mystic something.

In forming a conception of the initial act of life the same mysticism confronts one. The basic fact is the structureless living matter, and one remove

from it the structural unit or so called "cell"; nor have we yet emerged from the region of mysticism. The bioplasm of the structural unit, or physical basis of life, comes close to, coalesces with, takes up the selected nutrient matter of its environment, and at this point the mystic, primordial life act occurs in the transfer and confer of the life power of the bioplasm, in its connection with the parent cell, to its successor, the daughter cell, which phenomena are repeated incessantly throughout embryological evolution and organic existence.

We are merging more and more into the region of the spectacular, but not at all, as yet, getting out of the region of mystery. If the evolution processes are watched, the outcome of the initiatory metabolism is seen in that that which was structureless takes on structure, and new structureless matter appears, to take the initiatory in the further and continuous metabolic phenomena.

The inherent force of the protoplasmic nucleus is the active agency bringing about the disturbed equilibrium of the "cellular mass," which is concomitant with the repeated phenomena of nutrient selection, assimilation, and vitalization with the accruing anabolism, katabolism, fission, cell multiplication, and "differentiation," resulting in tissue formation and the entire phenomena of organic evolution.

In these confessedly mystic phenomena, enacted in and with these microscopical substances, may be traced the constant perpetuation and coming into entity of the bioplasm, or living matter, in which solely arises, initiates, or originates the essential or metabolic life activity.

That is a mystic phenomenon which brings about the increased so called cellular mass, the cause of disturbed cellular equilibrium; *i. e.*, we have no example of such phenomena anywhere else, nor can they be explained on any known principles in cosmic dynamics. They are vital phenomena and vital force—that is, a force unique to them, is the active agency in them. At present that is the utmost interpretation science permits. In what sense can vitalism be a bar to progress? It certainly does not appear, nor do the advocates of such notion show, save by assertion of the objection, or make good any such contention.

Without the normal organic environment the organic phenomena are not. The organic environments in plant physiology, as we have seen, are inorganic elements and matter, the result of which processes being organic construction, and while the phenomena are largely chemical, chemical force and processes unique to chemistry being evident, the active, sovereign, dominating principle is the living force of the protoplasm of the vegetable seed. Metabolism in animal physiology, in one particular already specified, is unlike that of the plant in that the nutrient matter is solely organic. Whatever

part inorganic element or matter plays in organic phenomena, it is certainly outside the nutrient department and must be classed as dynamic. Oxidation is a necessary condition, at least, in all molecular metamorphosis, and oxidation is a dynamic not a nutrient phenomenon in the specific sense, the initiatory metabolic action being the response of the vital force of the bioplasm of the cell to the dynamo of the chemical oxidation.

I might say, in passing, that microorganisms, in a general sense play the same part, occupy the same causal relation, in initiation of pathological phenomena that oxidation does in incipient physiological processes, the active agency in both classes of processes being the same, the vital force principle.

The ultimate, primordial life act, as expressed in molecular metamorphosis, is essentially vital, that is to say, it is unique as the product of a force localized with this specific substance and solely operative here, and under these environments.

It is a mystic process, as is much, too, confessedly, in chemistry, but in a more specific degree. The phenomena physiological are essentially purposeful and constructive, and in this phase are marked and distinct from simple chemistry. A merely crudely constructed picture of the vital processes will evidence the overwhelming influence of the psychic factor in vital phenomena.

Take off the muzzle and let the dog bark, expressing, as he will, pleasure and a variety of mental emotions, and phenomena different from and superior to—in kind as well as degree—those evident in crystal formation are apparent, and forces different from and superior to those of attraction and repulsion are required to account for his coming to his entity. Nothing purposeful and constructive in chemistry is educible in any sense or degree comparable with organic phenomena.

Metabolism is inclusive of anabolism and katabolism, chemical processes, I readily admit, with the prefix bio.

There is a species of katabolism in disaggregation and decay of organic matter but a somewhat unlike phenomena to that obtaining within the vital domain. The latter is a katabolic segregation in interest of anabolic construction, like the methodical and purposeful pulling down of a house in the interest of its rebuilding into a possibly more imposing structure. Fermentation, which just now means so much, is katabolic phenomena, destructive in process. Certain ferments are found to undo the work of other ferments, but still within its own legitimate lines, a destructive process. Constructive ferment would be a contradiction in terms. The statement of a magazine writer³ that "Physiology's latest an-

³ *Harper's Monthly*, November, 1902, The Latest Conceptions of Life.

swer to the old riddle is simply: life is a series of fermentations," is utterly minus *dicta probantia*.

We may, as the lawyers say, rest our case here. Chemical physiology is a misnomer. Physiology, in which chemistry is largely operative, is originated and dominated by a special force "resident" in the protoplasm of the "cells" of the organism in which the phenomena obtain.

This force is inseparably associated with and related to the physical basis of life in the organism, and so continues throughout its existence. It is sovereign and singular in active dominance in all the processes of plant and animal, so much so that when it ceases its activity the life phenomena eternally end.

Our Subscribers' Discussions.

A SERIES OF MONTHLY PRIZE ESSAYS.

[Questions for discussion in this department are announced once a month. So far as they have been decided upon, the further questions are as follows:

XXIV.—How do you treat *delirium tremens*? (Answers due not later than May 11, 1903.)

XXV.—How do you treat the summer diarrhœa of children? (Answers due not later than June 10, 1903.)

Whoever among our subscribers (with the limitations mentioned below) answers one of these questions in the manner most satisfactory to the editor and his advisers will receive a prize of \$25. No importance whatever will be attached to literary style, but the award will be based solely on the value of the substance of the answer. It is requested (but NOT REQUIRED) that the answers be short, if practicable, no one answer to contain more than six hundred words.

Only subscribers to the NEW YORK MEDICAL JOURNAL (including regular and volunteer officers of the medical corps of the United States Army, Navy, and Marine-Hospital Service, commissioned or under contract) will be entitled to compete, and all persons known to be engaged in medical journalism are disqualified. This prize will not be awarded to any one person more than once within one year. Every answer must be accompanied by the writer's full name and address, both of which we must be at liberty to publish.]

The prize of \$25 for the best essay submitted in February has been awarded to Dr. Walter J. Cavanagh, of South Boston, Mass., whose paper appears on p. 637.

PRIZE QUESTION NO. XXII.

THE MANAGEMENT OF OCCIPITOPOSTERIOR POSITIONS OF THE PRESENTING HEAD.

By WALTER J. CAVANAGH, M. D.,

SOUTH BOSTON, MASS.

(Concluded from p. 641.)

Dr. A. E. Sohmer, of Buffalo, writes:

In the management of this abnormal position of the presenting head, one must always bear in mind the mechanical phenomena which take place in the normal position, and help to bring them about as

much as possible. They occur ideally when the greatest engaging diameter of the head is constantly in the greatest diameter of the pelvis, and the long axis of the descending head conforms fully to the long axis of the parturient canal. In persistent occipitoposterior positions during labor, this usually does not take place; therefore the expelling forces act at a disadvantage and labor is impeded. In a relatively large, normally shaped pelvis, the child can be born in this position, though often at the cost of a severe laceration of the perinæum; but should the head become impacted in this position, we have a very dangerous complication, which is hard to correct without severe injury to mother or child. Therefore one should always endeavor to convert the posterior into an anterior position during labor, should this not take place spontaneously.

In a normal pelvis, with a good active pelvic floor, and perfect flexion of the head, rotation will often take place spontaneously during the passage of the head through the birth canal. It may be prevented by: 1. Imperfect flexion of the head, which allows the sinciput to reach the pelvic floor at the same time with or before the occiput, so that the former is rotated to the front of the pelvis, the occiput turning into the hollow of the sacrum. 2. A defective resistance of the pelvic floor, which fails to shunt the occiput forward. 3. Pelvic deformities, which interfere with the normal mechanism. This shows us the importance of knowing the condition and exact pelvic measurements of our patient beforehand, to prepare us for the subsequent management.

When labor begins in these cases, the first point in our management is the position of the patient; she should lie in a lateroprone position, toward that side to which the occiput points; the genupectoral position is sometimes more effective. These positions will better allow flexion of the head, and bring the occiput into more favorable relation to the pelvic floor, so that the latter can shunt it forward.

When the membranes rupture, and there is sufficient dilatation of the os cervicis flexion of the head should be promoted by pressure upward on the sinciput, to bring the occiput under better control of the pelvic floor. Should rotation fail and cervical dilatation be sufficient, we must aid rotation by one of two methods, according to circumstances—manual or instrumental. Manual rotation is performed by passing the fingers of one hand into the uterus and behind the posterior shoulder, pushing this outward; while the other hand, acting through the abdomen, pushes the anterior shoulder inward; thus the whole child is turned, and will not return to its former position so easily as if the head alone were turned. The instrumental

method is especially indicated when there are deficient uterine contractions and an inactive or lax pelvic floor. The blades of the forceps are applied on the right and left (as to the pelvis); during traction and descent, rotation should take place. When the head reaches the pelvic cavity, the forceps must be removed, because, on account of the long internal rotation, the curve of the blades will no longer coincide with that of the birth canal. After this they may be reapplied in a new position, or may be left off, according to the progress of the case. After rotation is completed, the further progress of the labor will be the same as in a normal case. An anæsthetic is required during the manual or instrumental interference.

In cases of comparatively large pelvis, where the head can be born in the persistent posterior position, flexion must be kept up until the root of the nose reaches the pubic arch, and acts as a pivot around which the head flexes forward, the occiput passing over the perinæum. To save the perinæum from laceration, episiotomy may be required.

Should impaction take place in the posterior position, the axis traction forceps, cautiously tried, may overcome a slight arrest; otherwise symphysiotomy may be necessary. After the head is released, forceps or version will complete the birth.

To sum up: Favor spontaneous rotation by position of patient and flexion of the child's head; if necessary, assist rotation manually or instrumentally; if the head is born in persistent posterior position, guard the perinæum; in impaction, use the axis traction forceps or symphysiotomy, followed by version, if necessary.

Dr. William P. Pool, of Brooklyn, writes:

An occipitoposterior position of the presenting head is the result of imperfect flexion, or of some obstruction in the passage preventing the normal mechanism of labor, such as pelvic deformity, neoplasms, or placenta prævia. Attention should be directed first to the cause of the malposition. Careful pelvic measurements and abdominal and vaginal examinations should be made not later than in the eighth month of pregnancy, in order to determine the foetal position and the relative proportions of the head and pelvis.

Given a case in which the pelvic diameters are not less than the following: External conjugate, 8 in.; intercrystal, 11 in.; interspinal, 10 in.; internal (true) conjugate, 4 in., and the head of normal proportions, an occipitoposterior will frequently rotate spontaneously to an anterior position with the onset of labor, or even before. In the last month of pregnancy this may be aided by directing the patient to lie at night on that side toward which

the occiput presents. This lateral position, varied with occasional changes to the knee-chest, should be maintained during the first stage, or until the head is well engaged at the brim. If the head enters the strait in an extended or partially extended posture, it is because of an imperfect adaptation of the occiput to that portion of the brim which is in relation to it. This permits the sinciput to descend first, and when it reaches the pelvic floor it is shunted forward by that part upon which it impinges, and a complete occipitoposterior results. The disadvantage of this is that it presents to the various planes of the parturient canal the occipitofrontal diameter of $4\frac{1}{2}$ in., instead of the suboccipitobregmatic of $3\frac{3}{4}$ in. The indication, therefore, is to promote flexion. After sufficient dilatation of the cervix, upward and backward pressure should be made upon the sinciput during pains. This failing, several methods are open to the operator. 1. Delivery in a posterior position by the natural powers or by the forceps. This is advisable only in exceptional cases where the head is relatively small. If left to nature, labor is usually unduly prolonged and difficult, and in any case the perinæum is apt to be badly injured. Episiotomy should be done at the beginning of the perineal stage. 2. Labor may be allowed to proceed till the sinciput has reached the vaginal outlet, when rotation may be compelled by backward pressure upon the anterior temple, together with forward pressure upon the occiput. This is possible in most cases that have reached the perineal stage. 3. When the equator of the head has reached the middle plane of the pelvis, where all diameters are approximately equal, forcible flexion may be accomplished under anæsthesia, and the head rotated in the grasp of the forceps. For this purpose straight or slightly curved blades should be used, and the seizure frequently relaxed to permit moulding. Rotation secured, extraction by forceps is performed in the ordinary way. The diameters permitting, this is altogether the most satisfactory method when the head is in the cavity.

In another class of cases, when the pelvic diameters are slightly less than those mentioned, and the head, in a posterior position, persistently refuses to engage at the brim, the accoucheur should not delay after the first stage. Much fruitless time and suffering will be saved by immediate interference. The patient is anæsthetized and the hand is passed into the cervix, first completing dilatation if necessary; the head is grasped by the parietal bosses and rotated to the nearest anterior position. At the same time the trunk is rotated to the front by pressing the anterior shoulder toward the median line with the external hand. For, although there is lit-

the danger of injuring the child by torsion of the neck, yet if the head alone is rotated, it will almost invariably swing back to its old position as soon as released. The axis traction forceps is then applied. If rotation fails by this manoeuvre, internal version should be performed and the case treated as a breech presentation. This early interference, before the head has engaged, is applicable to a majority of all cases.

In certain rare instances the head will be found firmly fixed in the cavity, with its long diameter lying transverse. Here we have the choice of symphysiotomy or craniotomy. The latter is preferable, as the chances of saving the child after a long impaction are slender at best, while the former operation inflicts serious and perhaps lasting injury upon the mother.

When the malposition results from actual contraction or other deformity of the pelvis, an early knowledge of the condition is of the greatest importance, and if it is decided that the head cannot pass through the strait either by rotation and forceps or by version, the Cæsarean operation should be done before the onset of labor. The same is true of obstruction by complicating tumors of the cervix or appendages.

When placenta prævia is the cause, measures appropriate to the case must be taken to remove this obstruction, and the position corrected as above described, followed by delivery with forceps, or converted into a breech presentation by internal version.

Dr. F. Spencer Halsey, of New York, writes:

Fortunately forward rotation of the occiput takes place in a large majority of all vertex cases in obstetrics, but in about 2 per cent. we have the occiput behind, and there results a long and difficult labor on account of the difference between the fetal measurement of the head, and that of the pelvic outlet (unless the child is very small), and great danger of severe perineal laceration. How, then, can we best overcome this condition?

1. Before rupture of the membranes, and the correct position early diagnosticated, we may in some cases be enabled to rotate the occiput into the anterior position by abdominal palpation, but if labor has already begun, the treatment must be according to whether the head has engaged or whether the posterior rotation has taken place after the head has entered the pelvic cavity, and has either advanced to the outlet or not.

If the head is above the brim, we can either employ manual rotation, the forceps, or version. Manual rotation may be done by introducing the strictly aseptic hand into the uterus, firmly grasping the fetus, and rotating it into an anterior position, then

holding the head in the hope that uterine contraction will cause it to engage. Nature may then be allowed to terminate the case or if necessary the forceps may be used.

Should rotation fail by this means, we have the forceps and version, the choice between which must lie with the operator. While the danger to the mother would be less with version than with the forceps, the danger to the fetus would be greater. Should the forceps fail, version would be indicated, provided the child was living.

If the head has entered the pelvic cavity, but has not reached the outlet, rotation will be found to be retarded by imperfect flexion, thus preventing advance. Flexion being obtained, the occiput will come down, and delivery be accomplished. To get flexion, we may attempt to push the forehead forward and upward during the pain with one or two fingers, and so get the occiput to the front. With this done, the position becomes anterior, and the forceps, if necessary, will end the labor.

But we have a better method, it seems to me, in direct rotation with the forceps. This, done carefully, will in most cases prove successful, especially where the position persists at the outlet, and we have a tired mother and a tired uterus. The blades are introduced along the sides of the head, the pelvic curve looking to the front of the child, they are then locked, and firm downward traction is made until the head is well down upon the pelvic floor, when they are rotated, the fingers being held upon the vertex as a guide, until we have the head in a transverse position. A short interval of rest is now taken to allow for uterine contraction and relaxation, then the head is slowly carried to the anterior position. We shall now find the forceps in a directly inverted position. It is removed, and if we desire we may allow the case to terminate naturally, but it will be found better to reapply the forceps and deliver in the usual manner.

With some operators it is the custom to apply the forceps with the head in the posterior position, and deliver with force, but, as has been stated above, this will almost invariably result in severe damage to the soft parts of the mother and endanger the child as well.

Taken all in all, I think that the direct rotation with forceps, reapplying it after the head is rotated anteriorly, will be found to be the surest, the safest, and the best means of correcting occipitoposterior positions.

Professor Lorenz arrived in New York on April 15th, *en route* for Chicago, to visit his little patient. The duration of his stay is at present unknown.

The American Medical Association

*Fifty Fourth
Annual
Meeting*

NEW ORLEANS
MAY 5th to 8th
1903.



Supreme Court

St. Louis Cathedral

Civil District Court

Jackson Square

The Pontalba Building

THE CRESCENT CITY

Where the Association will hold its Fifty-fourth Annual Meeting on Tuesday, Wednesday Thursday and Friday, May 5, 6, 7 and 8, 1903

Cities and women are forgetting how to laugh. Laughter shows a mind in momentary return to paradisiacal carelessness: what woman of the present is careless enough to laugh? Women can smile and they do smile much nowadays. But the laugh, that "sudden glory" which in a flash eclipses in the heart sorrow, poverty, stress, even disgrace, it has become obsolete among them.—GRACE KING, *New Orleans, the Place and the People*.

THE CITY AND ITS PEOPLE

Hurried glances at cities are not a sufficient warrant for sober, serious conclusions. Cities are centres where the forces of civilization converge, and civilization is a big question, one involving many niceties and nuances which must be traced, sifted, weighed, and analyzed with fine delicacy and precision. Quick glances justify opinions. Opinions are not final. Judgments, seriously and soberly pronounced, are the products of analysis, deliberation, and are given with due regard for the tenets

of logic. Time was when feeling one's pulse and glancing at one's tongue were considered ample diagnostic data. Few physicians now will hang a diagnosis on so thin a thread. Nothing less than a complete account of one's life, revised, corrected, and brought down to date, with gilt edges and morocco binding, and not a few microscopic observations, will suffice, and the method is good.

Grace King's observation is pertinent. It institutes a comparison which at once develops the finer



Common Street Entrance of Charity Hospital

lines of life in New Orleans. If one may safely reason to a conclusion from statistical data, or from the signs which blazon the streets and glare in the shop windows, or from the names of streets and from the customs and habits of the people, their love of pleasure, dancing, music, or poetry, New Orleans is the happiest city in the world. Suicides are rare here. Crime of the revolting kind is at a low ebb, and even misdemeanors, such as drunkenness and kindred offenses, are scarce enough. Here the climate is equable. Changes in temperature are not violent enough to shock. The heat of June is tempered somewhat by the salt sprays which blow in from the Gulf of Mexico. The sting of winter is dulled to some extent by a lingering breath of summer, and so the seasons come and go. The

absence of meteorological violences, wide ranges in temperature, and quick changes contribute in no small way to the evenness of temper which expresses itself in so many ways in this city. Gentle weather begets gentle natures. Thus happily environed, thus sandwiched, as it were, between the biting season of sealskins and furs and the sweltering season of palmleaf fans, panamas, and pyjamas; with the trade balance heavy on the right side; with amusements and pleasurable things in rare abundance; with lakes, parks, bayous; with an endless list of things and situations within easy reach, it is not surprising that the people here should be happy.

While New Orleans may be christened not inaptly the City of Laughter and Song, she is not with-



The Old French Market; Vegetable and Poultry Section

out her sorrow. She was stung yesterday and bled. She hurts to-day. Perhaps she is super-sensitive, and too easily pricked. It is the fault—if it be a fault—of her temperament. Fragile natures, natures of blended chivalry and romanticism, are easily wounded. But her recuperative powers are good, and so she saunters along and laughs at the calumniations of her detractors. Her fondness for the lighter muses will not permit her long to grovel in the gloomier grooves. Her eyes are quickly dried and she as quickly forgives those who have sinned against her.

THE SUNNY SIDE OF LIFE.

Evidences of the sunnier side of life in New Orleans may be read in the little signs which are tacked up at the corners of streets. Here one may read the passions and impulses which give distinctive color to life in this city—Felicity, Harmony, Pleasant, Piety, Desire, Music, Arts, Liberty, Abundance, Good Children Street—is there not poetry in these names? Can we not conjure up deep shades and fine perfume and dreamy hours in such names as Walnut, Pine, Fern, Tupelo, Chestnut, Oak, Willow, Magnolia? Yet these are common examples. So there are evidences, too, of a fine reverence for patriots and heroes and poets and philosophers, even Solomon, "the Sweetest Singer of All Israel," and Socrates, being represented on the signs which label the streets.

These reflections strengthen the suggestion that men and women of New Orleans, rich and poor alike, live for the sake of living. They do not forget yesterday with its struggles, its triumphs and defeats, nor are they unmindful of the things which to-morrow may bring. But what they love most is to-day, the everlasting and ineffaceable now.

It would be a mistake to assume that the people here never get away from caps and bells. Deeply emotional and responding quickly to the things which offer a modicum of pleasure, they yet have serious moments, silent, solemn moments when they slip into some temple of worship to pass a while in reverence. It may be said that nothing in New Orleans is more interesting than the church life of the community. In the 209 churches of this city every shade of religious belief is represented. The structures are interesting architecturally. The old St. Louis Cathedral, with its chim-

ing bells, which has stood for more than a hundred years; St. Patrick's Church, towering gloomily in Camp Street; St. Roch's, with its sainted panels and its legends, a place where lads and lassies meet to deeply design the secrets of the future—all of these and many more are places around which cluster many alluring memories.

BIENVILLE AND DE LA TOUR.

Once get away from documentary proof, and the history of things and places, and even of men, becomes a series of uncertain facts, romantically colored, sometimes grotesque, often poetic, but always interesting. There are many alluring pitfalls for the man who would seek to be accurate. It is difficult to separate the wheat from the chaff, difficult to trace the line of demarcation between

traditional stories, mere legends, and the more serious things of history. "I am only certain that I am not certain," quoth the sage, and one may even say it now of New Orleans. Still, there are a few well authenticated facts. Bienville laid the foundation for the city in 1718, on a narrow strip of land which slipped in between the Mississippi River and Lake Pontchartrain. De la Tour, an engineer of that time, laid the city off into lots, and gave it the form it now has, that of a crescent. Even at this early period legend crept into history, for we are told that the only Indian then on the narrow slip of land said: "The Spirit tells me that the time will come when between the river and the lake there will be as many dwellings for white men as there are trees now." Not more than two hundred per-



DR. FRANK BILLINGS
of Chicago

President of the Association

sons lived here then. Since that time nearly two hundred years have dropped from the calendar. Bienville's town, its population, its cabins, and all have been replaced by other and more pretentious things, and where he toiled in the wilderness now stands a busy, pulsing metropolis, containing an estimated population of 310,000, a heavy percentage of which has been added in recent years, a city which has grown to such immense commercial proportions that it is the largest cotton market, the largest sugar market, the largest rice market, the largest banana market, and the largest cotton seed product market in the world. Statistics may have a metallic ring when applied to the concrete things of every day life, but in these days of large things they tell forcibly and eloquently the story of the world's progress. Between 1890

and 1900 Bienville's town spent \$60,875,680 on public improvements, or about \$6,087,568 a year during that period, and erected more than 20,000 buildings. And the exports and imports, railroad and ocean tonnage! In Bienville's time there were not boats enough in American waters to handle the shipments now involved in the vast volume of business passing through the port of New Orleans.

A HEALTHY CITY.

Again, what the death rate was in Bienville's time one may not know. But during the time of record it has been constantly on the decrease, from which one might reasonably assume that the percentage was heavier then than now. In 1890 it was 28.50 to each 1,000 persons, counting whites and blacks, and including Charity Hospital patients not properly chargeable to New Orleans. In 1902 the death rate had fallen to 21.20, all told. Minus deaths in the Charity Hospital, not properly chargeable to New Orleans, the death rate for 1902 was 17.64. Exclusive of hospital patients and negroes, the white mortality of the city in 1902 was 13 to 1,000. In all these percentages, accidental deaths and premature births are included.

Here it may not be inappropriate to suggest that the hospitals of New Orleans are objects of increasing public concern and professional pride. There are eight of them, the Charity Hospital, the Eye, Ear, Nose, and Throat Hospital, the Home for Incurables, the Milliken Memorial, the Hospital for Children, the New Orleans Sanitarium, and the Touro Infirmary, and they are all splendidly equipped with modern appliances.

THE GREAT CHARITY HOSPITAL.

The Charity Hospital as it exists to-day, is one of the most modern institutions of its character in the country. The history of the hospital reaches back to the year 1727, when is chronicled the arrival of seven Ursuline nuns, whose duty it was to take charge of the Charity Hospital of New Orleans. It was then at Bienville and Conti

Streets. In the course of a few years the locality was changed for a more convenient one connected with the Ursuline Convent at Conti and Ursuline Streets. The importance of the institution increased from time to time until 1784, when Don Andres Almonaster y Roxas, a rich and benevolent Spaniard, began the erection of a hospital on the west side of Rampart Street, between Toulouse and St. Peter. It cost \$114,000. The hospital founded by Almonaster y Roxas remained under the patronage and direction of his family until 1811, when it was ceded to the public. By an act of the legislature the hospital was placed in the hands of a council of administrators. In 1813 an act of the legislature authorized the appointment by the governor of a board of eight members, and in 1815, the

Charity Hospital was built on the square bounded by Common, Dryades, Canal, and Baronne Streets. In 1832 the property was sold to the State and converted into a State House. The purchase price was \$125,000. At a cost of \$150,000 the board purchased the square on which the hospital now stands, and erected buildings sufficient to accommodate 500 patients. Additions have been made from time to time, and now fully 1,000 patients can be accommodated and cared for. The hospital covers two squares of



Old Courtyard in French Quarter Showing Rain-Water Cistern

ground bounded by Howard, Gravier, and Magnolia Streets and Tulane Avenue, and is 700 feet in length by 430 feet in depth. On the plot are situated no fewer than sixteen buildings devoted to the various purposes of the institution. In the brief limits of this sketch it is impossible to embrace even the leading features of the Charity Hospital. Its buildings and accessories, a large portion of which are the results of legacies and donations made by popular philanthropic citizens of New Orleans, are such as to compare favorably with any in the country. The people of New Orleans and of Louisiana are justly proud of the institution, which they believe to rank next to Bellevue, and which is cared for by the State in a broad and generous manner.

Besides these institutions, there are twenty-six asylums and homes in New Orleans, each one of which was brought into existence to meet the wants of the needy, and they, too, are objects of public pride, are well provided for, and answer admirably the purposes for which they were established.

CHARACTERISTIC NOOKS AND CORNERS.

But let's to gentler, quainter things. There are many such, queer little nooks and corners, and one may not long resist the temptation to see, know, and love them. Quaint, queer, gentle, picturesque are not always the words to describe what one may find in this city of languor and dreams. There are things, and many of them, which should stand high in the realm of art. I doubt if the architecture of any city in the world can offer more alluring subjects for study, close analysis, and skilful delineation than that which may be found here. Persons who visit New Orleans hasten to the centres of interest, the old Cabildo, with its haughty memories of Spanish dominance, morose in outline, gloomy, austere, and with yet somewhat of the old pride blazoned on the crumblin cornice; the old cathedral with its mellow lights and music, its sainted images resting on the dimly lighted panels. Chalmette, the cemetery, and other places of historical magnitude.

But what to see, what to eat, and what to drink in New Orleans are questions not easily answered. Slight reflection will develop the difficulties of such a task.

Viewing New Orleans, seeing the things that are really worth one's while, and getting, as it were, close enough to finger the pulse and feel the heart throbs, close enough to understand the origin and character of the little forces which creep out and broaden into the splendid activities of the metropolis, one must quit the cab and the trolley car, leave the beaten paths, the guide books, and the charts, and wind into quainter by-ways which lead to cozy corners; into little empires not yet crumbled: old rookeries now perhaps, and yet the flowers in the windows, the palms and ferns in the courtyard, and the vines which hang from the balconies are evidences that the picturesqueness and poetry of yesterday are not yet lost in the prosaic iconoclasm of the age.

IN THE OLD QUARTER.

Cities are not builded of brick and mortar and stone. Houses at best are evolved caves, and are more or less artificial. Like clothes, however, they

are necessary artificialities, penalties, in a way, which Nature has imposed because of man's wisdom. But they are not the only external essentials. Things originally looked upon as mere frills, possessed because of their ornamental and decorative value, are now counted among the necessary things. The whiff of a rose is a good tonic. Right or wrong, there is something alluring about the contention that violets are a cure for cancer. Patches of green, palms, ferns, vines, grasses, even noxious weeds and other things delineative of the landscape rest and stimulate the eyes and calm the nerves. New Orleans is peculiarly happy in the possession of these virtues. One of the interesting features of life here is found in the time and attention given to flowers, plants and shrubbery of all kinds. Go into the old quarter. Push open a

door at some uninviting place exteriorly and glance down a narrow hallway leading to the rear portion of the premises, and you will find hemmed in by heavy thick walls, a palm garden and a floral display worthy of a more conspicuous place. Often vines are trailing over broken walls and roses are bursting from cracks and crevices as if to add somewhat of cheer to the mutilating processes of time. These courtyards in the Old Quarter are bright and saving spots. There are no front yards in that section. The doors open on the street. There are, of course, a few exceptions to the rule. Above Canal Street, particularly out on St. Charles Avenue, where one may find Audubon Place and Rosa Park, and on Prytanian and other thoroughfares up-



DR. ISADORE DYER
New Orleans

Chairman of the Committee on Entertainment

town, yards have been modernized. Fences have been pulled down and the yards are thrown into the street, giving a landscape effect. Visitors who fail to see these things miss much of the city's beauty. What with these old courtyards and landscapes, with balconies draped with vines, and flower pots in windows and resting in niches and interstices, there is nothing lacking of the mellow glamour and dreaminess of an earlier phase of the city's history.

The balconies, so conspicuous in the architecture of the city, afford ample opportunity for a display of Flora's daintier tints and lines. There is an abundance of native plants and flowers and others which have become acclimated and grow with quite as much luxuriance as these indigenous to the soil and climate.

Persons who are fond of the massive in art can find no more interesting spot in New Orleans than



The Milliken Memorial Hospital for Children

the marble hall, in the custom house, on Canal Street. Capable critics have pronounced the marble hall the finest and most magnificent customs business room in the world, and a mere glance at it will in a measure justify the opinion. The building in which it is situated is not uninteresting. The corner stone of the custom house was laid by Henry

Clay in 1848. More than \$4,500,000 have been spent on it, and it is yet unfinished, over half a century from the time of its beginning. Quincy granite was used in constructing the building. The architecture is of modified Egyptian style. It is asserted that less wood has been used in this building than in any other building of its size in the



On the Levee—Shipping Cotton

world. There is a popular belief that bales of cotton were used to make a foundation for this immense mass of stone. This is an error. The foundation is of cypress logs, and for the whole space of the square between Canal, North Peters, Customhouse, and Decatur Streets, these logs were hammered and wedged into the earth seventeen feet deep. A stairway of magnificent white marble leads into the buildings from the front entrance, on Canal Street. This stairway leads into the marble hall. The hall measures 95 by 125 feet, and is 54 feet high. There are fourteen marble Corinthian columns forty-one feet high, each standing on an antique base. These columns came from Italy, and cost \$23,000. At the top of each capital is a bas-relief of Juno, and there is another of Mercury, with designs of cotton and tobacco plants. At one end of the hall are panels containing bas-reliefs of Bienville, the founder of New Orleans, and of Jackson, the defender. Between these is the coat of arms of Louisiana—the pelican feeding its young. The roof is an iron frame, painted in gold and white, into which are set enormous plates of heavy ground glass with a blue Grecian border of elegant design. The floor is of white and black marble, with plates of heavy glass to admit of the passage of light to the rooms beneath the hall. There is a silent eloquence in this place which will not fail to rouse the fervor and enthusiastic praise of æsthetic natures, and yet visitors are wont to hasten to other scenes of less grandeur, giving the marble hall but scant notice as they go.

THE QUAIN OLD COFFEE HOUSES.

Recurring to the quainter things, probably the eating and drinking places of New Orleans are more widely famed than other institutions here. What is daintier at this season of the year than shrimp, boiled, peppered, and iced? Shrimps are cooling. The finger tips are cooled while picking them from the flakes of ice, and peeling off the glossy husks. Men become experts in the business of picking the husks from shrimps. They learn to do it deftly, artistically, each man in his own way. Crabs, too, are on the market now, and crawfish, in abundance. Crawfish bisque is one of the more noted dishes of the old Creole cooks, and to get the genuine article with all its richness of flavor one must get away from the more pretentious restaurants. There are many little places in the Old Quarter, places that are cozy and comfortable enough, but not at all elaborate in finishings, even perhaps without linen and without silver, but the crawfish bisque you get is of the essence of art in cooking. There are many of these places grouped around the French Opera House and the French Market, and in other places in the downtown quarter of the city. They are not hard to



The Eye, Ear, Nose and Throat Hospital

find, nor is it difficult here to get what one wants. Coffee! One cannot get coffee elsewhere, once accustomed to the coffee served here. Nor need one pick the place to get it. It is a pretty thought that the pride of these older cooks will not allow them to stint the coffee pot. How far they must be from the pinching commercial spirit of the age—an age which is demanding payment and protesting notes on a split-second basis! These old-timers would rather lose money than have you say the coffee was not good. One may find coffee houses everywhere. Little coffee counters are particularly numerous around the markets. Coffee houses are not what they used to be. They are now less like the coffee houses of Paris. The older places of the kind, the old absinthe house, and a few others, may be found scattered around in the city. They are relics of the time when the coffee house was the saloon, when one could get any sort of drink for the asking, when men and women sat around the tables on the banquettes, as they do on the boulevards of Paris, and drank what it pleased them to order. Now the saloons are behind screen doors, else they are connected with the more elaborate institutions, institutions that will daze you with a bill of fare that looks like a French dictionary, and the coffee houses are small, often mere stands and counters, where, if you are finicky and fastidious, your order will be confined to coffee and doughnuts. In the old courtyard of the old absinthe house, and in a few of the places around the French Opera House,

part of the earlier habit is still in vogue. Men and women sit around in these places, sip anisettes and cordials, or the things that please the palate most, and dream life away.

Above the courtyard of the old absinthe house, in quarters not particularly inviting, is an artist unknown to the world, whose praises are unsung even in the city where he lives, yet a man whose ideals are high; who at the moment is working out a model expressive of the virtues of the Confederacy, a stupendous undertaking in scope and one in which he has merged his faculties and buried his genius with the hope that some time or other the butterfly may leave the cocoon finished.

I have not spoken of the monuments here which pay enduring tribute to the men and women who are remembered for their good deeds; of the parks with their "duelling oaks" and interesting histories; of the lake resorts, Spanish Fort, West End, Milneburg, and other points which command a view of Pontchartrain; of the barracks and Fort St. Philip; I have not gone into the cemeteries where the tombs and monuments are massed into an imposing picture; I have not loosed pirogue or bateau on Bayou St. John, the clear, crystal water path traversed by Bienville when he came to found the city; nor have we yet had a glimpse of the restful home on its banks where disabled Confederate soldiers are idling out life's candle in the sweet solitude of that cool, placid, romantic spot; nor have we whirled along the white glistening Shell Road to the lake, or strolled leisurely through the cooling shades of Metairie Road—in fine, there are many places of interest, historically and otherwise, to which no reference has been made in this running sketch of New Orleans. It would be difficult to name them all. It would be difficult even to outline the stories which are told of houses and places, stopping here to recount the story of an old pirate who once lived in the curiously shaped house now stooping under the weight of years, and there to follow again the tales conjured up by superstitious fancy of haunted houses, with skulls and crossbones beneath the flooring, tales as weird and grewsome as Poe's story of the clatter of a dead man's teeth. There are "haunted saloons" and "ghost saloons," innumerable places around which superstition has built uncanny history. Many of these stories have, no doubt, grown out of that mass of curious



St. Anthony's Alley

belief, fancies, and superstitions common among the Voudoos, now a disappearing cult, about which so much misinformation has been spread abroad by men and women who were ambitious to give their imagination the fullest possible sway, even if it meant a sacrifice of interesting and valuable historical and sociological data.

So the thin line which we have been following in our eccentric rambling brings us back to the point where we began. We have not traced the forces well. They are too ponderous, too variant to yield easily to quick treatment. Even the needle here is eccentric and variable. The task is as difficult as tracing the lines of distinction in a composite picture of humanity. The community is cosmopolitan to its finger tips. The activities which give New Orleans its distinctiveness are due and traceable to an earlier time and to inheritances which have been handed down from one generation to another. While pulsing with the newer forces of society, filled with the newer dreams, New Orleans cannot, and would not if she could, get entirely away from the age of snuffboxes and high-heeled slippers, of graceful minuets, of gavottes and euphemisms, and of all the courtly and gracious things which give the rarest virtues to noble aris-



Pirate's Home on St. Philip Street

tocracy. There is yet a love of the old things, the old idols in fashion and in dress, the tinsel ornaments, the glimmer and glow of jewels, the swish of silks and satins, and the love of velvets and ormolu and brocades and tapestries, and there is yet love enough of the finer and more serious things, love of the drama, of music, of poetry, of sculpture, of painting, of dancing, and of all the sublimated niceties of art. These virtues find ample expression during the Carnival season in the classic studies, and pantomimic stories unfolded by the gorgeous pageantries which parade the streets of the city, and in the bewilderingly beautiful balls which mark the Mardi Gras time, social functions of a most exclusive kind which bring the culture, grace, refinement, and wealth of the community into the whirling vortex of the season of masks and merriment.

As we find the nobler and larger inheritances thus expressing themselves in so many pretty ways, so do we find many smaller things which mark again the lines along which this quaint and cosmopolitan community has developed. Stories are still told that the old-time Frenchman will eat his snipe now as his ancestors before him ate it—*faisandé*—as the Dutchman eats his Limburger. Age gives them flavor and robs them of that fresh taste which is not pleasant to the palate of the epicures—and they are indeed epicures and live long for their pains. So, too, the shoulders are shrugged here as in Paris, and one's ears are constantly battered by the old answer "Je ne sais pas," lightly, even indifferently used and yet the epitome of the Agnostic's creed, but of course in its use here having no religious significance.

J. B. MYRICK.

NEW ORLEANS.

RATES AND ROUTES TO NEW ORLEANS.

All the railroads in the Southeastern and the Southwestern and Central Passenger Associations have granted a rate of one fare for the round trip to delegates attending the meeting. From the States east of Ohio and north of Virginia, delegates will have to pay a fare and a third to the point at which they enter the southeastern territory, which will be either at Washington, Pittsburgh, or Charleston, W. Va. Delegates from States west of Minnesota and north of Kansas will also have to pay a fare and a third to the points of entry into the southwestern territory. All these tickets will be on sale from May 1st to May 4th, and will bear a final limit of ten days from date of sale, but by depositing the tickets with the joint traffic agent at New Orleans, not later than May 12th, and paying a fee of fifty cents, the final limit may be extended up to and including May 30th. No stop over privilege will be allowed on these tickets. The joint agent referred to will be located in Room 204, at 204 Camp Street, and will be in attendance from eight in the morning until eight in the evening. The tickets must be deposited personally by the original purchaser. In purchasing tickets the delegates and others should ask for a certificate on the association plan and state what meeting they propose to attend. The cost for the round trip ticket from various leading cities is given below:

Baltimore	\$29.50	Nashville	\$16.75
Boston	42.15	New York	37.50
Buffalo	31.85	Omaha	29.50
Chicago	23.00	Philadelphia	33.50
Cincinnati	21.00	Pittsburgh	29.35
Cleveland	28.25	Richmond, Va.	26.50
Des Moines	27.85	St. Louis	18.00
Indianapolis	22.25	St. Paul	34.00
Louisville	19.00	Washington	27.50

ROUTES AND TRAINS.

From New York and Philadelphia a special train will be run, leaving New York from the Pennsylvania ferry at the foot of West Twenty-third Street at 4.25 p. m., and from the Broad Street station, Philadelphia, at 6.55 p. m., going to New Orleans by way of Washington, Atlanta, and Montgomery, over the Southern Railway. Dr. Frederick Holme Wiggin, 55 West Thirty-sixth Street, New York, or Alexander S. Thweatt, 1185 Broadway, will make sleeper reservations. The train will be composed exclusively of Pullman cars. Another special train will leave New York from the Pennsylvania ferry, at the foot of West Twenty-third Street, on May 2nd, at 3.25 p. m., leaving Broad Street station, Philadelphia, at 6.05 p. m., and Washington at 10.01 p. m., going by way of Lynchburg and Chattanooga over the Blue Ridge Mountains. Reservations may be made through L. G. Ellis, 398 Broadway, New York. Southern Pacific Passenger steamers will sell tickets, good for three months, at the rate of \$50 for the round trip by water, or \$60 one way by water and the other way by rail.

A delegation of Eastern members will leave New York at 4.25 p. m., May 2d by way of the Chesapeake and Ohio Railroad, stopping on Sunday at the Virginia Hot Springs where they will be the guests of Mr. Fred Sterry, manager of the Homestead Hotel, which is situated 2,500 feet above the sea, and is, at this season, one of the most beautiful and popular of health resorts. Particulars may be had of U. L. Truitt, 362 Broadway.

Among those who have already engaged accommodations on the train leaving New York City at 4.25 p. m., on Saturday, May 2d, and going over the Southern Railway by way of Washington, Atlanta, and Montgomery, are: Dr. Frederick Holme Wiggin, Dr. Percy Fridenberg, Dr. and Mrs. Comstock, Dr. and Mrs. John A. Fordyce, Dr. and Mrs. W. R. Townsend, Dr. and Mrs. Robert F. Weir, Dr. and Mrs. M. L. Rhein, Dr. and Mrs. Charles G. Kerley, Dr. Johanna B. Leo, Dr. Parker Syms, Dr. George L. Stevens, Dr. and Mrs. Henry A. Dodin, Dr. and Mrs. C. S. Payne, Dr. Wilbur Marple, Dr. and Mrs. D. C. Moriata, Dr. Marsh, Dr. Isaac L. Kip, of New York; Dr. and Mrs. Henry O. Marcy, Dr. Edmund D. Spear, Dr. John T. Bottomley, Dr. Nichols, Dr. Fred B. Lund, of Boston; Dr. Joseph

Malone, of Brooklyn; Dr. E. F. Brush, of Mt. Vernon, N. Y.; Dr. M. H. Carpenter, of Oneida, N. Y.; Dr. and Mrs. L. W. Hotchkiss, Dr. W. H. Knapp, of Binghamton; Dr. J. T. Acker, Croton-on-the-Hudson; Dr. E. H. Carpenter, Oneida, N. Y.; Dr. George W. Guthrie and party, of Wilkesbarre, Pa.; Dr. Stewart, Dr. H. H. Gibbons, of Scranton, Pa.; Dr. Burgess, Dr. Sheets, Dr. J. O. Pollock, Dr. Wampole, and Dr. Tyson and party, of Philadelphia, Dr. Tyson having engaged six sections; Dr. William P. Watson, Dr. H. P. Cheers, of Baltimore.

From Chicago, the Illinois Central will run a special train, leaving about 12 o'clock, noon, on Sunday, May 3rd.

From St. Louis a special train will leave on Sunday, May 3rd, at 2.44 p. m., over the Illinois Central.

From Louisville special Pullman service has been arranged over the Illinois Central Railroad, a party leaving Louisville at 12.55 p. m., on May 4th, and arriving in New Orleans at 11 o'clock the next morning.

THE BUREAU OF INFORMATION.

The local Committee of Entertainment has established a Bureau of Information, the headquarters of which will be in Washington Artillery Hall. This bureau has made arrangements by means of which clerks, stenographers, bookkeepers and office assistants

of every description will be furnished, excursions arranged, and information supplied as to resorts, hotels, etc. Messengers of the Parcel and Delivery Express Company will be on all special trains and will collect checks and deliver baggage at a uniform charge of twenty-five cents. These messengers will not be on the regular trains, and visitors on arriving can, if they choose, retain their checks and turn them over to the company at the headquarters of the Bureau of Information at Washington Artillery Hall. The general charge for handling baggage is from fifty to seventy-five cents.

HOTEL ACCOMMODATIONS.

Hotel accommodations may be obtained through Dr. E. B. Martin, 810 Common Street, New Orleans. In applying for accommodations visitors should be careful to state whether they want rooms alone or room and board, whether they desire to have rooms with or without bath, and whether they prefer a boarding house or a hotel. The rates of



The Old Absinthe House, Bienville and Bourbon Streets

boarding houses are from \$1 to \$2 a day for a room for each person. A rate of \$1.50 a day and upward has been made by the following hotels:

Commercial Hotel—Corner of Royal and Customhouse Streets. European plan.

Cosmopolitan Hotel—Bourbon Street, between Canal Street and Customhouse Street. European plan.

Denechaud Hotel—Corner of Carondelet and Perdido Streets. European and American plan.

Grunewald Hotel—Baronne Street, between Canal and Common Streets. European and American plan.

New St. Charles Hotel—Between Common and Gravier Streets on St. Charles Street. Headquarters of the Association. (See illustration under Association News.)

St. Charles Mansion—826 St. Charles Street. European and American plan.

The following hotels have rates from \$1 and up:

Antoine's Restaurant and Hotel—713 St. Louis Street, between Royal and Bourbon Streets. European plan. A few rooms only.

Fabacher's Hotel—Royal and Customhouse Streets. European plan.

Louisiana Restaurant and Hotel—Customhouse Street between Royal and Bourbon Streets. European plan. A few rooms only.

Osborne Hotel—Carondelet and Poydras Streets.

Park View House—616 Camp Street (Lafayette Square).

Of restaurants there is an abundance, and in nearly all of these the cuisine is excellent, even though in some cases the fittings and service leave something to be desired by the fastidious.

Probably the leading restaurants, aside from those attached to the hotels are the Louisiana on Customhouse Street, Victor's on Bourbon Street, Lancathe's on St. Charles Street, near Common, and the Cosmopolitan. In all of these the cuisine is

essentially French with an admixture of Creole dishes and all are suitable for ladies as well as men. At the Grunewald the cooking is on the German order, as is also the case with a popular men's lunch-room Vonderbander, on Common Street, near St. Charles. At Antoine's, 713 St. Louis Street, and Begue's, Madison and Decatur, the cuisine is of the French-Creole type and excellent, but these cafés are essentially men's and not ladies' restaurants.

This by no means exhausts the list of good restaurants, but this list will prove of value to the visitor unfamiliar with the city.

THE ENTERTAINMENTS, EXCURSIONS, ETC.

The Entertainment Committee has not neglected the social features of the meeting. On Tuesday, May 5th, there is to be a reception in the Palm Garden of the St. Charles Hotel from 5 to 7 p. m., for the purpose of bringing together the visiting physicians with their ladies and the townspeople. For Wednesday, two large private receptions are announced, one for an afternoon tea, and one at night. Thursday's programme includes an illuminated fête champêtre, with music and refreshments in the City Park; while for Friday a boat ride on the river, with accommodation for two thousand people, is scheduled. In addition, certain physicians have promised to give receptions to the members of various sections. An excursion to Cuba, and also some fishing excursions, are on the programme. A Ladies' Committee, with Mrs. Samuel Delgado as chairman, has been appointed, the purpose of which is to entertain those ladies who accompany the medical members during the intervals between the regular entertainments. A smoker for the Section in Surgery, is to be under the charge of Dr. Rudolph Matas, and receptions for the Sections in Dermatol-

ogy, Laryngology, and Ophthalmology, under the charge of Dr. Dyer, Dr. De Roaldes, and Dr. Henry Dickson Bruns, respectively.

Other excursions are to Lookout Mountain, Tennessee; rate \$25 for ninety days; river trips to Natchez and Vicksburg, \$12 and \$16 respectively, for the round trip; and to San Antonio, Tex., at a special rate of \$10 for the round trip if the party numbers five hundred members. The latter will be under the charge of Dr. J. M. Head, of San Antonio, Texas, with whom those who desire to take part are requested to communicate promptly.



Oyster Luggers

WHERE THE SECTIONS WILL MEET.

1. Practice of Medicine, Washington Artillery Hall, second floor.
 2. Pathology and Physiology, Washington Artillery Hall, first floor.
 3. Ophthalmology, College of Pharmacy.
 4. Laryngology and Otology, College of Pharmacy.
 5. Surgery and Anatomy, Young Men's Christian Association, Auditorium.
 6. Diseases of Children, Young Men's Christian Association.
 7. Cutaneous Medicine and Surgery, Young Men's Christian Association.
 8. Obstetrics and Gynecology, Touro Synagogue.
 9. Nervous and Mental Diseases, Touro Synagogue.
 10. Stomatology, Carondelet Street Methodist Episcopal Church.
 11. Hygiene and Sanitary Science, Carondelet Street Methodist Church.
 12. Materia Medica, Pharmacy and Therapeutics, Carondelet Street Methodist Episcopal Church.
- HOUSE OF DELEGATES, Council Chamber, City Hall.
GENERAL SESSIONS, Tulane Theatre.

POINTS OF INTEREST ON THE VARIOUS STREET CAR LINES.*

CLAIBORNE AVENUE.—From the river to Claiborne. Points of interest: St. Louis cemeteries; St. Roch shrine; St. Vincent de Paul's cemeteries.

DAUPHINE LINE.—From the river to Rampart. Points of interest: Post Office, Custom House, through the old French quarter, Ursuline convent, United States garrison, Slaughter House. (This car takes you within a short walk of the Chalmette Cemetery.)

LEVEE AND BARRACKS.—Canal and Camp to North Peters. Points of interest: Post Office and Custom House, St. Louis Cathedral, the Cabildo, the famous old French market, full view of river front, Northeastern depot, transfers to Dauphine car at Poland, which takes you to barracks, Chalmette Cemetery and Slaughter House. Also passes Jackson Square and United States Mint.

PRYTANIA.—Canal and Basin to Camp. Points of interest: Margaret's Monument, through resident section of the city and to Audubon Park, Howard Memorial, Howard's Library, Fisk Library, St. Patrick's Church.

MAGAZINE LINE.—From Basin and Canal, out Canal to Camp, up Camp to Audubon Park. Points of interest: Boston and Pickwick clubs, through business section, Lafayette Square, Fisk Free and Public Library, Margaret's Monument, Coliseum Square, St. Patrick's Church, Howard Library, Howard's Memorial, Audubon Park.

VILLERE.—From head of river, out Canal to Villere. Points of interest: Direct line to St. Roch's shrine.

TCHOUPITOULAS.—From Canal and Decatur up Tchoupitoulas to Audubon Park. Points of interest: Full view of river front, and along cotton presses, United States Marine Hospital, Audubon Park, also Stuyvesant docks and grain elevators.

ERATO.—Carondelet and Canal. Points of interest: New Orleans Cotton Exchange, Margaret's Monument, Annunciation and Clay Squares, Lafayette Square, City Hall, Orpheum and Audubon Theatres, St. Charles Hotel, Masonic Temple.

BAYOU ST. JOHN.—Canal and Royal, out Canal to Dauphine. Points of interest: Passing through old French quarter and Fair Grounds.

WEST END.—Canal and Baronne, out Canal to Half-way House, along New Basin to West End, and return by the same route. Headway, summer and winter schedule varying according to travel. Points of interest: Cemeteries and Lake Pontchartrain.

NEW ORLEANS AND PONTCHARTRAIN.—From Napoleon Avenue and St. Charles Avenue, out Napoleon Avenue to Broad, Broad to Washington Avenue, Washington Avenue to Carrollton Avenue, Carrollton Avenue to New Basin, and along the New Basin to the Half-way House. Returning by the same route. Points of interest: Ride through the suburbs, direct line to cemeteries.

* From the New Orleans Harlequin.

Therapeutical Notes.

Cassia Beareana in Blackwater Fever.—Dr. H. Corke (*Lancet*, March 21st) reports from Zanzibar a case of blackwater fever in a woman, which he treated with liquid extract of cassia beareana well diluted with water and given in fifteen minims doses, at first every half hour and afterwards every hour. The treatment was preceded by three grains of calomel, as there was constipation. Meat extract, rice and barley waters, and champagne in small quantities were given. After the first dose of cassia beareana all vomiting ceased, the patient dosed on and off throughout the day, and the temperature fell gradually from 103° F. at 11 a. m. to 99.8° F. toward evening. In three days all the urgent symptoms had disappeared, and the patient recovered rapidly. The author is of opinion that the recovery was due solely to the action of the drug.

Sulphides in Phthisis.—Dr. John C. Thorowgood (*Medical Press*, August 20, 1902) refers to the sulphide of allyl as the active principle in essential oil of garlic recommended in phthisis by Dr. Vivian Poore. Dr. Thorowgood has found the carbon disulphide of the *British Pharmacopœia* of great service. "Two drachms of the pure bisulphide may be dissolved in six drachms of rectified spirit, and four or five drops given in milk or in emulsion three times daily." He has found it useful "in chronic phthisis of cold and strumous temperaments, * * also in asthma and chronic bronchitis." Externally he has used the bisulphide in the proportion of one part to three of almond oil, and finds it a very useful application over any part of the chest where a deposit or thickening is suspected. The oils of lavender, lemon, and geranium may be added to disguise the odor of the liniment.

The Treatment of Vertigo.—According to the Paris correspondent of the *Medical Press* for August 20, 1902, Professor Vires recommends potassium iodide, from ten to twenty grains daily for months, with periods of rest, and quinine as advised by Professor Charcot when other methods fail. About six or eight two-grain pills should be given daily for a week. Special treatment should be directed to the particular causes of the vertigo, syphilis, malarial disease, gout, gastric affections, ear troubles, tobacco, etc.

Vertigo due to arteriosclerosis should be treated with small doses of potassium iodide:

℞ Potassium iodide.....1 drachm;
Water.....10 ounces.

M. Two tablespoonfuls daily for three weeks in the month. At the same time three drops of a one-per-cent-solution of nitroglycerin to be given morning and evening, and a milk diet prescribed for eight days every month. Purgatives should be given frequently.

When tachycardia is present one or two of the following pills should be ordered daily:

℞ Extract of convallaria majalis.....2 grains;
Sparteine sulphate.....1 grain.

M. ft. pil.

Insomnia is best treated with trional, and œdema

of the limbs by theobromine, ten grains four times a day.

For Pneumonia in Children.—M. Méry (*Journal des praticiens*, March 14th) gives the following as a substitute for cinchona wine, which is often badly borne:

- R Ammonium acetate.....3 grammes (45 grains);
Cognac.....5 grammes (75 minims);
Syrup of coffee.....20 grammes (5 drachms);
Tilia water.....50 grammes (1½ ounce).
M. This quantity may be given in divided doses distributed over the twenty-four hours.

Formulæ for the Administration of Phosphorus in Phthisis.—F. S. Plicque (*Presse médicale*, December 10th), gives the following:

In cases of fever in tuberculous subjects, accompanied with gastric troubles, the phosphoric lemonade of the Codex forms a grateful and refreshing drink:

- R Dilute phosphoric acid.....2 grammes (30 minims);
Water.....900 grammes (30 ounces);
Syrup.....100 grammes (3½ ounces).
M. One or even two quarts of this lemonade may be given daily. It is useful, also, in hæmoptysis, and especially in enterorrhagia.

Dujardin-Beaumetz frequently prescribed the wine of sodium and potassium phosphate, as a very agreeable preparation and one readily taken, even by children.

- R Sodium phosphate.....6 grammes (90 grains);
Potassium phosphate.....3 grammes (45 grains);
Syrup of bitter orange peel.....60 grammes (2 ounces);
Wine of Banyuls.....200 grammes (7 ounces).
M. A liqueur glassful at the end of each meal. This wine is slightly laxative.

It is difficult, says the author, to give creosote phosphate in doses sufficiently large and continued to constitute a real "phosphate medication." Moreover, in course of time under its use the patients grow thin, rather than increase in weight. But, employed temporarily, this remedy possesses a special action, on the one hand against the sweats, and on the other against the vomiting induced by the stomach cough. The best formula is the emulsion ordered by Brissonet:

- R Phosphate (or tannophosphate) of creosote.....25 grammes (375 grains);
Syrup of orange flowers.....70 grammes (2½ ounces);
Gum arabic.....10 grammes (½ ounce);
Distilled orange flower water { enough to make 125
grammes (4¼
ounces).
M. A teaspoonful of the emulsion contains 15 grains of phosphate or tannophosphate.

When incorporated with cod liver oil in the proportion of 10 grammes (150 grains) of the salt to 240 grammes (8 ounces) of the oil, the phos-

phate and the tannophosphate are equally well supported by the stomach. They are contraindicated in hæmoptysis or in a tendency to congestion.

Phosphite of creosote, on the contrary, by reason of its irritant action on the stomach, can only be given as an enema. It is a very active drug, easily inducing congestive attacks, insomnia, and rapid emaciation. But it seems, nevertheless, to have a direct and useful action on the fever and the tuberculous infection. Its employment, however, must always be exceptional and carefully watched. The author gives the following formula as the best:

- R Sydenham's laudanum.....10 drops;
Phosphite of creosote.....1 to 2 grammes (15 to 30 grains);
Yolk of egg.....No. 1;
Olive oil.....30 grammes (1 ounce);
Milk.....150 grammes (5 ounces).
M. To be used as an enema.

Formulæ for the Use of Calcium Chloride in Scrofula.—Dr. Liégeois (*Journal des praticiens*, March 14th) says that calcium chloride acts similarly to sodium chloride in scrofula, and that, like the latter, the former should be restricted to torpid scrofula. Calcium chloride is a powerful resolvent, more powerful than its similars. Containing more than one third of calcium, it is of great value to the osseous system, which, in scrofula, is poor in mineral matter.

For adenitis and suppurating caries, the author uses:

- R Calcium chloride. }
Calcium phosphate } of each 0.50 gramme (7½ grains)
M. for 1 powder. One such after the midday and evening meals.

The following is Rigghini's "Antiscrofulous Mixture":

- R Calcium chloride.....4 grammes (60 grains);
Distilled water.....350 grammes (11¾ ounces);
Syrup of Corsican moss.....50 grammes (1½ ounce).
M. To be taken in three doses during the day.

Rigghini uses a high dose (four grammes daily) such as is recommended for internal hæmorrhages. Biett's dose is weaker:

- R Calcium chloride } from 8 to 15 grammes (120 to
225 grains);
Distilled Water.....500 grammes (17 ounces);
Syrup of gentian.....60 grammes (2 ounces).
M. One or two tablespoonfuls daily.

Rabuteau's formula is still weaker:

- R Calcium chloride.....5 grammes (75 grains);
Syrup.....400 grammes (13½ ounces);
Alcoholate of mint..... } 100 grammes (2½
ounces).
M. A tablespoonful before each meal.

G. Spillmann insists that the use of calcium chloride should be continued for weeks and months; Warburton Begbie, for months, and even years.

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THE SANITARY PROVISIONS FOR THE NEW SUBWAY.

Inasmuch as some apprehension has been expressed publicly that the new underground railway of the city of New York would not be adequately furnished with ventilating and other sanitary provisions, we have instituted an inquiry of our own, and we are gratified to be able to say, as a consequence of that investigation, that we believe the tunnel will be amply provided with means of keeping it salubrious. There are to be numerous openings leading to the surface—openings quite sufficient in area, it is thought, to insure a constant supply of fresh air, and the constant passing of trains will aid materially in the diffusion of this air supply. Nearly every station will have a superstructure on the surface, and this structure will be open in fair weather, and more or less open at all times; these buildings, it is believed, will carry air to the tunnel much on the same principle as that by which funnels on steamship decks convey air to the interior parts of the vessel. Moreover, a system of induced ventilation will also be employed where the depth is such as to seem to call for it, a forced draught being effected by means of mechanical devices on the surface to inject air into the closets or by means of electric fans in the closets themselves. Where the presence of area ways or other openings permits of it, there will be placed louver ventilators of glass. These will be so constructed as to exclude storm water.

Each side of every station will have such water connections as to permit of the use of hose for washing all parts of the flooring of waiting rooms, the platforms, and the stairways. There will be

two waterclosets on the uptown and two on the downtown side of each station, plainly marked for the respective use of men and women. Each closet for women will include one or more "pay" sections. The closets are to be furnished with bowls of sanitary design and approved make and supplied with a good flushing device. In addition to the bowl, the closet for men will be provided with a urinal having its own flushing mechanism. Each closet will have a ventilating pipe leading directly to the outer air, where its mouth will be covered with a suitable iron grating and furnished with a small automatic exhaust fan. All the bowls and urinals will be connected by iron drain pipes with the main sewer, and these drains are to be trapped and "back-aired" in the most approved fashion. The back air pipes will have their surface openings covered with galvanized iron gratings. It will be seen, therefore, that the engineer has by no means overlooked the necessity of efficient sanitary appliances for the subway.

ILLEGITIMATE MATERNITY.

One might be pardoned for taking it for granted that this world-old theme had been worn threadbare, but we should always welcome a kindly word for the unfortunate—those who are more sinned against than sinning—especially when, even if lacking novelty of thought, it presents aspects of our duty that are for the most part ignored. This can truthfully be said of an article entitled *The Illegitimate Child in Chicago*, by Hastings H. Hart, LL. D., superintendent of the Illinois Children's Home and Aid Society, published in the March number of the *Chicago Medical Record*. Men and women who take an active part in administering the affairs of charitable institutions are apt to be moralists characterized rather by severity than by tenderness, and it is on this account all the more gratifying to find one of them so imbued with humane feeling as Dr. Hart undoubtedly is. We may not think that in every respect his recommendations are of the wisest, but we must concede that they are at all points expressive of a most sympathetic feeling for the unfortunate and the erring, to the exclusion of that repulsive censoriousness that often rises like a stone wall in the way of their reclamation.

Dr. Hart rightly rates high the power of the

physician to bring good out of the evil situation of illegitimate pregnancy or maternity—his capability of overcoming the first natural but misguided, if not radically criminal, propensity to seek the devilish art of the abortionist; of inducing the prospective mother to nourish and protect her offspring instead of abandoning it to institutions, to baby-farmers, or to persons of unsettled purpose and untried sense of duty who fancy they wish to adopt a child; of leading the mother to see that she must not leave her own baby to be "brought up by hand" while she gives all her natural nourishment to another child for hire; and, finally, of convincing the young mother that the interest of her child and that of herself will in most instances best be served by confiding in her own parents, who, to the credit of humanity be it said, will not generally stand aloof from her. It is in such ways as these that the physician, silently though it must be, so far as the world at large is concerned, saves the lives of infants, averts from them the stigma of bastardy, and restores to a virtuous and honorable life young women who but for him would be in great danger of swelling the horde of professional prostitutes.

RABIES.

We think our readers will admit that we are not given to playing the alarmist, and we have no intention of assuming the part with reference to the present prevalence of rabies. It cannot be denied, however, that there is at present unusual occasion for alarm in certain parts of the country. It may be that recent mad dog stories with the city of New York as their scene have been exaggerated by the newspaper reporters, but it can hardly be that they are fabrications; this much is shown by the lamentable death of the little child of a prominent physician of our town from rabies.

At a meeting of the Michigan State Board of Health held on April 10th, the president, the Hon. Frank Wells, made rabies largely the subject of his annual address. He declared that the disease was now epidemic in Michigan. Dr. Victor C. Vaughan, of Ann Arbor, who reported as a special committee on rabies, intimated that it had gradually spread from New York, where it had been very prevalent two or three years before, through Ohio and into Michigan. It had been diffused through every part

of the lower peninsula of Michigan, and was now prevailing among cattle, hogs, and other domestic animals. Many dogs and children had been bitten, and a man had died in Ypsilanti and a child in Saginaw. On Dr. Vaughan's recommendation a Pasteur institute had been established in connection with the State university, and six patients had already been treated, five of whom had been bitten by dogs known to be infected with rabies. Several thousand dollars' worth of cattle had been lost from the disease in the State, and the moderate appropriation of \$2,500 which the university had made for maintaining the institute for a year had been well invested. The president remarked in his address that circulars of information and forms of regulations requiring the muzzling of all dogs "at large" had been sent to each of the sixteen hundred local boards of health in the State.

In view of all these facts, we submit that there is good ground for enforcing the muzzling of all dogs in the affected districts, and we may add that we have a strong leaning toward the extermination of all city dogs.

HOMICIDE BY ADVERTISEMENT.

A disastrous event which happened in Brooklyn on the afternoon of April 9th is a clear indication of the absolute necessity for much greater restrictions being placed upon the sale and distribution of patent medicines than at present exist. A young boy, eleven years of age, on his road from school saw a man distributing from door to door envelopes which, it is said, contained samples of sugar-coated pills. Many of these the distributor appears not even to have taken the trouble to deliver to some responsible person at the door, but to have passed them into front yards and areas or to have left them on window sills. Several schoolboys collected some of these packages and under the impression that they were candy the unfortunate lad referred to ate several packages of them. Soon after reaching his home the boy showed symptoms resembling acute mania. A physician was summoned and the boy's manner and the condition of his eyes suggested belladonna poisoning. The pills were stated in the circular that accompanied them to be "tonic, laxative pills." Their composition is, of course, unknown, but in the opinion of the physician who attended the boy it seems probable that they contained strychnine as well as belladonna, and goodness only knows what irritant poison besides. Later accounts state that at least one other boy suffered from

eating the supposed candies, though, not having eaten many of them, he soon recovered. The man who should leave about in area ways and on window sills packets containing strychnine, morphine, arsenic, or other powerful poisons would probably receive his just deserts on conviction. It is only the anomalous condition of the law relating to patent medicines that may help to prevent all the persons concerned in this wholesale distribution of poisons, from the manufacturers downward, from receiving their just deserts. We trust that it will not be long before it will be made compulsory for all patent medicines containing poisons to be clearly labeled with the name and amount of the particular poisons contained. Better than all would it be if a law could be passed forbidding the manufacture and sale of any patent medicine whatsoever containing, in however small a degree, any of the drugs scheduled as poisonous in the State Pharmacy Law. But such promiscuous distribution of drugs of any kind for advertising purposes should be strictly prohibited in any event.

INFLUENZA AS A FATAL COMPLICATION.

Those who still underestimate the malign effect of influenza on the public health would do well to ponder certain statements printed in Chicago's *Bulletin of the Health Department* for the week ending April 4th. Dr. Reynolds informs us that during "the first four months" of 1903—we presume he means the first three months—influenza was more prevalent in Chicago than at any time since 1891. The number of deaths from all causes in the month of March, 1903, exceeded the number in the same month of 1902 by 350, and there were 330 deaths due, not directly to influenza, but to influenza as a complication of such diseases as pneumonia, consumption, Bright's disease, heart diseases, bronchitis, measles, and whooping cough, "in about this order of frequency." Of course it is only the laity who underrate the malignity of influenza, and we are glad to see that the Chicago department is pushing its campaign of education in regard to the disease.

THE JOURNAL OF CUTANEOUS DISEASES, INCLUDING SYPHILIS.

Under this title the former *Journal of Cutaneous and Genitourinary Diseases* continues its existence in its twenty-first volume, beginning with the January number for 1903. The March number lies before us as we write. The strong editorial staff, consisting of Dr. Edward B. Bronson, Dr. Prince A. Morrow, Dr. George T. Jackson, and Dr. John A. Fordyce, of New York; Dr. James C. White, and Dr. John T. Bowen, of Boston; Dr. Henry W. Stelwagon, of Philadelphia; and Dr. James Nevins Hyde, of

Chicago, with Dr. A. D. Mewborn, of New York, as acting editor, is surely a guarantee of excellence, more especially as we understand that all these gentlemen are actual collaborating editors, and not *nomina et præterea nihil*. The articles in the issue before us consist of an editorial on Lichen Planus and Leucoplasia of Mucous Surfaces; The Ætiology of Acne Vulgaris, by T. Caspar Gilchrist; A Case of Systemic Blastomycosis with Multiple Cutaneous and Subcutaneous Lesions, by Dr. Oliver S. Ormsby and Dr. H. M. Miller; Acne and its Treatment, by George Henry Fox; and the Transactions of the American Dermatological Association, of which body it is the official organ. A report of the New York Dermatological Society and some abstracts close the number. The mechanical setting of the journal is worthy of its contents.

"RABIES IN A MILD FORM."

We learn from the *Bulletin of the Health Department*, of Chicago, for the week ending April 4th that "rabies in a mild form is still prevalent in the vicinity of Fifty-fifth and Halsted Streets." We do not remember to have seen previous mention in literature of a mild form of rabies—mild enough, that is to say, to warrant any other than a fatal prognosis. We have reference, of course, to the casual disease, and not to any morbid condition resulting from the use of an attenuated virus.

INITIAL HÆMOPTYSIS IN THE PROGNOSIS OF CONSUMPTION.

Traditions that rest on common observation, even if it is uncollated and unanalyzed, are generally found in the long run to be trustworthy. F. Reiche (*Zeitschrift für Tuberkulose und Heilstättenwesen*, iii; *Zentralblatt für innere Medizin*, March 7th) has compiled and analyzed the statistics of the Hanseatische Versicherungsanstalt bearing upon the point, and he finds that they sustain the view that pulmonary tuberculous disease is most likely to prove curable if it first manifests itself by hæmoptysis.

MASSAGE OF THE BARED HEART.

We quite agree with M. Boureau (*Revue de chirurgie*, xxii, 10; *Zentralblatt für chirurgie*, April 4th) that further resort to the heroic procedure of laying the heart bare for manipulation designed to set it in motion again in cases of suspended animation due to chloroform had better be postponed till the physiologists have given us more definite information as to the length of time for which the heart remains capable of reanimation under such circumstances.

"MISSED LABOR" AFTER LACERATION OF THE CERVIX UTERI.

Such a paralysis of the uterus as makes it incompetent to expel the ovum must rarely if ever have been observed as the result of traumatism of the cervix incurred during pregnancy. That occurrence, however, seems reasonable, as the author suggests, in a case of which Dr. Lajos Góth relates the history in the *Zentralblatt für Gynäkologie* for April 4th. A woman who judged herself to be seven months pregnant was kicked by a calf in the region of the stomach. She felt no more foetal movements, and she lay abed for a few days, though more on account of alarm than of actual pain. After that she went about her usual household duties. She went far beyond term, when a macerated foetus was removed piecemeal. It was then found that the cervix had been lacerated, but without implication of the body of the organ. If it was really in the region of the stomach that she was kicked, it seems remarkable that the blow did no other damage than that of rupturing the cervix uteri.

News Items.

Society Meetings for the Coming Week:

MONDAY, *April 20th.*—New York Academy of Medicine (Section in Ophthalmology); New York County Medical Association; Hartford, Conn., Medical Society; Chicago Medical Society.

TUESDAY, *April 21st.*—New York Academy of Medicine (Section in General Medicine); Buffalo Academy of Medicine (Section in Pathology); Ogdensburg, N. Y., Medical Association; Syracuse, N. Y., Academy of Medicine; Medical Society of the County of Kings, N. Y.; Baltimore Academy of Medicine.

WEDNESDAY, *April 22d.*—New York Academy of Medicine (Section in Laryngology and Rhinology); New York Pathological Society; New York Surgical Society; American Microscopical Society of the City of New York; Philadelphia County Medical Society; New York Dermatological Society (private).

THURSDAY, *April 23d.*—New York Academy of Medicine (Section in Obstetrics and Gynecology); New York Orthopaedic Society; Brooklyn Pathological Society; Brooklyn Society for Neurology; Roxbury, Mass., Society for Medical Improvement (private, annual meeting); Pathological Society of Philadelphia (conversational); Church Hill Medical Society of Richmond, Va.; New York Celtic Medical Society.

FRIDAY, *April 24th.*—New York Clinical Society (private, annual meeting); New York Society of German Physicians; Yorkville Medical Association, New York (private); Philadelphia Clinical Society; Philadelphia Laryngological Society.

SATURDAY, *April 25th.*—New York Medical and Surgical Society (private); Harvard Medical Society, New York (private).

Change of Address.—Dr. J. Conger Bryan to 51 West Ninety-first Street, New York City.

The Chicago Medical Society has changed its official name to Medical Society of Cook County.

The Saturday and Sunday Hospital Association, on April 7th, distributed \$68,000 to thirty-seven city hospitals. The total collections for 1902 were over \$80,000, an increase of \$2,000 over the previous year.

The Society for the Culture of Musical Therapeutics has recently been organized in this city and the first meeting was to have been held on Friday evening, April 17th, at the residence of Dr. Egbert Guernsey.

A Randall's Island Hospital.—Plans have been filed for the erection of a two-story brick hospital on Randall's Island opposite One Hundred and Twenty-Third Street. The estimated cost is \$135,000.

A Smallpox Epidemic in Dublin.—It is said that smallpox is epidemic in Dublin. Over thirty cases are under treatment at the isolation hospital and many more are under observation. The public health department is taking all possible precautions.

Open Air Treatment on Blackwell's Island was recently inaugurated by the completion of a dozen canvas houses on the lawn south of the large building used as a tuberculosis infirmary. Each of these houses will accommodate from ten to twenty patients.

Mummies for the New York Odontological Society.—Dr. Finney, a dentist in Peru, has presented to the New York Odontological Society through Dr. J. H. Hanning, two mummies of Peruvian Incas. The mummies have been housed in the Academy of Medicine.

The Memorial Hospital for Women and Children, Brooklyn.—At a meeting held on April 6th, Dr. Jennie V. H. Baker, president of the medical staff, presented a report showing the admission of 600 patients during the year, with a total of 17,133 hospital days. The dispensary patients numbered 3,258. A new board of managers was elected.

Mr. Andrew Carnegie and the Cornell Typhoid Epidemic.—It is stated that Mr. Carnegie, who is a trustee of Cornell University, in addition to his gift of a filtration plant to the university, has offered to defray the expenses of all students who suffered in the typhoid fever epidemic, whether they withdrew from the university or remained at Ithaca. As at least some two hundred students have been seriously ill, Mr. Carnegie's offer, if accepted, will entail an approximate expenditure of \$60,000.

A Plea for Noiseless Car Wheels.—At the annual meeting of the Academy of Ophthalmology and Otolaryngology recently held at Indianapolis, a petition was read urging boards of health throughout the United States to secure the attention of street car and steam railway companies for an early consideration of the sanitary and therapeutical value of noiseless car wheels. The petition requests boards of health in the large cities to investigate this subject.

A Physician's Suit Against a Telegraph Company.—Dr. Howard A. Kelly, of Johns Hopkins has entered suit against the Western Union Telegraph Company for the sum of \$2,000 damages, in consequence of the alleged neglect of the company to deliver to him telegrams requesting his professional attendance for an important surgical operation, in Cambridge, Md., on October 13, 1902.

The New York Red Cross Hospital and Training School has had given to it, by William T. Wardwell, a site for a permanent hospital in Central Park West. A number of plans are under consideration. Private as well as public patients will be received. The Red Cross Sisters, of which organization Mr. Wardwell is president, have for some years maintained a hospital at 110 West Eighty-second Street.

A Check to Sanitary Work in Chinatown, San Francisco.—The L. Scatena Co., owner of the property on Dupont and Sacramento Streets, San Francisco, which was attacked recently by the agents of the health department, has obtained a temporary injunction against the board of health. The company has also demanded \$10,000 damages for the work done by the board of health in tearing down the overhanging balconies.

State and County Civil Service Examinations.—The next general examination for the State and county service will be held on May 9, 1903. The following positions, among others, are included: Apothecary, and trained nurse. Persons desiring to enter these examinations must file applications in the office of the State Civil Service Commission, in Albany, before noon of May 4th. Applications will also be received for medical interne in State hospitals and institutions. Application blanks and information regarding salaries and requirements of examinations may be obtained by addressing the chief examiner of the commission at Albany.

The Denver Academy of Medicine, to maintain a home and meeting place for the profession, and to provide for a medical library, was organized March 31st. The officers chosen for the ensuing year are: President, Dr. Henry Sewall; vice-president, Dr. George B. Packard; trustees, Dr. W. A. Jayne, Dr. W. W. Grant, Dr. Thomas H. Hawkins, Dr. L. E. Lemen, Dr. H. W. McLauthlin, Dr. I. B. Perkins; secretary, Dr. C. K. Fleming; treasurer, Dr. Frank E. Waxham; and librarian, Dr. C. D. Spivak.

The New York Academy of Medicine.—On Tuesday evening, April 21st, a meeting will be held by the Section in Medicine. Dr. Alfred Meyer will describe a Case of Complete Obstruction of both the Superior and Inferior Venæ Cavæ in a Young Man of Eighteen, being the first Reported Case; Dr. William P. Spratling, superintendent of the Craig Colony for Epileptics, will read a paper on the Nature, Frequency, and Possible Significance of the Various Forms of Epileptic Aura. Dr. Warren Coleman will present a communication on the Toxic Actions of Urotropium.

A Physician Appointed Consul.—Dr. Theodore L. Bluthardt has been appointed United States Consul at Barmen, Germany. Dr. Bluthardt served in the Union army through the civil war, and has resided in Chicago ever since that time, and for the major portion of that time has held some sort of public office.

The Plague in Mazatlan.—The United States Public Health and Marine Hospital Service has withdrawn all of its officers from Mexico with the exception of Passed Assistant Surgeon Grubbs, who is still at Guayamas, and Assistant Surgeon Francis, now in the City of Mexico. These officers remain to keep the American authorities in touch with the condition in the plague region. No new cases of the plague in Mazatlan during the week ending April 2nd; there had been no deaths for a week and on that date there were but nineteen cases under treatment.

Hospital Camps.—A bill has been introduced into the New York State legislature providing that no hospital camp for the treatment of consumption shall be established in any town without the consent of the supervisors of the county and the town board of the town concerned. This bill is apparently intended to give the local authorities power to prevent the proposed establishment of a consumption camp by the city of New York in Orange County.

The State has no Authority over Parochial Schools.—The Attorney-General of the State of New York has rendered an opinion to the effect that the State Health law does not compel the authorities of parochial schools to exclude unvaccinated children from attending school, but that the local board of health, if it deems necessary, may direct general vaccination and provide a penalty for non-compliance. The opinion was rendered as a result of the situation in Dunkirk, and is the first time the question has been passed upon.

American Delegates to the Madrid Medical Congress.—A large number of delegates from various parts of the United States sailed from New York on the *Princess Irene*, on Saturday, April 11th, for Madrid, via Gibraltar. Dr. Abraham Jacobi headed the delegation from New York. Dr. Reginald Sayre had already started for Madrid. Other New York physicians who went on the *Princess Irene* are Dr. Louis Fischer, Dr. Agnew H. Smith, Dr. A. E. Macdonald, Dr. John H. Huddleston, Dr. J. Z. Powell and Dr. Davidson H. Smith.

Chicago was represented by Dr. N. Senn, Dr. J. D. Murphy, and Dr. C. W. Adams. Among these who sailed were Dr. George W. Brown, of Milwaukee, Wis.; Dr. Wilson O. Bridges, of Omaha, Neb.; Dr. Richard Douglass, of Nashville, Tenn.; Dr. C. E. French, of Lowell, Mass.; Dr. J. D. Griffith, of Kansas City, Mo.; Dr. N. D. Harrelson, of Kansas City, Mo.; Dr. C. H. Hughes, of St. Louis, Mo.; Dr. Waldo Johnson, of Philadelphia, Pa.; Dr. Howard A. Kelly, of Baltimore, Md.; Dr. Calvin Gates Page, of Boston; Dr. R. Harvey Reed, of Rock Springs, Wis., and Dr. I. N. Wear, of Fargo, S. D.

Rhode Island Medical Society.—At the business meeting of the Rhode Island Medical Society, held March 5th, the following officers were elected for the year beginning after the annual June meeting: President, Dr. William R. White, Providence; first vice-president, Dr. Christopher F. Barker, Newport; second vice-president, Dr. Charles V. Chapin, Providence; recording secretary, Dr. Stephen A. Welch, Providence; corresponding secretary, Dr. Herbert Terry, Providence; treasurer, Dr. George S. Mathews, Providence; librarian, Dr. George D. Hersey, Providence. The annual meeting of the society will be held in Providence, on Thursday, June 4th.

Are Negro Infants Born White?—Some time ago we had a correspondence in our columns as to the color at birth of the infants of negro parents, both sides expressing their opinion with considerable conviction. It appears that in a recent contribution to the *Revue Encyclopédique*, a German physician, who has spent several years in African Togoland, states that in the equatorial regions the children are born of the same color as European infants. After two or three months the skin turns to a lilac color. Ten days later it becomes of a light chestnut shade, and it is only at the end of three or four months that the skin becomes completely black. We should be glad to hear from any other physicians who have been in African Togoland.

The New Mexico Medical Society.—The twenty-second annual meeting was held at Las Vegas on April 7th and 8th. The following was the programme: Presidential address, by Dr. W. G. Hope, of Albuquerque; The Use of Cocaine in Abdominal Operations, by Dr. G. C. Bryan, of Alamogordo; Gallstones and Fat Necrosis, by Dr. J. A. Rolls, of Watrous; The Medical Treatment of Advanced Pulmonary Disease, by Dr. J. Frank McConnell, of Las Cruces; Medical Notes While in Mexico, by Dr. W. R. Tipton, of Las Vegas; Presentation of a Case of Impermeable Stricture of the Œsophagus—Gastrostomy, by Dr. Edwin B. Shaw, of Las Vegas; and Suprapubic Cystotomy in Two Stages, with Presentation of Specimens, by Dr. Luis Hernandez, of Las Vegas.

Elevation of the Medical Course in New Jersey.—The State Board of Medical Examiners of New Jersey has secured amendments to the Medical Practice Act of that State by which the academic standards for admission to the State examinations have been raised from a competent common school education to a diploma issued after four years of study in a normal, manual training, or high school of the first grade in that State, or its equivalent.

The medical requirements have been increased from three to four courses of medical lectures of at least seven months each, in different calendar years, prior to receiving the degree of Doctor of Medicine.

The amendments go into effect July 4th next. After that date, candidates for examination or for the endorsement of a license issued by a recognized examining board of another State, will be obliged to comply with the new standard of requirements for a New Jersey license.

Dr. Shoemaker His Own Successor.—The newly installed mayor of Philadelphia has named Dr. John V. Shoemaker as director of the new department of health and charities, thus virtually making him his own successor since he has been serving for some years as president of the board of directors of the department of charities and correction, which had charge of the Philadelphia Almshouse and Hospital and the House of Correction. The department of health and charities was created by consolidating the department of charities and correction and the bureau of health. The department of charities and correction was operated under the supervision of a board of directors appointed by the mayor. The bureau of health was formerly under the charge of the director of the department of public safety.

A New Consumptive Colony in California.—Mr. N. O. Nelson, of St. Louis, has recently purchased one hundred and sixty acres of land at Indio, Cal., in the so-called desert, one hundred and twenty miles east of Los Angeles. The place is twenty-two feet below sea level, and the temperature even in winter never falls below 25° F. above zero. The atmosphere is very dry. It has been proved that under irrigation the ground is very fertile. The colony is intended for both rich and poor. While not entirely cooperative it will be self-supporting. Each family is to be given five acres to improve as they wish, and free water supply will be afforded. A free boarding place will also be established for those who need it. Mr. Nelson, who takes entire management in his own hands, expects the colonists to run the place on the lines which he will lay down in due course. Men are already at work erecting buildings, and Mr. Nelson intends to plant the region with trees and shrubbery adapted to the climate. Should the colonists increase as he expects, it is his intention to purchase more land.

Appointment of Medical Consulting Staffs to the State Hospitals.—The Commission in Lunacy is appointing gradually consulting staffs to the various State hospitals, consisting of physicians, surgeons, and specialists. The following appointments have been made up to the present: At the Manhattan State Hospital East, Dr. Austin Flint, Dr. Whitman V. White, Dr. Walter R. Gillette, Dr. Edward G. Janeway, Dr. Carlos F. MacDonald, Dr. Allan McLane Hamilton, Dr. Joseph D. Bryant, Dr. Edward D. Fisher, Dr. William H. Thomson, Dr. Bernard Sachs, Dr. William Hirsch, Dr. William C. Lusk, Dr. Pearce Bailey, Dr. W. Evelyn Porter, Dr. John L. Adams and Dr. Thomas P. Prout; at the Manhattan State Hospital West, Dr. Austin Flint, Dr. Walter R. Gillette, Dr. Edward D. Fisher, Dr. Allan McLane Hamilton, Dr. Whitman V. White, Dr. Edward G. Janeway, Dr. Carlos F. MacDonald, Dr. Joseph D. Bryant, Dr. Bernard Sachs, Dr. Le Roy Broun, Dr. Pearce Bailey, Dr. Robert C. Kemp, Dr. William C. Lusk, Dr. Henry H. Whitehouse, and Dr. Ward A. Holden; at the State Hospital at Centre Islip, Dr. William H. Ross, Dr. William B. Savage, Dr. Harold E. Hewlett, Dr. James P. Tuttle, Dr. L. Pierce Clark, Dr. Nathaniel Bowditch Potter and Dr. P. R. Turnure.

The State Medical Association of Texas will hold its thirty-fifth annual meeting in Turner Hall, 217 Nacogdoches Street, San Antonio, on Tuesday, Wednesday, Thursday, and Friday, April 28th to May 1st. A special rate has been made by the railroad of one fare plus 10 per cent. for the round trip. A preliminary meeting will be held on the evening of April 27th, at which Dr. J. N. McCormack, of Kentucky, chairman of the Committee on Organization of the American Medical Association, will be in attendance, and will participate in the discussion. A long and interesting programme of papers has been published, and all physicians of good standing throughout the State are invited to attend the sessions. Accommodations may be obtained through Dr. G. G. Watts, of San Antonio, chairman of the Committee on Hotels.

The New York State Medical Association.—The New York County Branch will hold its annual meeting at the Academy of Medicine on Monday evening, April 20th. Polls will be open for the election of officers from 8 to 9 p. m. The following officers have been nominated by the nominating committee: For president, Dr. Alexander Lambert; for first vice-president, Dr. Francis J. Quinlan; for second vice-president, Dr. S. Busby Allen; for secretary, Dr. Ogden C. Ludlow; for corresponding secretary, Dr. John J. Nutt; for treasurer, Dr. Charles E. Denison; for member of executive committee for three years, Dr. Frederick P. Hammond; for member of nominating committee, fifth district branch, Dr. Parker Syms. The official ballot also includes the names of sixty fellows and alternates of the State association to be voted upon. Dr. A. Ernest Gallant will read a paper on Aseptic Labor, and Dr. Alfred B. Tuthill will describe a New Operation for the Repair of the Perinæum.

The Pennsylvania Society for the Prevention of Tuberculosis.—The annual meeting of the Pennsylvania Society for the Prevention of Tuberculosis was held recently in Philadelphia. Dr. S. A. Knopf made an address and the following officers were elected: President, Dr. Howard S. Anders; vice-presidents, Dr. J. Colis Cohen, Dr. Benjamin Lee, Dr. Talcott Williams, Dr. Samuel Scovell, Jr., Dr. Mazzyk P. Ravenel, Dr. Samuel Castner, Dr. S. A. Knopf, Dr. William Moss, Dr. Samuel G. Dixon, Dr. Lawrence F. Flick, Dr. Guy Hinsdale, Dr. A. E. Roussel, Mrs. W. F. Jenks, and Miss E. W. Redfield; solicitor, James F. Stanton; secretary, Dr. A. Heron Davisson; treasurer, the Commonwealth Title Insurance and Trust Company; board of directors, Dr. Lawrence F. Flick, Dr. Hinsdale, Dr. Anders, Dr. Moss, Dr. Leonard Pearson, James L. Stanton, Dr. J. Solis Cohen, Dr. Joseph Walsh, S. Scovell, Jr., Dr. Roussel, Dr. Ravenel, Dr. Davisson, Dr. Ward Brinton, Rev. Dr. Herman M. Duhring and Rev. Dr. Nathan C. Thomas.

The Limitation to the Powers of Health Boards.—A recent decision of the Appellate Court is of interest. In the case of the village of Liberty *versus* E. Van Fredenburg, the defendant was in the habit of collecting refuse from hotels

and other resorts near Liberty, and among other places from the Loomis Sanitarium for Consumptives, which refuse he used for feeding hogs with. The board of health of Liberty issued an order forbidding him to use the refuse from the sanitarium, for disobedience of which order he was arrested, held for trial, convicted and sentenced in the county court. An appeal was entered, and the Appellate Court reversed the decision, pointing out that the powers of the health boards are not unlimited, and that they must not overstep their legal limits or they cannot enforce their orders. The court says: "The gist of the crime which the defendant is said to have committed is the disobedience of a lawful order of the board of health. Unless, then, the order disobeyed was one lawfully made by the board of health, defendant had been guilty of no crime. There is no proof that this refuse from the sanitarium for consumptives is any more dangerous than the refuse from any hotel, and we cannot assume such to be the fact in sustaining this conviction."

The Late Dr. T. Gaillard Thomas.—At a meeting of a committee appointed by the medical board of the New York Infant Asylum held March 30th, 1903, the following resolutions were adopted:

Whereas, The late Dr. T. Gaillard Thomas for several years and at the time of his death was a consulting obstetrician of the New York Infant Asylum and President of the Medical Board, an office in which he exhibited wise counsel and charming geniality, and

Whereas, Dr. Thomas was a man of great eminence, well known to the medical profession throughout the world, by virtue of whose character and renown much honor was reflected upon this Institution, therefore

Be it resolved, That the Medical Board of the New York Infant Asylum record the death of Dr. Thomas with a sense of deep regret and inexpressible loss, and further

Be it resolved, That a copy of these minutes be sent to the bereaved family, and to the principal medical journals, and inscribed in the records of the New York Infant Asylum.

(Signed)

J. MILTON MABBOTT, M. D.,
GEORGE TUCKER HARRISON, M. D.,
Committee.

At a meeting of the Medical Association of the Greater City of New York, held on April 13th, a committee appointed to take action on the death of Dr. T. Gaillard Thomas presented an elaborate sketch of the distinguished career and eminent services of the deceased physician. The conclusion of their report runs as follows: "In the death of Dr. Theodore Gaillard Thomas this society recognizes the loss of one of its most distinguished and most valued members. Its memory of Dr. Thomas will be of a man of keen intelligence, wide cultivation, and accomplished skill, a man of purity of character, broad humanity, and strictest honor."

(Signed)

HENRY FREEMAN WALKER,
EDWIN B. CRAGIN,
S. BEACH JONES,

Committee.

Mosquitoes and Shipping.—In a report recently submitted to the Surgeon General of the United States Public Health and Marine Hospital Service based upon a study of the relations of mosquitoes to shipping with a view to determining the conditions under which mosquitoes infected with yellow fever may be brought into the United States, Assistant Surgeon Grubbs states that at the Gulf quarantine station from June to November last he made a careful inspection of vessels arriving from ports where the presence of the stegomyia renders them liable to infection. On the eighty-two vessels from possibly yellow fever ports sixty-five had no mosquitoes on board at any time during the voyage, five had the insects on board at port of departure, nine reported the appearance *en route* of culex, or harmless mosquitoes, and three brought stegomyia to the station. All three of the last group were from Vera Cruz, a yellow fever port, and the voyage lasted on an average of seventeen days. Surgeon Grubbs gives the mosquito history of each of the three and reaches these conclusions: "First, that mosquitoes can come aboard a vessel under favorable conditions when the vessel is not far from shore; second, that stegomyia can be carried from Mexican or West Indies ports to those of our gulf States; third, that they can board a vessel lying at anchor a half or mile or less from shore, being conveyed by the open lighters used for flying aboard, and finally, that a vessel moored a short distance from land may become infected with yellow fever, our old beliefs to the contrary notwithstanding."

Official News.

Infectious Diseases in New York:

We are indebted to the Sanitary Bureau of the Health Department for the following statement of cases and deaths reported for the two weeks ending April 11, 1903:

DISEASES.	Week end'g April 4.		Week end'g April 11	
	Cases.	Deaths.	Cases.	Deaths.
Measles	285	11	227	12
Diphtheria and Croup.....	353	52	389	47
Scarlet fever.....	324	19	313	23
Small-pox	1	0	0	0
Chicken-pox.....	105	1	83	0
Tuberculosis	270	124	284	168
Typhoid fever	36	4	39	11
Cerebro-spinal meningitis. .	0	0	0	0

Public Health and Marine-Hospital Service:

Official List of Changes of Station and Duties of Commissioned and Non-commissioned Officers of the Public Health and Marine-Hospital Service, for the Seven Days ending April 9, 1903:

MURRAY, R. D., Surgeon. Granted leave of absence for fourteen days, from May 1st.

McINTOSH, W. P., Surgeon. To proceed to Lumpkin, Georgia, for special temporary duty.

PIERCE, C. C., Assistant Surgeon. Detailed to represent the service at the meeting of the Florida State Medical Association, to be held at St. Augustine, Florida, April 8th to 10th.

ALTREE, G. H., Acting Assistant Surgeon. Granted leave of absence for five days, from April 8th.

RODMAN, J. C., Acting Assistant Surgeon. Granted five days' leave of absence, from April 8th.

WALKLEY, W. S., Acting Assistant Surgeon. Granted leave of absence for two days.

Promotion.

E. M. HOLT, Pharmacist of the third class, promoted to be Pharmacist of the second class, effective March 2, 1903.

Public Health and Marine-Hospital Service Health Reports:

The following cases of smallpox, yellow fever, cholera, and plague, have been reported to the surgeon-general, Public Health and Marine-Hospital Service, during the Week ending April 11, 1903:

Smallpox—United States.				
Place.	Dates.	Cases.	Deaths.	
Alabama—Mobile	Mar. 28-Apr. 4 ..	2		
California—Fresno	Mar. 1-31	20	1	
California—Los Angeles	Mar. 21-28	2		
California—Sacramento	Mar. 21-28	1		
California—San Francisco	Mar. 26-Apr. 2 ..	5		
California—Stockton	Mar. 1-31	4		
Colorado—Denver	Mar. 14-28	49		
Florida—Jacksonville	Mar. 28-Apr. 4 ..	4		
Illinois—Alton	Mar. 28-Apr. 4 ..	1		
Illinois—Belleville	Mar. 28-Apr. 4 ..	1		
Illinois—Galesburg	Mar. 28-Apr. 4 ..	2		
Illinois—Kankakee	Mar. 24-31	1		
Indiana—Elwood	Mar. 22-29	13		
Indiana—Indianapolis	Mar. 28-Apr. 4 ..	10	1	
Indiana—Kokomo	Mar. 28-Apr. 4 ..	1		
Iowa—Dubuque	Mar. 28-Apr. 4 ..	1		
Kansas—Wichita	Mar. 28-Apr. 4 ..	2		
Kentucky—Lexington	Mar. 28-Apr. 4 ..	2		
Louisiana—New Orleans	Mar. 28-Apr. 4 ..	3	all im- ported.	
Maryland—Baltimore	Mar. 28-Apr. 4 ..	1		
Massachusetts—Boston	Mar. 28-Apr. 4 ..	2	1	
Massachusetts—Holyoke	Mar. 21-Apr. 4 ..	2		
Michigan—Ann Arbor	Mar. 21-28	1		
Michigan—Detroit	Mar. 28-Apr. 4 ..	15		
Michigan—Grand Rapids	Mar. 28-Apr. 4 ..	10		
Michigan—Port Huron	Mar. 28-Apr. 4 ..	2		
Missouri—St. Joseph	Mar. 28-Apr. 4 ..	1		
Missouri—St. Louis	Mar. 29-Apr. 5 ..	7		
Nebraska—Omaha	Mar. 28-Apr. 4 ..	7		
New Hampshire—Manchester	Mar. 28-Apr. 4 ..	3		
New Hampshire—Nashua	Mar. 28-Apr. 4 ..	2		
New Jersey—Hudson County	Mar. 29-Apr. 5 ..	2		
New York—Buffalo	Mar. 31-Apr. 6 ..	1		
New York—New York	Mar. 28-Apr. 4 ..	1		
Ohio—Cincinnati	Mar. 27-Apr. 3 ..	9		
Ohio—Toledo	Mar. 21-Apr. 4 ..	6		
Oregon—Portland	April 1	1		
Pennsylvania—Erie	Mar. 28-Apr. 4 ..	3	1	
Pennsylvania—Johnstown	Mar. 28-Apr. 4 ..	1		
Pennsylvania—Norristown	Mar. 28-Apr. 4 ..	1		
Pennsylvania—Pittsburgh	Mar. 28-Apr. 4 ..	25	4	
South Carolina—Charleston	Mar. 28-Apr. 4 ..	7		

Smallpox—Insular.

Philippines—Manila Feb. 13-20 | 1 | | |

Smallpox—Foreign.

Brazil—Pernambuco	Feb. 1-28	9		
Brazil—Rio de Janeiro	Feb. 27-Mar. 6 ..	8		
Colombia—Barranquilla	Mar. 8-15	2		
Great Britain—Birmingham	Mar. 14-21	12	3	
Great Britain—Bradford	Mar. 1-14	6		
Great Britain—Liverpool	To Mar. 21	86	6	
Great Britain—London	Mar. 14-21	2		
Great Britain—Manchester	Mar. 14-21	8		
Great Britain—Nottingham	Mar. 14-21	3		
Great Britain—Walker-upon-Tyne	Mar. 7-14	1		
Gt. Britain—Wallsend-upon-Tyne	Mar. 7-14	1		
Italy—Palermo	Mar. 7-14	1		
Mexico—City of Mexico	Mar. 15-22	6	5	
Russia—Moscow	Mar. 7-14	3	1	
Russia—St. Petersburg	Mar. 7-14	37	5	
Russia—Warsaw	Mar. 7-14	4		
Straits Settlements—Singapore	Mar. 7-14	4		

Yellow Fever.

Brazil—Rio de Janeiro	Feb. 27-Mar. 6 ..	27		
Colombia—Cartagena	Mar. 9-16	1		
Colombia—Panama	Mar. 19-26	4	1	
Ecuador—Guayaquil	Mar. 7-14	17		
Mexico—Vera Cruz	Mar. 21-28	2		

Cholera—Insular.

Philippine Provinces Feb. 7-14 | 570 | 270 | |

Plague—Insular.

Philippines—Manila Feb. 13-20 | 2 | | |

Army Intelligence:

Official List of Changes in the Stations and Duties of Officers serving in the Medical Department of the United States Army for the Week ending April 11, 1903:

BAKER, DAVID, First Lieutenant and Assistant Surgeon. Granted four months' leave of absence, from about May 1, 1903.

HENDERSON, A. B., First Lieutenant and Assistant Surgeon. Granted leave of absence for one month and twelve days.

RAFFERTY, OGDEN, Major and Surgeon. Left San Francisco, Cal., on April 3, 1903, on two months' leave of absence.

ROBERTS, WILLIAM, First Lieutenant and Assistant Surgeon. Ordered to the Army and Navy General Hospital, Hot Springs, Ark., for treatment.

TEN EYCK, B. L., Major and Surgeon. Granted leave of absence for twenty days.

TRUBY, W. F., First Lieutenant and Assistant Surgeon. Assignment to temporary duty at Columbus Barracks, Ohio, amended to read Fort Ethan Allen, N. Y.

The following Assistant Surgeons are under orders for examination as to their fitness for promotion, and to report to L. A. La Garde, Major and Surgeon, President of the Examining Board at the Surgeon-General's office: First Lieutenants DAVID BAKER, DOUGLAS F. DUBAL, EUGENE H. HARTNETT, CLYDE S. FORD, CLARENCE J. MANLY, E. R. SCHREINER, IRA A. SHIMER and ALBERT E. TRUBY.

Naval Intelligence:

Official List of Changes in the Medical Corps of the United States Navy for the Week ending April 11, 1903:

BIDDLE, C., Surgeon. Detached from the Navy Yard, League Island, Pa., and ordered to the *Minneapolis*.

BOGERT, E. S., Surgeon. Ordered to the Naval Academy, Annapolis.

BROWN, E. M., Assistant Surgeon. Detached from the Naval Museum of Hygiene and ordered to the Naval Hospital, Norfolk, Va.

ELY, C. F., Assistant Surgeon. Ordered to the Naval Hospital, New York.

HALLOWAY, J. H., Assistant Surgeon. Detached from the Naval Museum of Hygiene and ordered to the *Franklin*.

LIPPITT, T. M., Assistant Surgeon (retired). Detached from the Naval Hospital, New York, and ordered home.

MCCORD, D. J., Acting Assistant Surgeon. Appointment revoked, to take effect April 4, 1903.

NORTON, O. D., Surgeon. Detached from the *Minneapolis* and ordered to the Navy Yard, League Island, Pa.

SMITH, G. T., Surgeon. Detached from the *Puritan* and ordered home to wait orders.

Births, Marriages, and Deaths.**Married.**

HESS—SCHOOLHERR.—In Baltimore, Maryland, on Wednesday, April 8th, Dr. Samuel Hess, of New York, and Mrs. Helen Schoolherr.

JENKS—COX.—In New York, on Tuesday, April 14th, Dr. Edwin Brown Jenks, of Elmira, N. Y., and Miss Ruth Cox.

KLINETOP—WAITE.—In Chicago, Illinois, on Sunday, April 5th, Dr. C. W. Klinetop and Miss Venus Waite.

MORRIS—SIMS.—In Troy, N. Y., on Thursday, April 9th, Dr. Samuel J. Morris, of Washington, and Miss Florence Elizabeth Sims.

PANCOAST—BOGGS.—In Baltimore, Maryland, on Tuesday, April 7th, Dr. Henry K. Pancoast, of Philadelphia, and Miss Clara Louise Boggs.

SMITH—ALLEN.—In Philadelphia, Pa., on Wednesday, April 8th, Dr. J. Robert Smith, of Indianapolis, Ind., and Miss Bessie Jones Allen.

VAN SANDT—CUDDY.—In St. Louis, Missouri, on Thursday, April 9th, Dr. Guy Van Sandt and Miss Lucille Cuddy.

Died.

ALLEN.—In Mansfield, Massachusetts, on Sunday, April 5th, Dr. W. G. Allen, in the seventieth year of his age.

ARCHAMBAULT.—In Woonsocket, Rhode Island, on Wednesday, April 8th, Dr. L. Gideon Archambault, in the fifty-sixth year of his age.

AYRES.—In Stamford, Connecticut, on Tuesday, April 14th, Dr. Chauncey Ayres, in the ninety-fifth year of his age.

BROWN.—In Philadelphia, Pennsylvania, on Friday, April 10th, Dr. James M. Brown, in the fifty-first year of his age.

BRYANT.—In Los Angeles, California, on Saturday, April 4th, Dr. J. H. Bryant, in the sixty-ninth year of his age.

CHEESMAN.—In New York City, on Sunday, April 12th, Dr. Hobart Cheesman, in the fifty-ninth year of his age.

COLLAMORE.—In Toledo, Ohio, on Wednesday, April 8th, Dr. G. A. Collamore.

DURRIE.—In East Orange, New Jersey, on Wednesday, April 8th, Dr. William A. Durrie, in the eightieth year of his age.

KERFOOT.—In Berryville, Virginia, on Thursday, April 9th, Dr. Henry D. Kerfoot, in the fifty-seventh year of his age.

MARSHALL.—In Monmouth, Illinois, on Saturday, April 11th, Dr. Hugh Marshall, in the seventy-seventh year of his age.

MILLER.—In Paris, France, on Tuesday, April 7th, Dr. Guy Bryan Miller, of New York, in the thirty-first year of his age.

NEHRBAS.—In Brooklyn, N. Y., on Monday, April 13th, Dr. Frederick Nehrbas, in the thirty-fifth year of his age.

PRICE.—In Somerville, Massachusetts, on Saturday, April 11th, Dr. William H. Price, in the ninety-first year of his age.

SMITH.—In Baltimore, Maryland, on Tuesday, April 14th, Dr. William F. Smith, in the thirty-ninth year of his age.

SUSSORFF.—In San Francisco, California, on Saturday, April 4th, Dr. Gustave E. Sussdorff, in the sixty-first year of his age.

WHITWELL.—In Fishkill, New York, on Wednesday, April 8th, Dr. William S. Whitwell, in the fifty-seventh year of his age.

WUNCH.—In Saranac, Michigan, on Wednesday, April 8th, Dr. Charles Wunch, in the seventy-seventh year of his age.

WYCKOFF.—In Belvidere, New Jersey, on Tuesday, April 14th, Dr. Albert Wyckoff, in the fifty-second year of his age.

OBITUARY NOTES.

DR. WILLIAM F. SMITH, who for some years held the chair of anatomy at the College of Physicians and Surgeons of Baltimore, died of pneumonia on April 14th in that city, at the comparatively early age of thirty-nine years. Dr. Smith was a professor at the College of Dental Surgery, in Baltimore, and was a graduate of Johns Hopkins.

DR. CHAUNCEY AYRES, of Stamford, Conn., died at his home on April 14th. He was born at New Canaan, on August 14, 1808, and was the oldest living graduate at Yale Medical School. He graduated in 1831, and had resided in Stamford for sixty-six years.

DR. LABORDE died in Paris, on April 6th. Dr. Laborde was a member of the French Academy of Medicine, and was perhaps most widely known for his introduction of the method of resuscitating the apparently drowned by means of rhythmical traction of the tongue.

Pith of Current Literature.

PRACTICE OF MEDICINE.

The Diagnostic Value of Blood Counts in Malarial and Other Fevers. By T. H. Delany, M. B. (*British Medical Journal*, March 28th).—The author's article is based on a series of 197 blood counts in cases of malaria and other fevers. His conclusions are that in malarial fever the blood shows: (a) A marked increase in the large uni-nuclear leucocytes. (b) A large increase in the lymphocytes. (c) A diminution in the total leucocyte count. (d) Myelocytes are frequently present. (e) A diminution in the red cells, but less than that of the leucocytes. (f) A diminution in the hæmoglobin, but less than that of the red cells.

A reduction of the leucocytes to 1,500 or less is of grave prognostic significance; in such cases large doses of quinine hypodermically will alone save the patients. The characteristic increase in the uni-nuclear leucocytes may be absent under the following circumstances: (a) very short duration of illness; (b) the presence of a leucocytosis; and (c) the presence of a high temperature at the time the blood is examined. Leucocytosis occasionally occurs in malaria, and indicates a reaction of the blood to the intense poisoning, the amount of leucocytosis varying directly with the intensity of the disease.

Trypanosomiasis and Its Cause. By A. Maxwell-Adams, Jr. (*British Medical Journal*, March 28th).—The author holds that the priority of the discovery of a case of human trypanosomiasis rests with Dutton. It seems that the patient had been bitten twice by rats before falling ill; as trypanosomiasis is a common disease among rats, the author suggests a direct transference. The original seat of the parasite might be some insect (flea) peculiar to, and living only on, the juices of the rat which in its turn is capable of conveying it to man, acting as an intermediary.

Trypanosomiasis on the Congo. By Dr. P. Manson. (*British Medical Journal*, March 28th).—The author has observed a second case of trypanosomiasis occurring in a European and also acquired on the Congo, and further has heard of two additional cases. From this we must infer that the disease is very common in that part of Africa. In both of the author's cases the disease followed a sore on the foot attributed to an insect's bite. The author suggests that the insect may be the poisonous tick of bug-like habits (*Argas moubata*) observed by Livingstone in the Zambesi Valley.

Ankylostomiasis. By O. Baker, I. M. S. (*British Medical Journal*, March 28th).—Ankylostomiasis is a disease caused by a leech-like blood-sucking parasite which infests the small intestine. The author holds that it is far more serious and fatal than physicians have any idea of, and is the immediate and only cause of many deaths set down to general dropsy and debility in tropical countries; and as an indirect and contributory factor in deaths due to other diseases, its influence is enormous. It exists

uninterruptedly over about three fifths of the habitable globe, between 50° lat. north and 30° lat. south.

The disease is not transmitted or conveyed by infected drinking water; it is directly due to the dirty, filthy habits and customs of the people among whom it is prevalent. In one way or another more or less dirt and earth enters with the food, carrying with it the eggs of the parasite. The earliest symptoms are epigastric pain and distress, loss of appetite, and a progressive anæmia. In the early period the anæmia is of a protopathic type; later, it shows all the characters, signs, and symptoms of pernicious anæmia. General œdema is common in the last stages of the disease.

The means of prevention are expressed in the one word, "sanitation." For treatment there is no vermifuge comparable with thymol. Three doses of from ten to sixty grains each, should be given at intervals of one or two hours. It is sometimes advisable before administering the drug, to improve the patient's condition by a short course of digitalis and judicious feeding.

Bilious Hæmoglobinuric Fever of Malarial Origin.—A. de Villiers (*Revista Médica Cubana*, March 15th) calls attention to the association of hæmoglobinuria and bilious fever with malaria. These phenomena have been observed by him in a number of cases, after patients had suffered repeated malarial seizures, the hæmoglobinuria for which relief was sought being accompanied by pallor, anæmia, slight fever, rapid and feeble pulse and hepatic and splenic infarction. Such urine showed the presence of albumin and biliary elements when tested. In a second class of cases, the patients presented the characteristic trend of malarial symptoms, chill, fever and perspiration. In the first stage, bilious vomiting appeared, and the urine took on the hæmoglobinuric character. With the elevation of temperature more or less pronounced icterus appeared, and at its height hæmoglobinuria reached its maximum intensity. When the perspiration set in, the hæmoglobinuria gradually decreased, and subsided entirely with the termination of the seizure. Albumin also appeared during the seizure and disappeared at its termination; this also reaching the maximum quantity during the fever's height. In a third variety of cases, fever was continuous and the intensity of the hæmoglobinuria increased as the fever rose, and decreased as it fell. In all cases the plasmodium was found in the blood.

Angina Pectoris. A Criticism and a Hypothesis. By Dr. E. H. Colbeck. (*Lancet*, March, 21st).—The author's hypothesis ascribes the pain experienced during an anginal paroxysm to localized distention and stretching of the ventricular wall. The territories and patches of deteriorated muscle tissue are unable to take their proper share in resisting the increased intracardiac pressure, and they contain nervous tissue in an unduly impressionable and irritable condition, which must be subjected to a considerable degree of stretching and tension. The establishment of mitral regurgitation in the course of angina pectoris relieves the intraventricular pressure, and in this way diminishes the stress

on the cardiac wall, and hence the degree of distention and stretching of the diseased muscular territories. Nitrites and other vasodilators owe their beneficial influence to a similar mode of action. The safety-valve action of the tricuspid valve is what prevents its becoming the seat of angina. The *angor animi* is due to the perturbation of the cardiac nerve centre, which, spreading to adjacent centres, causes the nausea, vomiting, flatulence, hic-cough, etc., that so often accompany the attack. Angina sine dolore is explained by the assumption that the nerves of the heart wall are so far degenerated that they fail to react to an ordinarily painful stimulus. Hence, the prognosis of this variety is grave. Pseudoangina pectoris is a vasomotor ataxia, whereby the heart is suddenly exposed to stress which, after a period of stormy nervous action, subsides and enables the heart again to obtain control of the circulation. The author's view as to the causation of true angina explains the oft-noted fact that the action of the heart and the rhythm of the pulse may remain undisturbed throughout a paroxysm. The wave of ventricular contraction passes uninterruptedly from apex to base, but over certain portions of the wall it is quantitatively and qualitatively deficient. But where the degeneration exceeds a certain proportion, the heart may falter, the pulse become irregular, and the blood pressure fall.

Some Causes of Coughs and Colds.—Dr. G. Rosenfeld (*Berliner klinische Wochenschrift*, March 2nd) speaks of the well-known influence of the pollen of the *Graminaceæ* in producing acute rhinitis. He calls attention to the fact that the blossoms of the plane tree can also evoke a coryza very similar to hay fever, as has been often observed in Stuttgart. The author favors cocainization as a remedial measure, but also has had good results from the use of anæsthesin. Rosenfeld records the case of a woman who suffered from a coryza of a similar character from inspiring the dust from the feathers of a parrot. The author illustrates this dust, which consists of fine little hooks and splinters, which bore their way into the nasal mucosa and set up an irritation.

The Comparative Value of the Mouth, the Rectum, the Urine, the Axilla, and the Groin for the Observation of the Temperature; Especially in Regard to Tuberculosis and to the Effects of Exercise and Other Conditions. By Dr. F. W. Burton-Fanning and Dr. S. G. Champion. (*Lancet*, March 28th).—The time allowed for the thermometer to lie in the mouth is usually too short to obtain the correct reading. According to circumstances, it takes from thirty seconds to thirty minutes to obtain the maximum temperature. The interior of the mouth is especially cooled by the following: (1) The breathing of cool air with parted lips. (2) Exercise entailing more rapid respiration, whether of cold or warm air. (3) The contact of cold with the outside of the cheeks.

In the rectum the maximum is reached in from one to five minutes. To be sure of obtaining the correct reading five minutes should be allowed. The rectal temperature averages 0.4° F. higher than that of the mouth, 0.2° F. higher than that of the

urine, 0.6° higher than that of the groin, and 0.9° higher than that of the axilla.

To obtain the maximum from two to five ounces of urine must be voided over the bulb of the thermometer, which must be held very close to the penis.

The time required to obtain the maximum temperature in the axilla and groin varies widely—from ten to fifty minutes.

The effect of exercise upon the temperature of a healthy man has been generally underestimated. In the exact estimation of body temperature the following conditions should be recognized: (1) Absolute rest, with relaxation of all large muscles. Here the temperature is depressed. (2) Standing without taking exercise. (3) Active exercise which distinctly raises the temperature. Tuberculosis shows nothing peculiar in the manifestation of an exercise reaction; the same kind of rise of temperature occurs in health and in other diseases. In eighteen out of thirty-four tuberculous women a distinct rise of temperature preceded each menstrual period. This was most declared in patients whose tuberculous lesions were either very slight or had become satisfactorily arrested, and whose temperatures were in either case running a normal course.

Clinical Notes on Hysterical Fever. Dr. G. B. Ughetti (*Riforma medica*, March 4th) reports a case of hysterical fever, *i. e.*, the occurrence of febrile attacks in a case of hysteria. These cases are not very frequently met with, and their occurrence has been doubted and denied. Every form of fever has been noted in cases of hysteria which are accompanied by a rise of temperature, and every author who has reported cases of this kind has given a different classification of the various types of hysterical fever. The author thinks that no classification can be satisfactory, in view of the great variability of the febrile phenomena of hysteria, and in view of the fact that many of these cases resemble very closely one or another type of infectious disease. Sometimes hysterical fever is accompanied by headaches, prostration, loss of appetite, digestive disturbances, sweats, etc., but in most cases these additional symptoms are absent or slight. The patient whose case is here reported was a young woman, aged twenty-eight years, with a negative family history, except that her brothers and sisters had manifested marked forms of hysteria. She had suffered at intervals from slight fevers, characterized as "febricula," for about two years, but two months before admission the fever had become at first sub-continuous, then remittent, and finally intermittent, with evening rises which gradually increased in height. The temperature varied from 35° to 36° C. (97° to 98° F.) in the morning, and from 40° to 43.8° C. (104° to 109° F.) in the evening. No disturbances, such as delirium, stupor, or convulsions, occurred in the evening; at most there were slight nocturnal hallucinations. On examination, every possible cause of this febrile movement was excluded and the diagnosis of hysterical fever was made. A noteworthy fact was that the administration of bromides was followed by a fall of the temperature to the normal and that for a few days, while the bromides were continued, the temperature did not rise above 98.6° F. After a few days, however, the

temperature again rose to 109° and continued to rise every evening to about that point. The cutaneous injection of water after assuring the patient that an antipyretic was about to be given, was followed by a rapid fall of temperature, but the effect was of brief duration. Hypnotic suggestion also reduced the temperature temporarily. Neither the pulse nor the respiration was affected by the rise of temperature. Forced feeding and the general treatment of hysteria were adopted, with the result that the temperature gradually returned to normal.

Further Note on the Pulse Wave in Aortic Regurgitation. By Dr. P. M. Chapman. (*Lancet*, March 28th).—The author again contends that the pulse in aortic regurgitation is not always retarded or delayed, as is insisted on by many observers. The contraction of the heart is of the nature of a steady push against a weight, and the resulting wave, not being created by impact, is a slowly propagated wave—that is, one of much less velocity. This is the real reason why the appearance of the radial pulse is not more often anticipated, and it is only thus that the fact can be accounted for that the disappearance of the pre-sphygmie interval is not oftener accompanied by shortening of the heart-radial interval.

A Case of General Miliary Tuberculosis; Symptoms of Acute Myelitis Involving the Conus Medullaris and Cauda Equina; with a Note on the Value of the Abdominal Ice Bag. By V. G. Thorpe, M. R. C. S., and E. R. Grazebrook, M. R. C. S. (*Lancet*, March 28th).—After reporting the above-mentioned case of miliary tuberculosis, the authors call attention to the value of the abdominal ice bag in many acute diseases. Its value is best seen in the treatment of acute pneumonias. It can be kept applied to the abdominal surface for days together, the patient suffering no discomfort so long as the groins are protected with a layer of cotton wool. The temperature falls, delirium ceases, the mind clears, the patient sleeps well, and his general condition markedly improves. By its use undoubted cases of acute pneumonia have been aborted at the very beginning of the attack. At times one must be guarded in its use, as in acute appendicitis, when it may mask important symptoms, but even here it is of benefit in localizing inflammation and suppuration. Its action appears to be a reflex one on the thermogenic centres through the solar plexus and splanchnic nerves.

The Diagnosis of Pulmonary Tuberculosis. By Dr. C. T. Williams. (*British Medical Journal*, March 14th).—The initial signs in most cases of phthisis are crepitation and slight dulness in the suprascapular region. It is the locality of the physical signs, rather than their character, which is of importance. Signs of no significance at the base of the lung are very serious at the apex. Unilateral apical pleurisy is usually tuberculous; if found at both apices, it probably accompanies pneumonia. Bronchophony heard over the apex is very serious, and implies that the consolidation is extensive. Bronchophony is most useful in a highly resonant chest with crepitation over the whole of one side; such cases are usually tuberculous. The earliest sign to be heard in phthisis is crepitation—the crepitation heard on coughing; there is no aus-

cultatory sign so pathognomonic of phthisis. Although dulness on percussion is very important, still, in many cases of phthisis there is no dulness at all. Dulness over the suprascapular region is of course decisive. Prolonged expiration in the suprascapular region, while suggestive, may not be due to tuberculosis at all. The cases most difficult of diagnosis are those of so-called catarrhal phthisis where nothing is to be made out in the chest but over-resonance and catarrhal sounds. The characteristic temperature of phthisis is one of extremes; a low temperature is quite as indicative of phthisis as a high temperature. Of course sputum examination is the important item of diagnosis nowadays, but it should never be forgotten that in the early stages of phthisis tubercle bacilli may not be found until after several examinations. The quantity of bacilli is no measure of the severity of the disease process. Where they are plentiful there is probably a cavity. Therefore, for knowledge of the extent of the disease we have to depend upon physical signs.

Treatment of a Formidable Case of Sprue by Diet; the Value of Strawberries. By Dr. E. H. Young. (*Lancet*, March 28th).—The author reports an excessively severe case of sprue, or chronic diarrhoea, occurring in a woman aged fifty-eight years. The disease followed an attack of influenza, and from the onset of the symptoms the patient steadily lost flesh and strength, until she was extremely emaciated. The diarrhoeal motions were of the typical sprue character—large, pultaceous, ochreous, sour-smelling, frothy, and very frequent. She had typical attacks of tetany of the feet, arms, and legs, causing her great agony. She at first refused to take a milk diet, but later consented; her condition improved but slightly on it, however. Meat, egg albumen, and bread were added and she improved somewhat. Finally, strawberries were tried, and she was benefited at once. The character of the motions changed and became normal, and the patient made a slow but uninterrupted recovery. The interesting points were: (1) The apparent specificity of strawberries in bringing about a cure. (2) The attacks of tetany. (3) The change in character of the pulse before the advent of a large, fermented stool, it being hard and intermittent. (4) A rise of temperature before an attack of tetany. (5) The failure of a strictly milk diet to cure the condition.

A Case of Acute Splenic Anæmia Terminating Fatally with General Bacterial Infection. By Dr. H. P. Hawkins and Dr. C. G. Seligman. (*Lancet*, March 21st).—The authors report a case of acute splenic anæmia occurring in an Italian chef, aged thirty-seven years. The patient dated his anæmia from an attack of pneumonia, one month previously. He was pale, and the red corpuscles of the blood were reduced to a million and a half, the blood-picture being a typical secondary anæmia, with a low percentage of hæmoglobin and no nucleated red cells. The liver was slightly, the spleen markedly, enlarged. Under iron and arsenic he improved steadily and two months later, the red corpuscles were over three million. Diarrhoea developed, also bleeding from the mucous surfaces; he took but little food, and died three months from the beginning of his illness. The blood-picture and the en-

larged spleen excluded pernicious anæmia. There was a curious periodic elevation of temperature. At the autopsy death was found to have been due to the supervention of a general infective state, shown by necrosis of the bowel wall, focal necrosis of the liver and spleen, pericarditis, pleurisy and acute endocarditis.

SURGERY AND ANATOMY.

Acute Osteomyelitis of the Spine of the Scapula.

—M. Latarjet (*Lyon médical*, March 1st) describes this case in a man of forty-eight years, convalescing from an attack of typhoid fever. There was no other ætiological factor to be found. It began slowly and the local pain and tenderness were not very severe. Serum diagnosis was negative, and the pus collected at the operation showed only the ordinary bacteria of suppuration, but no typhoid bacilli. Radical operation was followed by an absolute cure. The localization of the disease in the spine of the scapula is very rare, occurring in only nine cases out of 601. Its rarity is due to the small quantity of spongy tissue found here.

Bloodless and Aseptic Extirpation of the Rectum.—Dr. Wengel (*Münchener medicinische Wochenschrift*, March 10th) describes Witzel's operation. It is divided into five parts. First, the coccyx is removed and the rectum is loosened in front of the sacrum, thus rendering the resection of the sacrum unnecessary. Bleeding is controlled by tampons and is rarely severe except as the seminal vesicles and prostate are freed. The second act consists in the opening of the peritonæum and the removal of the seminal vesicles and the prostate. This is followed by the freeing of the anal portion of the rectum after the inferior hæmorrhoidal arteries have been ligated. A catheter previously inserted into the urethra prevents injury to that organ or to the bulbus urethræ. The superior and middle hæmorrhoidal arteries are next ligated in the mesorectum and the entire rectum is removed as high up as is deemed advisable, usually to the sigmoid flexure. Its amputation and the establishment of the gluteal anus are next accomplished. Recurrence is not so frequent by this method, as the entire growth can be removed. None of Witzel's patients has yet died of sepsis or collapse following this operation.

Bilharziosis Surgically Considered. By F. Milton, F. R. C. S. (*Lancet*, March 28th).—The morbid changes known as bilharziosis are due to the deposition in the tissues of the eggs of the bilharzia parasite. The cases seen by the surgeon are those of bilharziosis of the bladder, the urethra, the rectum, and the female genitals. When the bladder is affected there is hæmaturia (the blood escaping at the end of micturition) and pain and scalding. If neglected, an untractable cystitis develops, passing in turn into septic cystitis of the worst form. The diagnosis rests on the peculiar hæmorrhage and the detection of the eggs in the urine. The stage of hæmaturia is best treated by the administration of the liquid extract of male fern, which controls the loss of blood. Cystitis is treated by irrigation; in the later stages it is neces-

sary to drain the bladder, best done by perineal puncture. The prognosis is bad, as the kidneys are usually extensively diseased. Urethral bilharziosis practically exists only as urethral urinary fistula. These fistulæ are of two kinds: one, the more common "roof" fistula, arising from the pubic side of the urethra, the other ("floor" fistula) from the perineal side. The latter, from their earliest stages, take on the form of periurethral abscesses. The treatment of both forms is by free excision. In the rectum the symptoms of the disease are those of dysentery, and the treatment consists in allaying the irritability of the bowel by sedative and astringent enemata. In females the most common seat of the disease is in the labia minora of the vulva, the disease taking on the hypertrophic form.

Bilharziosis is a disease of very frequent occurrence in Egypt; it is most commonly found among the peasants, especially those of lower Egypt. It is liable to attack all ages, with the probable exception of nursing children; males are more frequently attacked than females. The black races enjoy a certain amount of immunity, and many more people suffer from the disease than are aware of the fact.

A Case of Salivary Fistula.—Dr. A. N. Zimine (*Chirurgia*, February) reports a case of salivary fistula in which he resorted to the use of the thermo-cautery to effect the obliteration of the duct, and thus the atrophy of the gland itself. The patient was a young woman, aged nineteen years, who showed the presence of a small ulcer situated at the anterior border of the masseter muscle. This ulcer partially healed after a time, leaving a small opening through which saliva was discharged in drops. At first the Paquelin cautery was repeatedly applied to this opening, with the effect of arresting the discharge for a few days. A radical operation was then performed, consisting of freshening the edges of the opening by means of an oval incision cutting through the entire thickness of the cheek, within this oval passing a gauze drain into the mouth and suturing the denuded edges of the fistula. In other words, an attempt was made to convert an external fistula into an internal. After three days the wound separated, the sutures had to be removed and the drain taken out. A second operation consisted in burning a passage through the cheek by means of the Paquelin cautery and introducing a rubber drainage tube from 3 to 4 mm. in diameter into the opening thus made. On the eleventh day the tube was removed and an ointment of silver nitrate was applied to the granulating surface of the fistula. Gradually, healing took place, and in about four weeks, the discharge of saliva ceased. Finally, a firm scar was obtained on the outer surface of the cheek.

Postoperative Pneumonia.—Dr. C. F. Deruzhinsky (*Chirurgia*, February) in a review on the subject of pneumonia after operations, urges the adoption of measures which tend to diminish the frequency of this complication. Schultz, of New York, collected the cases of postoperative pneumonia which occurred during the ten years preceding 1898, at the Presbyterian Hospital. He found

that of 5,724 cases operated upon under anæsthesia, there had been only 27 instances of pneumonia, in 20 of which the operation had not been performed upon the tongue or upon the respiratory organs, while in 7 cases the pneumonia could be referred directly to the swallowing of infectious matter. Of these patients 4,914 had been given ether, and 689 chloroform, while 116 had been given mixed anæsthesia. Under ether there was pneumonia in 0.35 per cent., with 0.19 per cent mortality; under chloroform 1.17 per cent., with 0.12 per cent. mortality; and under mixed anæsthesia 1.71 per cent. mortality and the same frequency of pneumonia. A number of authors have given statistics on the subject and all the data seem to show that pneumonia may result from the injurious action of ether or chloroform, and yet the question is not so simple as it appears. Thus, Gottstein found 27 cases of pneumonia after 114 operations on the abdomen *under cocaine anæsthesia*. Hypostatic pneumonia very often develops after abdominal section, probably owing to the position of the patient after operation and to the shallow breathing after such operations. A weak heart's action also plays an important rôle in the development of these pneumonias, and, finally, embolism may be the cause of a postoperative inflammation of the lungs. Lesshaft produced artificial strangulation of the intestines in rabbits in which vomiting is impossible, and did not observe any pneumonia in these animals. On the other hand, in dogs in which vomiting was possible, the same experiment was followed by pneumonia. Exposure to cold during the operation is also a possible cause of these pneumonias.

In order to avoid as much as possible the occurrence of postoperative pneumonias, the lungs of every patient to be operated upon should be carefully examined, and if bronchitis is present and the operation cannot be postponed, local anæsthesia should be used. The mouth should be carefully cleaned after vomiting during narcosis. The most rigid asepsis should be observed in all operative work and exposure to cold should be avoided during and after the operation. After laparotomies patients should be required to breathe deeply and their chest and abdomen should not be tightly bandaged.

Renal Decapsulation for Chronic Bright's Disease. By George M. Edebohls, M. A., M. D. (*Medical Record*, March 28th).—The first operation deliberately undertaken by Dr. Edebohls for the cure of chronic Bright's disease, was performed in January, 1898. He first announced his belief that chronic Bright's disease should be treated by decapsulation in May, 1901. His total experience with this method of treatment up to the end of the year 1902, embraces 51 cases. The youngest patient operated upon was a girl four years and a half old; the eldest patient was a man sixty-seven years old, and the average age of the fifty-one patients was thirty-four years. The duration of the Bright's disease, previous to operation, was ascertained in forty-one cases; it averaged three years and four months; the least duration was one month; the greatest duration was nineteen years. Of the thirty-two cases of advanced chronic nephritis operated upon in 1902, the greater proportion were com-

plicated by cardiovascular changes. There were 29 cases of chronic interstitial nephritis, 14 of chronic diffuse nephritis, and 8 of chronic parenchymatous nephritis. "In the 29 cases of chronic interstitial nephritis the disease was limited to one kidney in no less than 9 cases." Out of the total number of cases operated on by the author, it has been possible to trace all but three, and there have been fourteen deaths occurring between twelve hours and eight years after the performance of the operation. Of these fourteen deaths, seven resulted as a consequence of the operation itself, although Dr. Edebohls believes that on healthy subjects decapsulation could be performed with practically no risk. Many of the cases he operated on were, so to speak, forced upon him, and were very far advanced, and thus unsuitable for any kind of operation; hence the high mortality. So much for statistics. The author discusses in detail, among others, the following points that are important in judging the value of the treatment he urges. (1) Points in the technics of decapsulation. (2) The mortality following the operation and the causes that have produced the deaths recorded. (3) The histories of all the patients that have died. (4) What he means by Bright's disease, by cure, and by improvement. (5) The therapeutic results of the operation, with regard both to the condition of the urine and the patient's general health. (6) The important particulars regarding the nine cured patients. These cases are tabulated. The author draws the following conclusions which we have somewhat condensed: (1) Forty-seven operations were performed on both kidneys, and four operations on one kidney only. (2) Seven patients died within seventeen days after the operation. (3) Seven patients died at periods after operation varying between two months and eight years, the average period of life after operation being one year and eight months. (3) Two patients do not show improvement satisfactory in every respect. (4) Twenty-two patients are in various stages of satisfactory improvement and progress toward health at periods varying between two months and fifteen months after operation. (5) One patient, after a cure extending over a period of four years, again has chronic Bright's disease. One of the kidneys only was operated upon. (6) Nine patients were cured of chronic Bright's disease and remain cured at periods after operation varying from one year and nine months to ten years. The average duration of cure being over four years.

OBSTETRICS AND DISEASES OF WOMEN.

Twin Pregnancy in the Fallopian Tube.—Dr. E. Ferroni (*Zentralblatt für Gynäkologie*, February 28th) reports the case of a woman thirty-two years of age whose left Fallopian tube was removed on account of a hæmatosalpinx, which could be felt as a mass in the cul-de-sac of Douglas. The mass showed two tumefactions, an inner, large dark-red mass, and an outer, smaller, and lighter-colored one. Each of these masses contained an ovum, that is, the tube was the seat of a twin pregnancy, although the ova were of different periods of development.

The author thinks the second ovum reached the tube and was there impregnated after wandering from the ovary of the opposite side.

Hæmatocolpos. Imperforation of the Hymen.—R. Socarrás (*Revista Médica Cubana*, March 15th) reports the case of a young girl, aged fifteen years, who came under treatment for urinary retention of three days' duration, and gave a history of never having menstruated. Examination showed the abdomen to be much increased in size, and palpation revealed a painful, fluctuating tumor which displaced the uterus upward. An imperforate hymen was found, and this formed the lower boundary of a fluctuating tumor which reached the labia majora. A small vertical incision in the centre of this tumor gave egress to two quarts of a chocolate colored, odorless fluid. A second, horizontal incision was made and a douche of warm water and boric acid given; a strip of iodoform gauze being left *in situ*. Convalescence was perfectly uneventful, and menstruation was established normally. Urinary retention being entirely overcome by the operation, it is believed to have been caused by compression of the bladder by the tumor.

Laryngeal Tuberculosis During Pregnancy.—Dr. Löhnberg (*Münchener medicinische Wochenschrift*, February 24th) reports several cases of this complication. Interruption of the pregnancy, in one case, at least, had no beneficial effect upon the tuberculous process. This is a problem which must be settled by the elements presenting themselves in each case. The main postulates which the author lays down are the prevention, as far as possible, of marriage of tuberculous persons; and in those that are married, to prevent conception. The slightest complaint of laryngeal disturbance on the part of a pregnant woman should be followed by the most scrupulous examination. If a tuberculous process is discovered, the patient must be placed at once in the most favorable hygienic surroundings; if the disease is quite advanced, the well-known methods of treatment must be instituted.

Ætiology of Uterine Rupture.—Dr. H. Füh (*Zentralblatt für Gynäkologie*, February 28th) records the case of a twenty-four-year old secundipara, who two years previously had been subjected to Cæsarean section on account of a dermoid cyst of the ovary, which completely blocked the pelvis. The cyst was removed at the same time. During her second labor, a complete rupture of the uterus took place which demanded laparotomy. The rupture was not at the site of the former scar, but was found at the left side of the fundus. A supra-vaginal total hysterectomy was performed, followed by recovery. The author assumes as the reason of rupture a laceration of some of the uterine muscle fibres at the time of the Cæsarean section, which healed in scar tissue. Füh believes that during the second labor, the scar tissue yielded, giving rise to the rupture.

Tachycardia in the Menopause.—In a paper dealing with this subject, José Zunzunezui Echevarría (*Revista de Especialidades Médicas*, March

5th) states that cardiac disturbances in the menopause are of two kinds; one being of organic nature, brought on or increased by the menopause; the other, and most frequent, being a purely functional disturbance, which manifests itself in palpitation and tachycardia. The latter may be entirely reflex, and due to the influence of the menopause upon the uterus, liver, stomach, or nervous system. In other instances, this symptom may be present without organic affection of any kind. In the author's opinion, arterial overtension and excitation of the sympathetic nervous system enter into the pathogenesis of this last form; and he advances the theory that the arteriosclerosis, of which overtension is the first manifestation, may be induced by the disturbances brought about in the organism through the influence of the menopause. He holds, further, that tachycardia due to excitation of the great sympathetic may be produced through sanguineous plethora or ovarian insufficiency; and believes that the admission of the latter possibility may lead to the advantageous employment of opotherapy in such cases.

Cæsarean Section for Placenta Prævia, with Report of a Case. By P. E. Truesdale, M. D. (*Boston Medical and Surgical Journal*, April 2nd).—The author believes that Cæsarean section is the operation of choice in the treatment of placenta prævia, complete or partial, when the child is viable and when dilatation and version, performed with sufficient rapidity to save the child's life, are rendered impossible by the pelvic diameters and the condition of the soft parts. In the hands of experts, the mortality in complete placenta prævia treated by version is, for the mother 18.9 per cent., and for the child between 65 per cent. and 70 per cent. In partial prævia the maternal mortality is probably not over 5 per cent., but the infant mortality in such cases probably is as high as 50 per cent. It is the high mortality of version, in complete placenta prævia, that makes Cæsarean section a rational method of procedure. Lateral insertion of itself does not justify section. So far, there have been reported thirteen cases of Cæsarean section for placenta prævia. In these the maternal mortality was 44.4 per cent., and the infant mortality also 44.4 per cent. These figures, are, however, misleading, as in one case the operation was undertaken as a last resort when all other means had been tried, and in another case there was probably malignant disease of the cervix. In these two cases both mother and child were lost. In the second the child was shown to have been dead two days before operation. Dr. Truesdale excludes these two cases on the ground that they do not give fair statistics. The revised showing is, then, 11 cases with a maternal and foetal mortality of 22.2 per cent. each.

Further Remarks on the Treatment of Placenta Prævia. By Frank A. Higgins, M. D. (*Boston Medical and Surgical Journal*, April 2nd).—Dr. Higgins has yet to see a case of placenta prævia in which, in his opinion, Cæsarean section would have been advisable or justifiable. He is of the opinion that the only cases of placenta prævia in

which Cæsarean section could be used with propriety would be cases of complete placenta prævia with mother and child both in good condition, and in which the os uteri was undilated and severe hæmorrhages had not yet occurred. He reports five personal cases of placenta prævia, two of which were marginal, treated by version. All five of the mothers made a good recovery and all five of the infants died or were born dead. Two of the cases were, however, hopelessly premature, and in only one case does he believe that it would have been at all possible to save the child's life by different treatment. Packing can only be regarded as a temporary expedient to control hæmorrhage, and if properly applied will do so for a few hours. To pack properly, the woman should be placed in the Sims position.

DISEASES OF CHILDREN.

Congenital Goitre. By Dr. J. T. Hewetson. (*British Medical Journal*, March 21st).—The author reports a case of congenital goitre, occurring in a seven months' foetus. The child cried strongly when born, but died a few minutes later. Its neck presented a distinct tumor, identical in appearance with that of an enlarged thyroid gland, and dissection of which showed it to be a bronchocele a little larger than a hen's egg. Microscopical examination showed it to belong to the congestive or vascular type of congenital goitre, there being an entire absence of cyst formation and colloid matter. Congenital goitre generally assumes one of three types: (1) Adenomatous, being perfectly encapsuled tumors, occurring in the substance of the thyroid gland. (2) Parenchymatous, similar in all respects to that occurring in adults. (3) Vascular, in which the acini of the tumor remain foetal in character, showing an entire absence of colloid matter. Heredity plays an important part in the causation of the condition. Many of these goitrous children are born prematurely or are still-born. Of those that survive birth, a considerable number die soon after, from pressure of the growth upon the trachea or œsophagus. The milder forms tend to disappear spontaneously, but the severer ones call for operative intervention.

Febrile Whooping Cough.—Quotidian Intermittent Type.—Dr. Alberto Cesaroni (*Riforma medica*, March 4th) reports a case of whooping cough which was accompanied by a well marked febrile movement. This disease is not always febrile, and nearly every author speaks of a slight rise of temperature during the initial stages of the disease. During the spasmodic stage, however, the principal authorities on the subject declare that no fever occurs, or that when it does occur, it indicates the presence of some complication. A few cases are cited in literature in which fever was observed during the convulsive stage. Alfaro describes several varieties of fever which may occur in this stage of whooping cough: (1) Sudden and short accesses of fever, occurring at irregular intervals, and sometimes preceded by chills. The temperature may rise to 104° F. and the attack may be single and terminate with perspiration, or

it may be repeated at intervals of a number of days. (2) Protracted remittent fever lasting during the entire convulsive stage or during the greater part of it. (3) Protracted intermittent fever, usually quotidian, sometimes tertian or irregular, with or without chills. (4) Fever with a morning rise and evening remissions.

In the case reported here, the patient was a boy, aged eighteen months, who developed whooping cough. During the catarrhal period, lasting about fifteen days, there were slight elevations of temperature. During the convulsive stage a well-marked febrile movement developed, although the attacks of cough were not particularly severe. This fever was not preceded by chills; increased gradually from 1 to 4 p. m., and sank to the normal towards 9 o'clock; again rose from 1 to 4 in the afternoon and became normal in the evening. The fever continued for eleven days and ranged from 102° F. to 104° F. No complications of any kind were present to account for the fever and the cough presented the classical characteristics of pertussis. The author believes that he had to deal with whooping cough accompanied by fever. The prognosis of these cases is not worse than that of those without fever, but the course of the febrile movement is not altered by any remedy which may be administered for the cough, not even by quinine.

CUTANEOUS MEDICINE AND SURGERY.

Circumscribed Scleroderma in a Child.—J. Brito Foresti (*Revista Médica del Uruguay*, January) reports the case of a child, aged thirteen years, affected with scleroderma, or morphœa, localized above the upper lip and on the cheek. The affection commenced with a small patch above the left side of the lip and extended from the junction of the skin and mucosa to the nares. A second patch, about three centimetres in diameter, appeared later, upon the left cheek below the left labial commissure; the two patches finally coalescing. Examination revealed an infiltration of the skin, this being hard and lardaceous to the touch. The centre of the lesion was pale, yellowish, and somewhat depressed; while it was surrounded by a border, slightly elevated above the level of the healthy tissue, and having the characteristic violet hue. The condition seemed in no wise to affect the general health of the patient, and the hardness of the skin did not interfere with eating. The only ætiological factor which could be invoked, in the case, was a traumatism of the lip sustained a year previous to the onset of the disease. At the time of writing the report, the lesion showed signs of retrogression.

The Conditions which Modify the Characters of Inflammations of the Skin, and their Influence on Treatment. By Dr. H. R. Crocker. (*British Medical Journal*, March 7th, 14th and 21st).—The deductions drawn by the author in his Lettsomian lectures are as follows: Many of the inflammatory diseases of the skin are of compound origin; there is frequently a microbic element, which may consist of more than one kind of microbe superposed upon another. Different mixtures produce different forms of dermatitis, and a single organism may

give rise to varying conditions according to its mode of implantation. The microbic element requires a suitable soil, varying with the age of the patient and the kind of skin he possesses, of which the modifications may be congenital or acquired. Certain of the tissue proclivities to special diseases are probably hereditary. Intestinal and visceral toxins and ptomaines play an important part in the production of skin eruptions. They act through the vasomotor nerves, rather than directly on the skin, the cerebral nervous system acting as a controlling influence over the intensity, but not over the character of the eruption. The character is mainly due to individual peculiarities or proclivities. Many general eruptions are for a long or short time of local origin, occupying only a small area before generalization. Serious affections may start from apparently trivial causes, so that it is important to treat diseases of the skin at as early a stage as possible. The principles of treatment depend upon the due appreciation of the relative importance, in any one case, of the microbic character, the personal peculiarities, the nervous system, and the toxic elements. The most reliable and comprehensive specifics are arsenic, thyroid gland, quinine in large doses, and potassium iodide, the first having the widest range. The character of the local treatment depends comparatively little on the diagnosis of the particular kind of dermatitis, the extent, intensity, and localization of the inflammation being the most important elements. Microbicide treatment in superficial and widespread eruptions should not be irritating, or at least should be capable of being at once neutralized. In all widespread forms of dermatitis rest and equability of temperature are the most important and essential curative means.

NERVOUS AND MENTAL DISEASES.

The Morbid Anatomy of Erythromelalgia Based upon the Examination of the Amputated Extremities of Three Cases. By Dr. H. B. Shaw. (*British Medical Journal*, March 21st).—The author reports three typical cases of erythromelalgia in which the pain was so severe and the affected extremity so useless that amputation was performed. Examination showed vascular change to be present in the tissues in each case, consisting in an increase in the intima of the arteries, and occasionally thrombosis and changes in the inner coats of the veins. The nerves were investigated, even to their terminations, and no degeneration was found, nor was there any suggestion of increase of fibrous tissue in the trunks of the nerves.

In none of the cases hitherto reported has recent degeneration of the nerves been demonstrated, nor has anæsthesia been present. So that it would appear that erythromelalgia, occurring independently of central nervous change, is associated with but one morbid picture, that of local vascular change.

OPHTHALMOLOGY.

The Treatment of Trachoma by X Ray Tube Exposure and by the High Frequency Current.—Sydney Stephenson, C. M., and Dr. David Walsh (*Medical Press and Circular*, February 18th) con-

sider that, though surgical measures have so far afforded the best results, inasmuch as they materially shorten the course of the disease and in that way prevent the likelihood of such troublesome and serious complications as pannus, ulcers of the cornea, and trichiasis, this condition seems likely to be entirely changed by the introduction of two powerful remedial agencies, to wit, the x ray focus tube and the "high frequency" electric current.

Of four cases of trachoma treated with the focus tube the eyes appeared to be cured in two, while such considerable improvement took place in the other cases as to promise an equally favorable result with the continuance of the treatment. On several occasions slight superficial dermatitis of the lids was noted, and in one case it amounted to a blister. The face was also similarly affected once or twice. A moderate dermatitis also occurred on the fingers and back of hand of the nurse who held the lids everted during one of the short distance exposures. A shield and mask of lead prevented any further mischief so far as hands and face were concerned.

The rapidity of the curative action is noteworthy. Every case showed a definite improvement from the first exposure. The immediate effect of the focus tube was to render the granular bodies redder and more prominent. That appearance was followed by a stage during which rapid absorption of the granulations presumably took place.

The focus tube was "hard," with an average resistance equal to a seven or eight inch spark gap on the coil. The anticathode of the focus tube was placed at an average distance of eight inches from the eye, and the average exposure was from ten to fifteen minutes.

LARYNGOLOGY, RHINOLOGY, AND OTOTOLOGY.

The Removal of a Sunflower Seed from the Throat. A Contribution to the Study of Foreign Bodies in the Respiratory Passages.—Dr. A. M. Orwsky (*Chirurgia*, February) has collected 4,381 cases of foreign bodies in the respiratory passages, and cites a number of interesting cases from literature. As regards the frequency with which foreign bodies are arrested in various portions of the respiratory tract, Bourdillot, out of 115 cases, found 35 cases of foreign bodies in the larynx, 80 in the bronchi, 26 in the right bronchus, and 15 in the left. In the case here reported the patient was a boy, aged two years, who was admitted with marked difficulty of respiration. Three days previously he had been eating sunflower seeds, when suddenly he began to cough, to breathe with difficulty, and to speak hoarsely. Ipecac was given to produce the expulsion of the foreign body by vomiting, but without success. High tracheotomy was performed, and a small curette failed to dislodge any foreign body from the larynx. A sudden access of cough, however, ejected the sunflower seed from the wound. A tracheotomy tube was introduced and inhalations of soda solutions were prescribed. The patient continued to cough for some time but made a good recovery.

Tobacco Deafness.—Dr. Wyatt Wingrave. (*Medical Press and Circular*, February 11th) in the presidential address delivered before the British Laryngological, Rhinological, and Otolological Association, refers to tobacco as a drug, the use of which is not only increasing beyond all proportion to the increase in population, but promises to extend to a still greater degree. Its responsibility for certain morbid visual changes has been fully established, and recent observations would seem to indicate that the frequent occurrence of deafness in tobacco amblyopia is more than coincidental. In the author's experience he finds that cases of deafness due to tobacco smoking may be classified into three groups: (1) Mechanical, or pneumatic; (2) irritative or catarrhal; (3) toxic or nerve deafness. In the group of nerve deafness the author brings forth seventeen cases, and in regard to them he emphasizes the following points: (1) They were all marked cases of nerve deafness (unattributable to other causes) occurring in heavy smokers. (2) The loss of low tones in 50 per cent. suggests an auditory equivalent for a recognized ocular lesion. (3) There was definite scotoma in four cases and impaired sensation of vision in eight of them. (4) The disease was symmetrical. (5) Eighty per cent. showed marked improvement on abstinence from tobacco, and, with supplementary drug treatment, three were cured.

HYGIENE AND SANITARY SCIENCE.

Note on the Detection of Raw Milk and Formaldehyde. By J. E. Lane, F. R. C. S. (*British Medical Journal*, March 21st).—The author has observed the following striking reaction of raw milk, which may prove useful in the examination of sterilized or scalded milk. On treating raw milk with a solution of orthomethylaminophenol sulphate, and then adding hydrogen peroxide, a very vivid deep red color is produced. The red color is so strong and pronounced that as little as one per cent of raw milk, if added to heated milk, may be readily detected. Dilute acids or alkalies, borax, or formaldehyde do not affect the reaction. Milk kept at 70° C. for one hour reacts readily; if heated to 75° C. for half an hour no reaction is obtained. The reaction is probably caused by the presence in milk of an oxidizing enzyme destructible by heat. Casein has nothing to do with it. The same reagent may be used as a test for formaldehyde. On adding nine or ten volumes of milk to a one per cent. solution of the salt, and allowing the mixture to stand, a pink color is gradually produced in the presence of formaldehyde. This latter test is not of any great value, however, as other substances give the reaction.

PHYSIOLOGY AND PATHOLOGY.

Some Points in the Anatomy and Pathology of the Vermiform Appendix. By W. McA. Eccles, F. R. C. S. (*Lancet*, March 21st).—In the third of the Hunterian lectures on the above-mentioned subject, the author calls attention to the following points: Appendicitis may be associated with joint lesions, but such cases are rare. The arthritis is wholly secondary to the appendicitis, and is of the

nature of a subacute pyæmia. The association of appendicitis with pregnancy and parturition is of the gravest import, and is by no means uncommon. A woman who has suffered from appendicitis and recovered without operation, runs an enormous risk if she becomes pregnant. Miscarriage or premature labor is almost certain to occur, and with it arises the chief danger of the condition, with regard to both mother and child. Prompt operation, even before emptying the uterus, is indicated.

The prognosis of appendicitis complicating the puerperal state is not so grave, but it is apt to be taken for puerperal septicæmia. As regards life insurance the author thinks that a person who has suffered from appendicitis and has recovered without operation, is a distinctly "bad risk." From seven to ten years should be deducted from the expectation of life. Where there has been more than one attack the applicant should be refused until the appendix has been successfully removed.

Innocent new growths of the appendix are extremely rare; examples have been recorded of lipomata, myomata, and lymphadenomata. Malignant new growths are uncommon; they are usually secondary to disease elsewhere. Sarcoma, carcinoma, and endothelioma are met with. Hernia of the appendix has been frequently observed. The appendix may constitute the sole contents of a hernial sac, or it may be present with other viscera. The appendix, when herniated, is almost invariably elongated, adhesions are often present, and cystic dilatation has been found in several cases. Inflammation of the appendix in a hernial sac is very common—in some cases it may be due to irritation from a truss. Strangulation may occur, due to the contraction of inflammatory tissue outside the sac, or to the sac's having a very narrow neck. But it is not common. If, during an operation for the cure of a non-strangulated irreducible hernia, the appendix is found in the sac, it should be amputated in the usual way and the stump returned within the peritoneal cavity.

Clinical and Pathological Significance of Autolysis.—Dr. F. Ueber (*Berliner klinische Wochenschrift*, March 2nd) says that recent investigations have made it clear that the processes of destruction of the protoplasm of the body and in the cells of the organs, are due to fermentative action, which goes on even *intra vitam*. Even in fresh specimens of exudates the presence of autolytic disintegration products can be demonstrated, such as free ammonia. Recent work has shown that in the living organism, the living cells furnish the substratum by which their own protoplasmic substance is gradually destroyed by hydrolysis; but the author does not believe that this process alone has great significance in the pathological disturbances of the organism.

Human and Bovine Tuberculosis.—Dr. A. Cippolina (*Berliner klinische Wochenschrift*, February 23d) inoculated a monkey with tuberculosis by means of infected milk, keeping the animal exclusively upon this diet for a long time. It became generally tuberculous with no involvement, however, of the gastrointestinal tract. A calf a month old was inoculated intraperitoneally with tubercle

bacilli derived from a human being, but at the autopsy the peritonæum, the liver, spleen and lungs were found healthy. This shows at least the resistance of the bovine species to infection from human tuberculosis. The author believes that bovine tuberculosis is even more dangerous to the human species than the tubercle bacilli of human origin.

The Ætiology of Sleeping Sickness (Preliminary Note). By Dr. A. Castellani. (*British Medical Journal*, March 14th).—The author thinks that he has isolated a microorganism which is the cause of sleeping sickness. He has grown it in pure culture in eight out of ten post-mortem examinations, from the cerebrospinal fluid and from blood. He has only found it once in the blood during life, but out of three cases in which lumbar puncture was performed, it was found in the cerebrospinal fluid in two. It is a distinct variety of the streptococcus group, with a variable morphology, all transitions from chains to typical diplococci being seen. Mucoid capsules are seen in some instances. It stains easily and grows luxuriantly on ordinary media. There is no gas or acid formation. In bouillon there is usually a flocculent sediment. It does not coagulate milk and is a facultative anaerobe.

The Transplantation of Tumors. By Leo Loeb, M. D. (*American Medicine*, March 14th).—Dr. Loeb's experiments were performed on rats and the tumors used were cystic sarcomata. The details of the experiments are chiefly of interest to pathologists. The paper is in the nature of a preliminary report, so that few absolute conclusions can be drawn. The following observation has probably been proved by the experiments: Different tumors of similar structure, derived by serial transplantation from one tumor, may have very diverse faculties of infecting other tissues by mere contact. That is, the power of a tumor to infect, is reduced by repeated transplantation. The author announces a number of tentative conclusions, of which the three following seem to be of the most practical value. (1) "A microorganism living outside the tumor cells and passing through the pores of the Berkefeld filter is not, in all probability, the cause of the formation of sarcoma in rats." (2) "A microorganism living outside of tumor cells and resembling organisms like the tubercle bacillus, or belonging to the class of blastomycetes, is probably not the cause of the formation of sarcoma." (3) "No organism sensitive to cold can be the cause of tumor formation."

A Case of Adenoids with Malaria. By Walter F. Chappell, M. D. (*Medical Record*, March 21st).—A child five months old was operated upon by the author for adenoids. Three weeks later, after about one week of prodromal disturbances, the child developed a high temperature, remittent in character, which reached, at one time, 105.3° F. The blood showed the presence of the malarial parasite and it was proved that ten days before the attack the child had been bitten by a mosquito in a locality in which the malarial-bearing variety was shown to

exist. The author considers the case interesting for three chief reasons: (1) The age at which the child developed adenoids and the rapidity with which they grew. (2) Malaria in a five months' old child is very unusual. (3) The accuracy with which it was possible to fix the date of the infection.

The Microscopical Observation of the Glycogen Reaction. By Dr. G. Spezia. (*Lancet*, March 7th).—The microscopical reaction with iodine showing the presence of glycogen in the white corpuscles may occur under both physiological and pathological conditions. This reaction is the expression of a resistance of the organism to toxic agents, whatever be their origin, whether bacterial or not. Glycogen must serve to arouse an increased degree of defensive activity, as is proved by the following facts: (1) This reaction is manifested after the injection of various nutritive substances. (2) In pathological cases it attains its highest point in the inflammatory centre, as in the foci of pneumonia or bronchopneumonia. (3) It is greater in severe toxic affections than in mild ones. (4) It is accompanied by hyperleucocytosis. (5) It is accompanied by evidences of cellular division.

The Bacillus Shiga in an Epidemic of Diarrhoea. By Lawrence W. Strong, M. D. (*Boston Medical and Surgical Journal*, March 26th).—Dr. Strong's observations were made during the summer in a seaside community on the coast of Maine. The data obtained do not justify too sweeping conclusions, yet, owing to Dr. Flexner's recent announcements regarding the relationship between the bacillus of Shiga and the dysentery that prevails in our own country during the summer months, the report is of considerable interest. The facts in the case are these. The community enjoys good sewerage, it has a water supply apparently above reproach; the milk and vegetable supply is good above the average. Yet for three summers it has been visited by an epidemic of diarrhoeal disturbances, sufficient to cause general alarm. Both adults and infants were attacked and the cases varied in severity from the type of mild non-infective to severe infective diarrhoeas. Among the latter were a number of cases that clinically resembled dysentery. The bacillus of Shiga was proved to be present in four of these cases of ileocolitis. Only cases of infective diarrhoea were tested for the serum reaction. Dr. Strong believes that the following tentative conclusions are warranted by a study of the observations he has recorded: (1) It is possible that Shiga's organism is normally present in the intestines, and that it is capable of setting up the inflammatory lesions of dysentery, if the bowel is first irritated by the action of a simple or of a fermental diarrhoea. (2) It is possible that some simple diarrhoeas pass into infectious diarrhoea, and that this latter is either fermental or an ileocolitis, according to the place of lodgment of the irritating matter. If this is true, then the bacillus of Shiga may be the common cause of the infective types of some diarrhoeas. (3) The scope of Shiga's bacillus is not determined, it seems wider than dysentery, but not so wide as to include all infective diarrhoeas.

Letters to the Editor.

EDUCATIONAL MATTERS IN THE STATE OF NEW YORK.

20 EAST THIRTIETH STREET,
NEW YORK, April 10, 1903.

To the Editor of the NEW YORK MEDICAL JOURNAL:

Sir: In your issue of March 28, 1903, there appears a letter from Dr. Charles H. Glidden, on Educational Matters in the State of New York. The missive referred to contains statements which might prove misleading. Possibly, as President Anderson is alleged to have said, twenty-five years ago, the regents of the University of the State of New York were more ornamental than useful; but observing members of the profession at least know the achievements accomplished in our profession by reason of the regents' supervision, and those acquainted with the situation are well aware that no employees of the State government are more strenuously occupied than the officials of the regents' office. The regents themselves stand in the same relation to the secretary of the board and to his deputies, as do the trustees of a college to the president and faculty of such an organization. The law does not require, nor does the system exact, that the regents should do the executive work connected with education in this State except in a supervisory way, and yet it is safe to say that no similar body of men has ever given, gratuitously, such frequent and such excellent service to the State. They have selected every member of the regents' staff because of peculiar fitness. The secretary, his deputies, and all of the university inspectors are men who have devoted their lives to educational work. Mr. James Russell Parsons, Jr., secretary of the board, is one of the ablest and foremost educators of the country. It is surprising that any man can make the statement contained in Dr. Glidden's letter: "It is notorious that the secretary of the regents has never been a prominent educator." Mr. Parsons has spent practically his whole life in educational work and in the study of educational problems. Graduated from Trinity College in 1881, his first public service was as school commissioner of Rensselaer County, New York. During his incumbency of that office he prepared and read before the New York State Teachers' Association, in 1887, a plan for the uniform system of licensing teachers. His presentation of the case was so clear that Mr. Andrew S. Draper, then superintendent of public instruction, decided to adopt it and called Mr. Parsons into his office to organize the work. Its success was immediate and abiding. It is the chief and fundamental advance of which the department of public instruction makes special boast and for which it claims credit.

In 1889 Mr. Parsons was made United States consul to Aix la Chapelle, and during the three years of diplomatic service he made careful study of the school systems of Germany and of France, and wrote two books entitled *German Schools through American Eyes* and *French Schools through American Eyes*. Since his return from abroad he

has held successively the following positions: Inspector of high schools and academies, University of the State of New York; inspector of teachers' training classes, department of public instruction; director of examinations, director of college and high school departments, and secretary, University of the State of New York.

Mr. Parsons's latest work of an educational character is a monograph on *Professional Education in the United States*, one of a series prepared for the Paris exposition, and he is now engaged on a companion volume treating of professional education in the old world. Mr. Parsons has been the chief agent in organizing the administration of the work under the laws governing professional education in the State of New York, and his advice is eagerly sought by professional men in other States and countries in formulating similar plans in relation to higher educational matters.

The writer is personally aware of the fact that during the incumbency of his present office Mr. Parsons has been offered more than one important college presidency at salaries much larger than that which he now receives. Notwithstanding these tempting offers, Mr. Parsons prefers to remain in his present place, with no immediate prospect of increased salary, because he is thoroughly in love with his work, and because he believes that as time goes on the University of the State of New York, controlling the unified educational interests of the State, will grow to be the educational clearing house of the world, as it is to-day the recognized authority in matters pertaining to higher education. A man with such unselfish ambitions is a rarity in public life. The State may well be proud of such a servant.

The course of your journal in espousing the cause of educational unification under regents' control is highly commendable. You are on the right side of a vital issue, and the medical profession in general applauds your attitude.

D. B. ST. JOHN ROOSA, M. D.

Book Notices.

The Principles and Practice of Gynecology. For Students and Practitioners. By E. C. DUDLEY, A. M., M. D., Professor of Gynecology, Northwestern University Medical School, etc. Third Edition, Revised and Enlarged. With 474 Illustrations, of which 60 are in Colors, and 22 Full Page Plates in Colors and Monochrome. Philadelphia and New York: Lea Brothers & Co., 1902. Pp. 761.

In the preface to this edition Dr. Dudley says: "In the discussion of plastic operations I have made no attempt to describe, either in the first or in subsequent editions, the great number of confusing operations on the perinæum, vagina, and cervix uteri, some of which would seem to have been proposed as an improvement on nature; nor have I felt justified in presenting all of the ingenious and complicated instruments used in performing these operations, but have emphasized rather the importance of restoring the conditions of nature,

which may be done with few and simple instruments, as we were taught by the pioneer gynecologists of America." There could be no sounder basis than this on which to found a textbook designed, as Dr. Dudley's work is, for the student and practitioner of medicine, and we are not surprised that successive editions have been called for.

The author wisely adheres to his original plan of considering together or consecutively the pathological conditions that in actual practice succeed one to another, rather than the various diseases of a particular structure. This has a powerful tendency to keep the practitioner on the watch for the sequelæ of a given morbid condition, and to fix his attention on the processes by which one pathological state leads to another.

These, we think, are the features that have caused Dr. Dudley's book to prove popular with the profession, and we believe that its popularity will be sustained.

Diseases of the Stomach. Their Special Pathology, Diagnosis and Treatment; with Sections on Anatomy, Physiology, Chemical and Microscopical Examination of Stomach Contents, Dietetics, Surgery of the Stomach, etc. By JOHN C. HEMMETER, M. D., Philos. D., Professor in the Medical Department of the University of Maryland, Baltimore, etc. With many Original Illustrations, a Number of which are in Colors, and a Lithograph Frontispiece. Third Enlarged and Revised Edition. Philadelphia: P. Blakiston's Son & Company, 1902. Pp. xxiii-17 to 894. (Price, \$6.)

In this new edition the author has laid great stress upon minute diagnosis and has added a great deal of new material upon ulcer and carcinoma and a new article upon gastric lipase.

While this book is undoubtedly the most complete one on the subject which we have in the English language, it is, nevertheless, not always accurate. We shall endeavor to point out a few instances in which it is not quite so trustworthy as might be desired.

The author's apparatus for recording gastric peristalsis can certainly not be used without great difficulty; extraneous influences affect its working, and even the specialist can have but a limited use for it. In the chapter upon the stomach tube and the technics of its introduction, no mention is made of the length to which the stomach tube should be introduced or of the method of its extraction. The author's objections to the aspirating bulb are untenable, for in some cases of advanced gastritis, and in beginning pyloric stenosis, it is almost indispensable.

The author's double test meal, in our opinion, will give uncertain results, because, in different stomachs, the amount and quality of gastric juice secreted after the first meal must vary, and, therefore, influence differently the digestion of the second meal. His summary of diagnosis from food remains is based entirely upon theory.

In Chapter XIII no mention is made of the fact that when sarcinæ are found, free hydrochloric acid is always present. The description of the *Oppler-Boas bacillus* is unsatisfactory. Again, in the de-

tection of mucus in the stomach contents, the author fails to mention that pharyngeal mucus floats on top, that it and mucus of the lung are very apt to be aerated, and that the existence of bile in the stomach contents is frequently due to straining, especially in cases of constipation. The statement that the quantity of mucus is inversely proportional to the quantity of hydrochloric acid secreted, and the largest amounts are found with total absence of hydrochloric acid, is not so absolutely true as the author would lead us to believe, for one frequently sees cases of chronic gastritis with large amounts of mucus, and high acidity, also cases of atrophy of the mucous membrane with very low acidity, which points are brought out very forcibly by Ewald, Kuttner and Van Valzah, and Nisbet.

The article on gastroscopy does not give one a fair idea of the pain and the danger of the introduction of the gastroscope, or of the difficulties connected with its use, and Rosenheim, who is quoted by the author as employing it, is certainly not so enthusiastic about it now as he formerly was. In the article upon the use of electricity in the treatment of gastric diseases, no mention is made of the moral effect of this form of treatment, which is undoubtedly a very important element, especially with nervous patients. Dr. Boardman Reed's and Dr. G. R. Lockwood's modifications of the electrode, both of which possess decided advantages over the soft deglutable one of Dr. Einhorn, are entirely ignored in the enumeration and description of gastric electrodes.

In the chapter upon gastritis the classification is not satisfactory. The author appears to be uncertain about the existence of gastritis acidæ, of which there should be no doubt, and his subdivision of gastritis mucosa is of very little value, as all cases of gastritis show an abnormal amount of mucus. The author's statement that simple chronic gastritis is also a mucous gastritis is not in accordance with the opinions of most authorities. In the chapter upon ulcer, the various symptoms are given in so disjointed a manner that the student could hardly get a comprehensive idea of the usual course of this disease. No mention is made of pain at night, which Fenwick points out as being fairly characteristic of ulcers adherent posteriorly, especially to the pancreas. In the treatment of ulcer, the author departs very much from the teachings of others, in that he recommends meat as early as in the third week, and fruit in the fourth. No distinction is made between the treatment of ulcers of traumatic and those of anæmic origin.

In the chapter on motor insufficiency, the author still retains the term dilatation, which, we think, has been dropped, with advantage, more especially by the German writers. Not sufficient distinction has been made between the acute and chronic forms of motor insufficiency, either in the description or in the treatment of them. In most instances, the author refuses to take the classification of others, and substitutes his own, which, in many cases, is inferior. He is frequently inclined to dispose of recognized opinions without sufficient reason, and is, at times, rather dogmatic.

By taking exception to some of the author's statements we do not wish to detract from the mass

of valuable information contained in his book. The chapters on dietetics, mineral springs, and enteroptosis are especially to be recommended for their completeness and excellence. The reference literature also deserves mention. The work, as a whole, will prove to be a most serviceable reference book.

Treatise on Diseases of the Skin. For the Use of Advanced Students and Practitioners. By HENRY W. STELWAGON, M. D., Ph. D., Clinical Professor of Dermatology in the Jefferson Medical College and Woman's Medical College, Philadelphia, etc. With 220 Illustrations in the Text and 26 Full Page Lithographic and Half Tone Plates. Philadelphia and London: W. B. Saunders & Company, 1902. Pp. 7 to 1115. (Price, \$6.)

Of Dr. Stelwagon's book it may be said that it is the best treatise on skin diseases that has lately appeared. It is sufficiently elementary for the student and at the same time comprehensive enough to be a valuable reference book for the specialist. The work of an experienced teacher, a close and indefatigable observer, thoroughly informed of the opinions and achievements of others, and a work, withal, controlled and individualized by personal views that are at the same time catholic and conservative, it combines the qualifications most essential to the making of a good textbook. Were all the medical literature entrusted to such competent hands there would be less of it, but more instruction in it.

In a work on cutaneous diseases there is special reason why attention should be paid to points of diagnosis, and this part has been elaborated with much clearness and painstaking detail. It is materially enriched by a large number of photographic and other illustrations, which have been judiciously selected, and all of them admirably executed. Indeed, without such illustrations any treatise on skin diseases, however good its descriptions, would lack something that is almost essential.

In matters of treatment, too, the work is comprehensive and sufficiently up to date. It is right, while the methods of other authorities are given with considerable fulness, that the means the writer's own experience have approved should be given the most prominence and described with clearness and elaboration.

The general make-up of the book reflects credit on its publishers.

The Practical Medicine Series of Year Books. Comprising Ten Volumes on the Year's Progress in Medicine and Surgery. Under the General Editorial Charge of GUSTAVUS P. HEAD, M. D., Professor of Laryngology and Rhinology, Chicago Post-graduate Medical School. Volume III. The Eye, Ear, Nose, and Throat. December, 1902. Chicago: The Year Book Publishers. Pp. 5 to 321. (Price, \$1.50.)

As this work is an annual publication of condensed selections from the literature which has appeared during the preceding year, it is not easy for the reviewer to greatly vary his comments with each successive issue. But this time the publishers re-

quest that he will "note that the present volume is one of a series of ten, issued at monthly intervals, and covering the entire field of medicine and surgery," also "that this series is published primarily for the general practitioner, the arrangement in several volumes being of special value to him." They also state that "the volumes have been criticized on account of the amount of material, although they contain more on the specialties than other year books."

Why the arrangement is of special value to the general practitioner the publishers do not tell and the reviewer does not know. Some arrangement of the kind is necessary if a collation of literature is to be of service to anyone. As to the amount of material contained in the book, only 120 12mo. pages are devoted to the literature on the eye, 64 to that on the ear, and 98 to that on the nose and throat, including the space given to illustrations and editorial comment. For the most part the work of the abstractors has been well done, and it would be hard to condense more accurately the selected articles, but even though all the illustrations and comments had been cut out, it would still have been necessary to omit valuable articles, and to that extent to fail to present the true picture of progress along any particular line or specialty. The criticism the publishers complain of seems to be just.

On page 51 the word *keratonyxis* is used as synonymous with *scleronyxis* and *reclination* of cataract, though its accepted meaning is essentially different. The writer of an article may unguardedly make such a mistake, but the editors of such a work as this should not allow it to escape them. For the work as a whole the plan is excellent and the publisher's part well done, while that of the editors shows earnestness and thought.

The Practice of Surgery: A Treatise on Surgery for the Use of Practitioners and Students. By HENRY R. WHARTON, M. D., Clinical Professor of Surgery, Woman's Medical College of Pennsylvania, etc., and B. FARQUHAR CURTIS, M. D., Professor of Clinical Surgery and Adjunct Professor of the Principles of Surgery in the University and Bellevue Medical College of New York, etc. Profusely Illustrated. Third Edition. Philadelphia and London: J. B. Lippincott Company, 1902. Pp. viii-1241.

It is the aim of the work to present to the medical student and general practitioner "a description of the various injuries and surgical diseases sufficiently full to enable the practitioner to recognize them when met with in practical work; full direction for the treatment of such diseases and injuries as would usually be attended by the general practitioner; a sketch of the treatment of the more difficult conditions, such as would allow the practitioner to advise patients intelligently in obtaining special skilled surgical attention, and an outline of the accepted facts and theories of the ætiology and pathology of the various surgical affections, sufficient to form a foundation for the clinical picture and give directions for the treatment."

The foregoing quotation from the preface goes

far to disarm the critic. Viewed from the standpoint of the student and general practitioner, the treatise is admirable and the authors have succeeded in presenting the subject in a clear and concise manner. They have wisely restricted themselves to all the more common surgical diseases, their treatment of which can but appeal to the general practitioner. It is perhaps to be regretted that there should be quite so much brevity in the pathological descriptions. It does not seem that any clearness would be sacrificed in giving pathological details, and the value of the book would thereby be enhanced to the more advanced student.

BOOKS, ETC., RECEIVED.

Transactions of the Obstetrical Society of London for the Year 1902. Volume XLIV. Part IV for October, November and December.

Proceedings of the American Medico-Psychological Association. The Fifty-eighth Annual Meeting held in Montreal, June 17 to 20, 1902.

Twenty-seventh Annual Report of the New York State Reformatory at Elmira for the Fiscal Year ending September 30, 1902.

Thirtieth Annual Report of the State Charities Aid Association to the State Board of Charities of the State of New York. No. 83.

Tenth Annual Report of the State Charities Aid Association to the State Commission in Lunacy, No. 84.

The Elements of Pathological Anatomy and Histology for Students. By Walter Sydney Lazarus-Barlow, B.A., B.C., M.D. (Camb.), F.R.C.P. (Lond.), Pathologist and Lecturer on Pathology at the Westminster Hospital, etc. Philadelphia: P. Blakiston's Son & Company, 1903. Pp. xiii-705. (Price, \$6.50.)

Hygiene and Public Health. By Louis Parkes, M.D., D.P.H. Lond. Univ., Fellow of the Sanitary Institute and Member of the Board of Examiners, etc.; and Henry Kenwood, M.B., D.P.H., F.C.S., Assistant Professor of Public Health at University College, London, etc. With Illustrations. Philadelphia: P. Blakiston's Son & Company, 1903. Pp. xii-763. (Price, \$3.)

The Care and Feeding of Children. A Catechism for the Use of Mothers and Children's Nurses. By L. Emmett Holt, M.D., LL.D., Professor of Diseases of Children in the College of Physicians and Surgeons, Columbia University, etc. Third Edition, Revised and Enlarged. New York and London: D. Appleton & Company, 1903. Pp. 5 to 149.

Miscellany.

The Absence of Salt as a Cause of Stomatitis.—Dr. J. C. J. Bierens de Haan (*Deutsche medizinische Wochenschrift*; *Journal of the Association of Military Surgeons*, March) describes an epidemic of ulcerative stomatitis that broke out simultaneously with a great shortage of salt, among the troops in South Africa and those who came in contact with them. There were no constitutional symptoms, and the trouble rapidly subsided when the supply of salt was restored. Mild antiseptics and astringents proved useful therapeutic measures.

The Height of the Diaphragm in Relation to the Position of Certain Abdominal Viscera. By Dr. C. T. Andrew. (*Lancet*, March 21st).—The

author's observations were made with a view to ascertain the height of the diaphragm in the two sexes and to find out if there was any relation between the height of the dome, the position of the viscera, and the thickness of the abdominal wall, a guide to the latter being obtained by estimating the average thickness of the rectus muscle at a given point. Nine consecutive cases in the dissecting room were examined. In seven females the height of the dome of the diaphragm varied from the fourth rib to the sixth interspace, whereas in two men it did not extend lower than the fifth rib. In the seven female bodies there were four cases of Riedel's lobe of the liver, two cases of gall stones, two affections of the gall bladder, and one abnormality of the stomach. In every case the measurement of the abdominal muscles was much smaller in the females than in the males.

A New Sign of Pleuritic Effusion.—The *Louisville Monthly Journal of Medicine and Surgery*, for March, in an editorial draws attention to a communication of Dr. Samuel W. Kelley, of Cleveland, recently published in the *Archives of Pediatrics*. After reviewing the usual signs and symptoms of pleurisy, Dr. Kelley says: "In the course of symptoms which indicate the early stage of pleurisy, among which is the attitude of lying upon one side or bending toward or pressing upon one side, this position changes, and the patient instinctively turns and prefers to lie upon the back or to be propped up high in bed, and avoids bending toward that side or pressing upon it. This is a sign of an effusion—probably of an effusion of considerable bulk and poured out with a degree of rapidity." This sign is not always present, but is conclusive, according to the author, when it occurs. The posture on the affected side in cases of effusion, as usually described by medical authors, is altogether a later phenomenon. Kelley's sign occurs at the time of onset of the effusion, and he attributes it to the assumption of a new position which allows the greatest freedom to the compressed viscera, thereby easing the breathing and circulation.

Lung Surgery: Historical and Experimental. By Benjamin Merrill Ricketts, Ph. B., M. D. (*Continued from page 532*).—*Foreign Bodies* in the lung or bronchi may be removed by coughing, or they may escape through the chest wall into the trachea or œsophagus, into the pleural cavity and through the diaphragm, or from the subcutaneous portions of almost any point upon the body. Some, such as bird-shot, may become encysted in the lung, and remain indefinitely. Experiments with the x ray show that the position of a foreign body in the lung when expanded is changed when the chest is open and the lung contracts.

Among the earliest reports of foreign bodies found in the lung are those by Tillingius (1688); Kirby (1700); and Buchtfield (1671); these were in the form of concretions.

Graham-Craig (1834) reported a case of deposits of charcoal in the lungs of miners (anthracosis).

In later years we find the report of a brass nail in the lung.

Bullets of different character, one of which was impacted for forty-two years, have been found there.

In 1876, Johnson, of Baltimore, in the presence of Sir Morell Mackenzie, removed a toy locomotive from the subglottic cavity by tracheotomy and thyroidectomy.

Weist's records of 1,000 cases of foreign bodies in the lung are exceedingly interesting. Of 177 cases, in 66 expulsion took place, with recovery of patients; 26 patients died without operation, and 85 underwent tracheotomy; of the latter, 66 recovered and 19 died. Of 107 cases due to watermelon seed, 70 patients got well without operation; 3 died with it; 34 had tracheotomy performed, of whom 26 recovered and 8 died.

Coffee beans caused 59 cases; in most of them recovery took place without operation. Of 371 miscellaneous cases, 263 had no operation, of these there were 109 recoveries; 108 patients had tracheotomy, of whom 77 recovered.

Of Weist's recorded 1,000, 93 had tracheotomy performed but foreign bodies could not be found in 73 of them. In 5 of these the body was expelled through the mouth after the wound had closed. In 63 of the 1,000 cases, hooks, etc., were used successfully to remove the body. Total number of operations, 338, of which there were 245 recoveries, and 93 deaths. The voices were lost in 10 patients, and impaired in 38.

Laryngotomy, 36 operations; 30 recoveries; 6 deaths.

Laryngotracheotomy, 26 operations; 19 recoveries; 7 deaths.

Tracheotomy, 276 operations; 196 recoveries and 80 deaths.

Moxley, of Ironton, Ohio (personal communication) had a case in which the tip of a silver spray was coughed up after having been in the bronchus forty days.

DeForest Willard was one of the first to open the bronchus for the removal of a foreign body (1891).

Ferguson (1892) records a case of a Durham tube in the right bronchus, which he removed through incision in the right neck extending through the isthmus of the thyroid to a point near the bifurcation of the bronchus. The patient recovered.

There have been more than seventy papers devoted to foreign bodies in the lung.

Rupture of the lung may be due to coughing or injury, most frequently the latter, and it may occur without injury to the chest wall. Ashhurst collected thirty-nine such cases without fracture of the chest wall. Twelve recovered.

Otis collected twenty-five such cases from military practice exclusively. Eleven of these recovered.

Tait, of Edinburgh (1844), records a case of rupture of the lung, since which time there have been many similar cases reported, with about 30 per cent. of recoveries without operation.

Ferrari (1855) reports a case of rupture of the lung due to deep inspiration.

Wallingford and Roberts (1901) record a case of spontaneous rupture of the bronchial artery with instant death.

Twenty-four papers by as many different writers constitute the literature upon this subject.

GUN-SHOT WOUNDS.

The history of this class of wounds begins with Mallet, who, in 1743, published a report of a lad who was shot through the lung.

Rigby (1790) reported a case of recovery after the ball had passed through the lung.

Hermetically closing the chest was suggested by Paré, Larrey, and Lamotte, and again by Benjamin Howard, in 1863, just before the battle of Gettysburg.

Sixty-seven cases were so treated for injured lung, with 25 recoveries and 42 deaths. Out of the 42 fatal cases, 15 were found upon autopsy not to have received lung injuries.

In the absence of statistics it is safe to say that the same per centage of those who recovered (25) did not have lung injuries. It is probable that the same rule could be applied to all chest wounds; that is, only about 30 per cent. of undetermined chest wounds do not involve the lung.

Dr. Orpheus Everett's name appears among those who sealed chest wounds at Gettysburg, he having closed five, with death resulting in each case (personal communication).

Only 3 recoveries took place out of 200 chest wounds at the battle of Sebastopol treated by the administration of digitalis; while 27 recoveries ensued in 127 wounds of the same character treated by venesection.

About 62½ per cent. of the wounds received during the civil war, United States (1861-1865), were of the chest.

The upper lobe was most frequently wounded, the ratio being 1 to 2.

Of 8,715 chest wounds in the rebellion, United States (1861-1865), 492 or 5½ per cent., spat blood, and 60 per cent. of the total number of patients died.

LACERATED AND INCISED WOUNDS.

As early as 1777, Pew gave an account of a most wonderful recovery after a wound through the lung.

Sewell (1849) reports a case of transfixion of the chest of a youth, eighteen years old, who accidentally fell on a scythe blade, the point passing under the right axilla between the third and fourth ribs straight through the chest. There was no hæmoptysis and the patient soon recovered.

Brown (1877) reports a case of a young man, who, while running to a fire, struck the pole of a carriage, which passed through the chest under the left nipple. There was no hæmorrhage and the boy recovered.

Casper (1880) reports two cases of wounds of the lung; in one by a carriage pole; in the other, the end of a mast passed through the lung.

Brokaw (1890) reports the case of a shipping clerk, who received a thoracic wound extending from the third rib to within one inch of the navel; it was thirteen and a half inches long, and completely severed all muscular and cartilaginous structures. In addition there was a terrible abdominal wound causing almost complete intestinal evisceration. The lung partially collapsed, the cartilages were ligated with heavy silk and hæmorrhage checked by ligature and packing with gauze in the

interchondral spaces. The patient was discharged in a little over a month, the only remaining evil result being a small ventral hernia.

[More of Dr. Ricketts's article will be published as space permits.]

Marked Elongation of the Cervix Uteri.—Dr. J. Wesley Bovée (*Washington Medical Annals*, January) reported recently to the Medical Society of the District of Columbia, the case of a white woman, aged forty-five years, mother of two children, the last of which was born in 1900. She came under his observation in October, 1902. She had been married twenty years. Menstruation had been regular, lasting three days, painless, the amount of flow being small, and the last period was September 1st. Since the birth of her last child she had suffered from "falling of the womb and bladder." Since July last she had noticed a gradual diminution in amount of menstrual discharge. Examination revealed the cervix protruding about two inches through the vulva and covered with a very much thickened and tough mucous membrane; it was pushed back into the vagina with considerable difficulty. On the 31st of October he removed the uterus and appendages. The canal of the uterus was 6 inches in length, that of the cervix $4\frac{1}{2}$ inches, and that of the vaginal portion of the cervix $2\frac{1}{2}$ inches. The ovaries were mere cysts. The broad ligament stumps were sutured to the fascia of the upper end of the vagina and to each other in the median line. The specimen, after being acted on by formaldehyde solution, showed very nicely the macroscopic changes in the mucosa exposed to the extravulvar influences.

A Case of Choreic Tic, with Remarks on the Classification of Myospasms.—At a meeting of the New York Neurological Society held on February 3rd, Dr. Charles L. Dana read a paper in which he said that apparently no case had been observed in England, Scotland, or Ireland, whereas fourteen cases had been reported in this country, and two other cases had been reported under a different name. After carefully reading the descriptions he had come to the conclusion that no case of paramyoclonus of Friedreich had been reported in this country. He then reported a case of paramyoclonus like those that had been published by other American observers. The patient was a man of forty-two, with a history of the mother having had similar attacks during the time she was pregnant with this son. The man said he had been healthy until the age of eleven years, when he had been rendered unconscious by the kick of a horse. Shortly after this the first attack of myoclonus developed. The trouble continued with various remissions for the twenty-three years which had elapsed before his coming under Dr. Dana's observation. When first seen, he was nervous, anæmic, and badly nourished. There was no disorder of the sensory sphere. When the attacks came on he was seized with rhythmic movements of the head, and the hands and feet quivered. During the attack there was considerable palpitation of the heart; he perspired profusely and became exhausted. These contractions came on at very short intervals, and were apt to last for several days unless he took some narcotic,

when the attack would cease. The patient had not been improved by any treatment he had employed, including hypnotism. A short time before the patient had reported that his general health was much better and that the attacks were milder and less frequent. Myoclonus multiplex, Dr. Dana said, occurred also in connection with epilepsy. Mention was made of a case of myoclonus that had been under observation for a number of years. The attacks had developed after an operation on the thyroid gland following an abscess. The contractions were both clonic and tonic, and involved practically the whole musculature of the body. He looked upon the case as a mixture of chronic chorea and tic. Myoclonus occurred in association with epilepsy, chorea, tic, and paresis; it also occurred in family forms. All these types of myoclonus were distinctly degenerative types of mobile spasm. There was another group of myoclonus multiplex which occurred in the form of recurrent spasmodic attacks, although sometimes the attacks were continuous. The trunk muscles and the proximal segments of the body were chiefly affected, and the contractions were very violent and of a rhythmic character. These cases had been called hysterical myoclonus, but in the cases he had seen there had been no distinct evidence of hysteria. Fright or shock was a common ætiological factor; his own case was of the family type. The cases reported by American observers approached more closely to a disease entity than the case of Friedreich did. He was inclined to think that the case of Friedreich belonged more properly to the class designated as myokymia. There had been reported cases of paramyotonus which ran a course quite comparable to that of paramyoclonus.

Intravenous Infusion of Formalin Solution for Puerperal Sepsis.—At a recent meeting of the New York Obstetrical Society, Dr. Stone, of Washington, D. C. (a guest), spoke of the importance of the discovery of such a therapeutic procedure, provided further experiments upon animals and human beings should prove its value. He would ask if a 1 to 5,000 solution of formalin would do outside the body what Dr. Barrows had said it would apparently do if introduced into the circulating blood.

Dr. Killiani (a guest) referred to the impossibility of finding bacteria in the blood at all times, and the consequent uncertainty of attempting to destroy them by introducing antiseptics into the blood. The chemistry of the toxins was of such an uncertain nature that it seemed undesirable to attempt to destroy them by formalin of the strength of 1 to 5,000.

Dr. A. Palmer Dudley gave a brief résumé of his experience with its use in seven cases of septiciæmia, from which he concluded that it was of value.

Dr. S. Marx said that he had not used it, and he thought a critical analysis of some of the cases in which it had apparently been successful would prove them to be examples of sapræmia. He would call attention to the reports of two or three cases in which cyanosis had followed the infusion. He had obtained the same results with all kinds of treat-

ment. He had seen a patient with pyæmia recover after the use of the antistreptococcus serum. He considered the administration of large doses of alcohol to be especially efficacious.

Dr. H. N. Vineberg also referred to the uncertainty of finding the bacteria in the blood. He related the history of a case of mixed tuberculous and streptococcus infection from a suppurating knee joint in which two infusions—one of formalin and one of salt—had been followed by practically the same temporary improvement. After the formalin there was cyanosis with a fall in the temperature of one degree more than after the saline infusion.

Dr. W. R. Pryor called attention to the importance of accurate diagnosis in estimating the value of any new therapeutic procedure. He would call no case one of puerperal sepsis unless pathogenic bacteria had been demonstrated to be present in cultures made from the interior of the uterus. The presence or absence of bacteria in the blood was not a safe index, as they were present in the general circulation at too irregular and transitory intervals. As an illustration of the results that had been obtained with antistreptococcic serum, the mortality was found to be 33 per cent., when all cases were excluded in which the bacteriological test of the interior of the uterus had been negative; but under its use, in all cases judged empirically to be septic, the mortality was only 15 per cent. He personally was opposed to the use of antiseptics in such a way in these cases.

Dr. Ralph Waldo gave the history of a case of puerperal sepsis in which formalin infusions were apparently of temporary benefit, but did not prevent a fatal termination.

Dr. G. L. Brodhead reported a case of puerperal pyæmia occurring in his service at the Postgraduate Hospital, in which temporary improvement apparently followed the formalin infusion, but the course of the disease was not materially altered. He thought the experiment bore out the following general conclusions of Dr. Fortescue Brickdale from experiments upon animals: "Generally, then, it may be said that at present there is no experimental evidence which would warrant the assumption that the course of septicæmia in animals can be influenced favorably by the intravenous injection of antiseptic substances, and that the only result to be obtained by pressing such a treatment beyond the maximum non-toxic dose is to hasten the death of the animal."

Dr. C. C. Barrows, after expressing his depreciation of the newspaper publications of his observations, gave a brief résumé of his experiences with the use of formalin. His clinical successes in the application of this method had so far exceeded his expectations, but he preferred to wait until he had personally treated a larger number of cases before drawing definite conclusions and before giving a full report of experiments which were being made at Cornell to determine the influence of the various solutions in various strengths on bacteria in different media outside of the body.

Version or Forceps—Which?—At the February meeting of the New York Obstetrical Society Dr. S. Marx read a paper in which he said that he wished to be understood as being unqualifiedly

and absolutely in favor of version in cases in which the head was above the brim. After describing what was generally meant by the so called "high operation," he, in his classification of the various forceps operations, said that he had always considered but three forceps positions of the head, defined according to the anatomical relations of the head to the bony as well as to the soft structures of the genital tract, as follows: 1. The high forceps application, with the head entirely above the brim freely movable or not, as the case might be, or the head engaged by its smaller segment whether movable or not. Such a position of the head constituted the only true field for the high forceps application, and this was in accordance with the teachings of the entire German school. 2. Median forceps application, with the head well engaged and yet not on the pelvic floor, *i. e.*, the greater segment of the head still above the ischial spine. 3. The low application, in which the head was on the perinæum or the greater segment of the head was below the ischial spines. He considered this both an anatomical and clinical classification, and believed that if this arrangement of the head positions was followed the use of the forceps would become very much simpler. The indiscriminate use of the term high forceps operation was due, he believed, to the fact that this anatomical application was seldom considered, and, as a result, many of the cases called high operations were really simply cases of median operations. The high operation was very dangerous on account of the injury to the tissues, and was to be condemned, not only for this reason, but also because in an overwhelming majority of cases the woman could be delivered by an operation which was safer to both her and the child, was easier of application, and was surer of success, namely, version. From the standpoint of experience and safety he had always leaned toward version and away from the forceps. Of course, personal experience would enter largely into the consideration of the treatment of any case. He did not sanction the application of the forceps to the head above the brim except in cases where there was a rupture of the uterus impending or, generally speaking, when he had to deal with a tetanized organ, one from which the waters had long escaped. In all other cases he preferred to perform version, and this for fear of causing a rupture in the threatened and tetanized uterus or increasing the tear in one already ruptured. It should be remembered that in most of these cases we were dealing with a prolonged, fruitless, and severe labor, and the child had often suffered so severely that it had almost or altogether been sacrificed, and under these conditions perforation was to be preferred. He did not believe that destructive instruments were yet obsolete; they still had a large field of application. With a dead foetus or with one that was alive but its chances of life very slight, he did not see what could be gained by a difficult high operation or even version; one certainly could do the child no good and would do the mother much harm; this danger could be much diminished by lessening the bulk of the unborn foetus.

We must admit that failure of the presenting head to engage almost always meant that there was

some abnormality, either of the presenting part or the pelvis, and under these conditions there were three factors to be considered, viz.: 1. A malposition of the presenting part. 2. A pelvis which was relatively or absolutely contracted. A relatively contracted pelvis was one large enough to permit the passage of an average-sized child, yet too small to allow of complete engagement and passage of an overgrown foetus or large-sized head. 3. A condition in which the pelvis was estimated to be about the normal, in which the head of the foetus was entirely too large for successful engagement and passage. In his experience minor pelvic or relative pelvic contractions were not uncommon, and it was unfortunate that we had no positive way of determining their existence before or even at the onset of labor. When present they were often not recognized until the severest lesions had been effected. Therefore, an early exploration of the pelvis should be made in order to search for the cause of non-engagement, and anticipate possible dangerous complications. Such an exploration should be early. This he did not consider to be meddlesome midwifery, but scientific obstetrics. In his experience most pelvic contractions were anteroposterior, with compensatory increase in the transverse diameters; this was the result of Nature's attempt to overcome the dystocia, which in most cases was fulfilled, when the case would go on to practically normal delivery. But often, at a critical moment, Nature became exhausted and delivery failed. Now, if the forceps was applied, pressure was exerted from side to side upon the foetal head, which, in his experience, was not compensated for by an overlapping of the bones; therefore this would not increase the biparietal diameter of the head, as was believed by many prominent writers. According to direct observation, pressure from side to side caused an increase in the biparietal diameter, which conformed to the contracted anteroposterior diameter of the pelvic inlet and so increased the pelvic contraction both relatively and absolutely. For this reason, version was to be chosen in all cases, with the exception already mentioned, when the head was above the brim. When version was done, the after-coming head descending as it should, transversely, pressure was exercised upon the biparietal bosses by the pelvic contraction in the anteroposterior diameter, diminishing the diameter where the greatest contraction existed; therefore he got a compensatory side to side enlargement of the head which conformed to the enlarged transverse pelvic diameter. This explained the superiority, and greater safety for the child, of version over true high forceps operations in cases where the head was above the brim, especially in cases of women whose pelvis were of the justo-minor contraction type. It was important to remember that in the performance of version the head should pass with its largest diameter through the largest diameter of the pelvis, not *vice versa*. Again, in order to insure the birth of a living child, there should be a complete and permanent flexion of the after-coming foetal head during the entire time it was passing through the pelvic tract. This could be accomplished only by firm and intelligent fundal and suprapubic pressure maintained as soon as the head began to descend.

If this was not strictly followed, and the child was dragged through the canal by pulling upon the legs, the head would very probably become extended, the arms be liberated, and the child's life sacrificed. He advised more of the *vis a tergo* and less of the *vis a fronte*. He referred to the superiority of version over the high forceps operation in such conditions as placenta prævia, accidental hæmorrhage, eclampsia, etc., and asked why such means would not hold good under the conditions he had attempted to make clear. If the premises he took were correct in one direction, they were certainly so in the other. To his mind, this was a very forcible argument against the contention of those who acted differently, and would show the inconsistency of their beliefs. In those rare cases in which the head was above the brim and which did not admit of version, either because of its utter impossibility, as from a completely spastic uterus or threatened rupture, then the high forceps operation should be attempted if the child was alive; if it was dead, then the perforator should be used. If the child was in good condition, he preferred the axis traction forceps of Tarnier. In those cases in which the head failed to engage, the presumption was that it was caused by some abnormality; therefore, this faulty position must be corrected before operative interference with the forceps was instituted, if at all possible. In minor and even major pelvic contractions, he had had most gratifying results in using the Walcher posture. In a minor contraction a well sustained extension position would make what would otherwise be a difficult forceps operation one of great ease; here the hanging must be a complete one, with the tendency for the patient to fall from the table; to prevent this a well-applied sling should be used. In case the Walcher posture failed to give the expected results, the following procedure had, in some instances, made delivery possible: The forceps was applied in the usual way with the patient in the ordinary obstetric posture. At the moment when the first traction was made the patient was suddenly thrown into the Walcher posture while the efforts at extraction were continued. The rationale and success of this method seemed to depend upon the forced and exaggerated extension by causing the limbs to fall, and, as the result, a greater superextension was produced than was obtained by the sustained Walcher posture. He recalled two women that could not be delivered by any means known, even the sustained extension posture. Suddenly throwing the patient into the Walcher posture gave surprising and happy results in that the two patients were delivered of living children. The one delivered by version had lost all her previous children in labor because of a contraction down to three inches and a half. Cæsarean section was advised, but declined. The child was very large, weighing over eight pounds. A bad prognosis was given. The version was an elective one, in an intact bag of membranes and with the woman in the Walcher posture, but the head could not be extracted. Rapidly placing the patient in the flexed position, he suddenly threw the legs into the extension posture, with the result that, with a sharp snap, the head was rapidly expelled and the foetus was born alive.

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THE AMERICAN ITALY.

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If you will look at the map of the United States, you will see that the southwestern corner of it is occupied by the State of California. This State, on the Pacific Ocean, occupies a belt of land about 800 miles long and about 200 miles wide. Its area is 158,000 square miles, that of Spain being 198,000 square miles. It lies between the parallels of 32° and 42° north latitude, which parallels in the eastern hemisphere pass through Morocco, Algeria, and Tripoli on the south, and near the northern boundary of Portugal and between the cities of Valencia and Valladolid in Spain on the north. No part of California is so far north as Rome, and that part of California which forms the subject of this paper is below the parallel of 34° 30' north latitude, or only a little north of that of Cairo in Egypt. It is this section of California, the California of the south, to which your attention is especially to be directed. This is the region we speak of as our American Italy. In entering the Italy of Europe by an Alpine pass, the traveller is surprised by and delighted with the suddenness of the transition from the region of eternal snow to the verdure of spring or the ripeness of summer. Dreary and desolate winter leaps into the arms of luscious and beautiful spring. In the United States the change is equally startling. Our Italy is approached from the east by railways which travel across great deserts, savage wastes of stone and sage brush or of burning sand and cactus. The contrast between the burning, blinding desert and the beautiful, bountiful valleys of Southern California, into which the traveller comes suddenly, makes him feel that he has escaped from Hades into Paradise. To this section turn the longing eyes of the health seeker, the pleasure seeker, and the home seeker, and California of the South opens her hospitable arms to all. Her great climatic advantages depend upon certain peculiar advantages of geography and

topography that I shall endeavor to make plain to you.

Its Peculiar Geography.—The Pacific coast line of California runs northwest and southeast until it reaches Point Conception, where it turns sharply east, and then curves southeasterly about 250 miles to the Mexican border, a few miles below San Diego. The coast, within these two limits, therefore has a sudden exposure on that sunniest of oceans, the mild Pacific Sea, studded with rocky and picturesque islands. Parallel with the coast, and only a few miles inland, run ranges of lofty mountains from 5,000 to 11,000 feet in height, some of them always snow-clad. These mountains turn sharply eastward from Point Conception nearly to the Colorado Desert, walling in the country from the north, and then turn southward again, walling it in from the east. They take various local names, but are spoken of collectively as the Sierra Nevada. These ranges are great watersheds, gashed by immense cañons, within which the waters from the winter rains can be impounded for subsequent use upon the arid plains at their bases, instead of allowing it to run wildly and wastefully to the ocean.

Another peculiarity, aside from its southern exposure, is the proximity of the Colorado Desert. That desert, waterless and treeless, is cool at night but intolerably hot in the daytime, then sending up a vast column of hot air which cannot escape eastward, because Arizona, the next adjoining State, produces a similar column. It flows high above the mountains westward until it strikes the Pacific and parts with its heat, creating an immense vacuum which is filled by the air from the coast flowing up the slope and over the range, and plunging down 6,000 feet into the desert. This gives the sea breeze, the glory of the California summer, which lasts until about sundown, when the air in the desert cools and descends. Then the current will change and come the other way, flooding the mountain slopes with an air as pure as that of the Sahara and nearly as dry. The character of this breeze causes the whole coast from Santa Barbara to San Diego to be an agreeable place of residence or resort, summer and winter, its average temperature varying only 15° F. the year around. One requires woolen clothing every month in the year, and that in a region which is in perpetual bloom and fruitage, and where delicate flowers bloom the winter through.

But the old seasonal divisions of winter and summer take on a new meaning in Southern California. The winter of other lands is the true summer or season of growth in this. From October to May is the season of light rains. None of the daily down-pour, with appalling thunder and lightning, found in tropical regions, but a precipitation which will amount to about fifteen inches during the seven months. When the rains are over, vegetation sleeps, and the land, where not irrigated, looks dry and bare. During the rainy season, snow accumulates in the high mountains and forms the great store-house of moisture for the summer streams. This combination of benign ocean currents, coast and mountain ranges, equability of temperature, easily accessible mountain altitudes, and alternating desert and ocean breezes gives to Southern California an infinite variety of climate which makes it suit a variety of constitutions and diseases. The soil is irrigated by many streams of pure water flowing down from the mountains to the sea, but many of these streams go dry during the summer season. Hence artificial irrigation becomes necessary, the water being obtained from artesian wells or from mountain reservoirs. The agricultural possibilities of this region are only beginning to be developed. Originally it was supposed that the land was worthless, except for grazing. Immense ranches of twenty, fifty, or one hundred thousand acres were formerly held for cattle and sheep raising. Now it is known that all of the land is productive if intelligently handled, and capital is finding out how to store in, and bring from, the fastnesses of the mountains, rivers of clear water taken at such elevations that the whole arable surface can be irrigated.

Here is the American Mediterranean! Here is the American Italy! It is a Mediterranean without marshes and without malaria. It will remind the traveller of more than one place of beauty in Southern Italy and Sicily, as he gazes at its purple hills running to the blue sea, its surrounding mesas and cañons blooming in semi-tropical luxuriance, its conjunctions of shore and mountain, or the delicate blue of its sky. It is a Mediterranean with a more equable climate, warmer winters, and cooler summers than the Riviera can offer; it is an Italy whose mountains and valleys give almost every variety of elevation and temperature. And, commercially, all the fruits and nuts which civilized Europe has looked to its Mediterranean to supply can be produced here in abundance.

Climatology.—In the study of climate we ought first to consider temperature; second, moisture, including the manifestations of storms and fogs; third, the weight of the air; fourth, the amount of sunshine; and fifth, the dissemination of gases,

microbes, and dust. The average summer temperature of Southern California is 70° F. The average winter temperature is 55° F. The singular equability is therefore at once apparent. This moderate temperature is due to the fact that the country lies between the cold Pacific Ocean and the high mountains. The sun warms the land by day; the heated air rises, and colder air from the ocean rushes in to take its place by day. Owing to the small percentage of actual humidity in the air, when the sun goes out of sight the radiation from the surface is so great that the air stratum above it cools rapidly; it becomes heavy in consequence and flows down toward the sea all night, hence the air flows landward all day and seaward all night. This is subject to some disturbance from storm movements, and there are fogs occasionally, but the description here given will apply to 95 per cent. of the days in any year, which is the percentage of days in which the sun shines at some time of the day in this region. On an average throughout the year San Diego has 80 per cent. of the possible sunshine. The air is relatively clean also; it comes from over the ocean, the desert, and the mountains, and is uncontaminated by any disease-producing thing. It will be seen, then, that Southern California possesses those qualities of climate that enable patients to live practically out of doors much of the time day and night. This is of more importance in tuberculosis than altitude or intense dryness of the atmosphere. The amount of oxygen taken in should give us most concern. But if altitude is considered desirable in any individual case, it can be obtained in a very few hours' journey into the mountains in this region, where a party of men have bathed in the ocean surf, plucked ripe oranges from a tree in the valley, and snowballed each other on the mountain heights within the compass of half a day, and where the mail carrier starts in El Capon Valley, almost at sea level, in his shirt sleeves, and finishes his rounds, a few hours later, wrapped in two overcoats, at Julian, 5,000 feet above the sea.

Fauna.—Of the great number of mammalia which originally fed upon the plains and in the mountains, but few now remain except in remote regions. Deer are yet found. The mountain lion occasionally makes predatory raids on the sheep. Coyotes are rare. Several smaller animals, such as tree squirrels, ground squirrels, cotton tail rabbits, and the like, exist in large numbers. The passage of the skunk is frequently obvious. The hare, "jack-ass rabbit," or "jack rabbit," breeds with such fecundity that at certain times the ranchers and farmers combine in rabbit "drives" and slaughter them by thousands. Two other animal pests are the ground squirrels and gophers. Many kinds of birds are

found, from the great eagle of the Sierras to the humming bird. Waterfowl have a wide range of species. Fish of many kinds are found on the coast, and fishing is an important industry. Seals and sea lions are numerous and form interesting sights at San Francisco and at Monterey. Of mollusks, the most interesting is the abalone, from the shells of which "mother of pearl" buttons are made. The native oyster is very small. There is a scarcity of insects, mosquitoes being very rare.

Flora.—The range of vegetation is singularly diversified, many features being unique and picturesque. The plains are covered in early spring with gorgeous masses of flowers, the most striking being the California poppy. The native grasses of the State are annuals, which for pasturage purposes are useful even when dead. The mountain ranges are generally covered with superb forests, but, as a rule, the valleys are generally bare of trees. The most striking trees are the *Sequoia gigantea* (the big tree of California) and the *Sequoia sempervirens* (the redwood). The range of wild flowers, both annuals and perennials, is exceedingly great, and many of them are of striking beauty. The alfalfa grass, used for cattle feeding, may be cut as many as six times in one year. Mustard is common on the plains, and is said to grow to such a height that a man on horseback is effectually concealed in riding through it.

Agriculture.—Few countries yield as great a variety of products as Southern California. In the list may be enumerated wheat, barley, corn, potatoes, and all kinds of vegetables, melons, berries, fruits of every variety found in the temperate and semi-tropical zones (including in the latter, the orange, lemon, lime, fig, and banana), nuts, the vine, the olive; also honey, wool, meat, fish, petroleum, asphaltum, and some coal and timber. Many other products might be mentioned.

Commerce.—With many railroads traversing the State and many good harbors on the coast, the agricultural possibilities, so long neglected for the absorbing pursuit of mining, will soon be developed to the utmost and California will feed the world. The time is not far distant when what is distinctively known as Southern California will support and give wealth to a population of several millions. At San Diego it has a fine land-locked harbor, turned off finished from Nature's hand, and with twenty-three feet of water at low tide across its bar. The city of Los Angeles, with 110,000 inhabitants, has two seaports, each of which is a terminal point for a transcontinental line of railroad. At other points along the coast, as at Ventura and at Santa Barbara, vessels lie at open sea wharves most of the year with little difficulty. When an isthmus canal

is completed, by either the Panama or Nicaragua route, the growth of these Southern ports will be stimulated to a marked degree.

Endemic Diseases.—Southern California is practically free from any diseases which belong especially to it, or have their habitat, as the naturalists say of a plant, in it. It may be said to be exempt from malaria. Yellow fever is unknown. Typhoid fever is found to a limited extent, where men congregate in the cities. The cool sea breeze gives a certain amount of neuralgia and subacute rheumatism, but these may be avoided by living farther back from the sea. The contagious diseases of children are much less violent than in the colder climates and close houses of the East. Pneumonia is rare, an active practitioner having seen but two cases in ten years. Tuberculosis does not originate here, but vast numbers of Eastern sufferers come here to live and their lives are prolonged and, when they come early enough, the disease is arrested. The present writer does not believe that pulmonary tuberculosis is ever "cured" in the sense that *restitutio ad integrum* may occur. Sunstroke is unknown. Bowel complaints, especially in children, are almost unheard of.

Medical Climatology.—The feeble and invalid from whatever cause may hope for benefit by coming to Southern California, because they can spend a considerable portion of each day in the open air, they can have clear skies and sunshine, they can enjoy the refreshing sleep of a cool, bracing night, and they can find a market stocked with fresh vegetables, fruits, berries, dairy products, and fresh meats every month of the year. Neurasthenics will find the recuperation which comes from restful climatic surroundings. Sufferers from malarial poisoning and its sequels will find almost certain relief on the sea coast. The free action of the skin which comes of a milder climate, the freedom from sudden changes of weather, and the risk of chill, and the choice of a wide range of diet make a very favorable combination for prolonging life in kidney troubles. Consumptives who come before the disease is far advanced, who have the means to secure reasonable comforts and the sense to follow the advice of a competent local physician, have a fair hope of check to the disease or even of apparent recovery. But they must stay here and make a new home. It must not be a trip, but a migration.

Asthmatics can generally secure immunity from the attacks of their remorseless foe. The long stretch of sea coast, and the different islands off the coast, offer abundant summering facilities for those who must live in the valleys and cities at other seasons. And those who have had one experience in anchor fishing in the beds of kelp for red snappers

or rock cod, or trolling for barracouda or Spanish mackerel over the lazily heaving surface of the ocean, or fighting the enormous tuna for an hour and a half before landing him, will come back again and again to this angler's paradise. One need not be an invalid to come here and appreciate the graciousness of the air; the color of the landscape; the constant procession of flowers the year through; the purple hills stretching into the sea; the hundreds of picturesque homes overgrown with flowers, in the midst of orange orchards and of palms and magnolias and in sight of the snow peaks of the giant mountain ranges which shut in this land of marvelous beauty. Here in one State, within nine degrees of latitude, flourish both the pine and the palm, those widely separated lovers of Heine's song, and they symbolize the capacities of the State.

Our American invalids can find in the southern part of the State all that the Mediterranean can offer them and more, and this they can secure, without the long ocean voyage with its dangerous transition from land to sea, but by easy, comfortable journey in luxurious sleeping and dining cars in four days from New York or Boston on the Atlantic seaboard, or in three days from Chicago, which is 1,000 miles west from New York or Boston. And when they get to this land of the sun, of the mountains, and of the sea, they are not in a foreign country, with people speaking an alien tongue, but at home in a land of agreeable homes, part of a contented community without any poverty and without any excessive wealth, among their own fellow citizens. If the traveller or invalid chooses to break the trans-continental journey midway, he can turn aside at Las Vegas, New Mexico, to the Hot Springs. Here, at the head of a picturesque valley, 6,767 feet above sea level, he will find a sanitarium as well as a beautiful pleasure resort. The Hot Springs have much the same character as the Töplitz waters in Bohemia, and the baths have the same curative properties which are enjoyed at Marienbad and Carlsbad. The desert, which is crossed by the Santa Fé Railroad, is not monotonous, but full of interesting features of plant life.

The student of history will find much to interest him in the present residences of the Pueblo Indians and in the cliff dwellings, the ruins of cities that were thriving when the Spanish explorer, Coronado, sent his lieutenants through this region three centuries ago. The whole region is a most interesting field for the antiquarian. Further along this railroad, with a branch road running directly to its brink, is that unique marvel of nature, the Grand Cañon of Colorado. It is impossible to form any adequate conception of the sublimity of this vast abyss. The mind has no standard of comparison. Niagara Falls,

150 feet high and 3,000 feet long, is usually spoken of as one of the stupendous works of Nature. It would need a spy glass to discover it, tumbling into this Titanic chasm. To give its dimensions and say that the Cañon of Colorado is 200 miles long, thirteen miles across from rim to rim at the widest points, and 7,000 feet high, may convey some idea of its capacity to engineers accustomed to dealing with such figures, but the average person is incredulous when told that if all the armies of all the world, infantry, cavalry, and artillery, with all their equipments and horses, were thrown into this awful hole in the earth, and then that all the buildings at present erected on the habitable globe were dumped in on top of them, the resulting mass would be insufficient to check the rushing torrent of the Colorado River, madly flowing along its bed at the bottom.

History.—The first employment of the name California was in a popular romance published in Madrid in 1521, twelve years before Cortez or one of his officers discovered Lower California. Later the mouth of the Colorado River was found, and the bay of San Diego was entered by Pedrillo, a Portuguese navigator, in 1542. The coast of Upper (Alta) California was explored in 1598 and in 1602. Thereafter, for a century and a half, nothing was done until 1769, when some San Franciscan friars made a settlement at San Diego. These wonderful men, inspired by that same spirit of self-renunciation inculcated and demanded by St. Francis of Assisi in the thirteenth century, came to work for God and to help men; and of all the splendid promise and wonderful development on the California coast to-day, Franciscan friars were the first founders. The father of far western civilization was Father Junipero Serra, who under the authority of Spain inaugurated the founding of a line of missions up and down the coast to the number of twenty-one, from San Diego to San Francisco, during the succeeding fifty-one years. Born and educated in the island of Majorca, Father Serra had been sent in 1749 from Cadiz to the College of San Fernando in Mexico. After nineteen years in Mexico, he was appointed president of the missions in Lower California. Leaving Lower California, as part of a military expedition, they set out for New Spain, or Upper California, "to establish the Catholic religion, to extend the dominion of the King Our Lord, and to protect this peninsula from the ambitious views of foreign nations." Father Serra, although fifty-six years old, displayed an activity, a generosity, and an enthusiasm which were inexhaustible. The sufferings and hardships endured by his devoted band give proofs of a spiritual enthusiasm and exaltation of self-sacrifice which are rarely paralleled in the world's history. Before his

death, at the age of seventy-two years, in 1784, Father Serra had founded nine of the early missions. He found in the country about thirty thousand friendly, intelligent, good-natured Indians. The Indians were brought under control, taught industrial pursuits, and there began a pastoral life which was the most picturesque the western hemisphere has ever seen. The fathers cultivated the olive, the vine, and the wheat, and owned vast herds of horses, cattle, and sheep. When Mexico established her independence of Spain, in 1822, they became the victims of Mexico's dislike, and finally in 1845 their property was confiscated and the fine old mission buildings were sold at auction. Prior to this time, American adventurers had begun to flock into California, and England, France, and the United States also coveted the territory and sent armed fleets to the coast. On July 7, 1846, Commodore Sloat, of the United States Navy, seized Monterey, the seat of government, and held it pending the war between the United States and Mexico. As a result of this war, California was ceded to the United States. Then followed a period of land grabbing, in which the rights of lawful owners were trampled upon, and which is a blot upon the fair fame of the history of our country. The discovery of gold about this time attracted to California the lawless and adventurous from all parts, and the Mission Indians saw their lands slip away from them and their people die off without protest or opposition.

Conclusion.—Southern California has fully as varied a climatology as Italy; its also has extremes of condition, but, unlike the Italian extremes, it enjoys extremes which are alike favorable to health and longevity. It has six distinct classes of climates, all having a therapeutic value and application, as follows:

1. A purely insular climate, at Catalina, Coronado, and the other channel islands.
2. The peninsular climate, at Coronado Beach outside San Diego Bay.
3. The coast climate.
4. The foot hill and valley climate, 200 to 2,500 feet elevation.
5. The mountain climate, 2,500 to 9,000 feet elevation.
6. The desert climate, from 360 feet below sea level to 2,500 feet elevation.

The New St. Francis Hospital, New York.—The Sisters of the Poor of St. Francis make an urgent appeal for funds in aid of the erection of their new hospital at East One Hundred and Forty-second Street and Brook Avenue. Since May, 1865, over 70,000 patients of all nationalities and creeds, 95 per cent. of whom were unable to pay anything, have been attended to by the sisters.

THE KIDNEY OF PREGNANCY.*

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The changes in the kidney during pregnancy, the recognition of these changes, and their clinical importance as viewed from the standpoint of the obstetrician, will be the text of this brief paper.

The so-called kidney of pregnancy is one in which there are no inflammatory changes, but in which is present a fatty infiltration of the epithelium cells lining the uriniferous tubules, associated with anæmia of the organ. These degenerative changes in the epithelium of the renal tubules have been attributed by Leyden to alterations in the arterial pressure and to an interference with the renal circulation incident to gestation. Recent observers, however, assert that the changes in the kidney, as well as the hepatic changes, are due to the circulation in the blood of certain imperfectly oxidized metabolic products, inasmuch as, throughout pregnancy, there is a marked tendency to disturbances of the renal function and the occurrence of slight degrees of nephritis, brought about by disturbed metabolism, which produces more or less autointoxication. It is easy to conceive that the excretory organs of a woman during gestation, as has frequently been observed in the presence of large abdominal tumors, are more liable to various derangements when these organs are called upon to rid themselves of an excess of waste material, the result of foetal as well as maternal metabolism. When women suffer from a retention of these imperfectly oxidized metabolic products they become toxæmic.

The appearance of albumin in the urine indicates a renal insufficiency, and may lead to serious consequences to the mother; and, if in sufficient quantity, it is always detrimental, if not fatal, to the foetus. The dangers to both are greatly increased if the albuminuria develops suddenly.

During pregnancy the urine is increased in quantity, and is of a lower specific gravity, though its normal constituents, with the exception of the chlorides, phosphates, and sulphates, remain unchanged. A proportionate amount of urea and other excrementitious substances is eliminated. Williams places the elimination of urea at from 20 to 24 grammes in the average woman, and takes exception to the statement that urea is increased in quantity during gestation. A trace of albumin may be demonstrated at some period of gestation, in the

* Read before the Kings County Medical Association, March 10, 1903.

urine of 50 per cent. of all pregnant women, but its appearance in such small quantity is seldom constant and has little clinical significance. Albumin is only of importance when it appears in abundance, is caused by an excess of toxins passing out through the kidney tissues, and is associated with diminished secretion; or when it is associated with tube casts and is an evidence of nephritis. Little, in his observations at the Johns Hopkins Hospital, has found these conditions to exist in from 5 to 7 per cent. of pregnancies.

The time of its appearance in the urine during pregnancy has a prognostic significance. When due to renal disease antedating pregnancy, albumin may be demonstrated during the early months, while, when it occurs in the later months, unless the amount is excessive, it may be considered as truly a symptom of the kidney of pregnancy. In a large proportion of cases albumin does not appear until late in the second half of gestation, and may be directly attributed to the increased abdominal pressure interfering with the renal circulation. It is more common in the presence of twins, hydramnios, or primiparæ with rigid abdominal walls. Notwithstanding the general acceptance of the truth of this fact, Allbutt believes that the absorption of toxins from the intestinal tract, and not the increased abdominal pressure, is responsible for the kidney irritation producing albuminuria.

As has already been stated, albumin is found in women who are enjoying perfect health throughout pregnancy. Its clinical value is more suggestive than actual, as it has been shown to be present in one-third of all cases during labor. The urine of nearly all women in the last month of gestation contains hyaline casts and leucocytes. This is generally attributed to the increased abdominal pressure or to the increased metabolism, for the abnormal constituents of the urine rapidly disappear when the uterus has emptied itself.

The kidney of pregnancy is practically a condition of the second half, particularly among primiparæ. More or less œdema of the lower extremities is the most common symptom, aside from the changes in the urine already noted. The œdema disappears, and the urine becomes normal promptly after delivery; but the transition from this condition, which may be considered as normal, in the last month, to one of concern, often culminating in eclampsia, is almost insensible so far as the kidneys are concerned. The writer is, therefore, of the opinion that the eclamptic explosions are the result of a combined toxæmia, produced by deficient elimination by all of the emunctories, of which the intestinal tract is the most potent factor.

It will be readily appreciated that women having

a chronic nephritis antedating pregnancy aggravate their renal condition by gestation and expose themselves to the dangers of a serious toxæmia. Again, it must always be remembered that an acute nephritis may develop suddenly on the kidney of pregnancy and subject the woman to a dangerous complication. While albumin indicates a renal insufficiency, its appearance, unless in quantity, is of little clinical significance, *except* it is associated with diminished excretion, deficient urea elimination, or fatty, granular or waxy casts. *The presence of these abnormal constituents determines the necessity of interrupting pregnancy.*

It is well to be certain that the albumin comes from the kidney, for many women have a leucorrhœa during pregnancy, and this discharge, mixing with the urine as it is voided, may mislead the attendant. Catheterized urine is therefore necessary for accurate analysis:

All inflammations of the kidneys may be accompanied by remote hæmorrhages. This hæmorrhage may be into the placental site and may separate the normally placed placenta, and thus cause foetal death as well as endanger the life of the mother; or the placenta may contain large infarcts, which are almost invariably associated with albuminuria. These are due to an endarteritis of the villi of the chorion. An albuminuric retinitis, as well as hæmorrhages from the nose, mouth, and intestine, have been noted as associated with this form of renal lesion.

The kidneys are involved in about two-thirds of the cases of eclampsia, and albumin in considerable quantity has been demonstrated in the urine of 84 per cent. of women during the convulsion. Albumin, when present, is always an important prodrome, the quantity increases with each explosion and decreases after its cessation; the white and red corpuscles and casts also rapidly disappear from the urine after the convulsions have ceased. *A diminution in the excretion of urea* is, however, the most important preeclamptic signal, and positively indicates kidney inadequacy; a fall to 1.5 per cent. is always dangerous.

When the preeclamptic state is recognized by the urinary examination and associated toxæmic symptoms, as headache, neuralgias, nausea, œdema, etc., the following suggestions may avert further intoxication: (1) Reduce the amount of nitrogenous food. (2) Limit the production and absorption of toxic materials in the intestines and the tissues of the body, and assist their elimination, by the bowel, liver, kidneys, skin, and lungs. And finally (3) if necessary, remove the source of foetal metabolism and irritation by emptying the uterus.

287 CLINTON AVENUE.

REPORT OF A CASE OF INFECTION BY
THE BACILLUS COLI COMMUNIS.*By A. JACOBY, A. B., M. D.,
NEW ORLEANS.

The practitioner is often confronted by cases with fevers of long standing which, resisting all efforts at eradication, baffle his skill both as a diagnostician and as a therapist. It is the peculiarities of the existing condition and these types of infections, that are the cause for anxiety and an aspect of alarm of the attending physician. There is hardly anyone who, having a fever case which has resisted the usual modes of treatment, does not feel discouraged by the existing unpleasant state of affairs.

The continued fever to-day has many causes, and, as the research of the scientist goes further and deeper, we must look forward with expectation that additional causes will be discovered. It is only within the past year that the paratyphoid bacillus has become recognized, its action understood, and its tendency to produce a fever similar to that of typhoid radically proved.

It is not long ago that all continued fevers were thought to be due to the malarial parasite, and there are still some physicians, especially in the country, whose ideas have not changed materially in that direction. Indeed, the practitioner could not understand why the existing fever did not yield to quinine and show a tendency to defervesce. But now, with the ever increasing light on the subject, we have been able to make the proper diagnosis and enter upon a line of treatment most efficient for success.

The case of which I shall relate the history is of particular interest on account of the fact that it resembled typhoid fever so closely. So much so was this noticeable that it was only the negative reports of Widal's reaction and the presence of the *Bacillus coli communis* in large numbers in the urine that enabled a positive diagnosis to be made.

CASE.—The patient, a white man, aged fifty years, a laborer by occupation, and of irregular habits, was admitted to the Charity Hospital on November 7, 1901. He had been working on the railroad in Texas, when he was taken ill with a fever which worried his attending physician and resulted in his determination to come to our hospital for treatment.

The patient stated that he had been drinking nearly any kind of water, from ditch to well water. He had been suffering with malaise, which continued to increase and compelled him to take to his bed.

His condition on admission was one of depression and he seemed greatly exhausted by his trip. He had diarrhoea, temperature about 101° F., pulse rapid, tongue slightly coated and pointed, and face

flushed. His abdomen was distended; there was slight gurgling in the right iliac fossa and a tendency to nausea.

Examination of the lungs revealed nothing abnormal; of the heart, an aortic obstructive murmur; the spleen was very much enlarged and the liver slightly increased in size. The external picture of his condition seemed to preclude a positive diagnosis of typhoid and the appearance of an intense erythematous eruption on his chest, abdomen, and back seemed to justify our conclusion.

The blood was examined for malarial plasmodia twice, for Widal four times, and the scraping of the spots, as well as the urine, for the bacillus typhosus, with negative results, so that it was determined to seek elsewhere for a diagnosis. The urine was then sent for examination for the colon bacillus and a positive report was returned. The urine examination showed the presence of an inflammatory condition of the kidneys. The treatment throughout was naphthalin, 15 grains, strychnine sulphate $\frac{1}{30}$ of a grain, every four hours. Ice bag to the head and abdomen for high temperature, and high ice water enema if indicated, to be repeated in an hour if the previous one had not been effective. He was also given at times $\frac{1}{10}$ of a grain of calomel every hour. The temperature, however, never rose above 102° F. and began steadily to decline a week after his admission until November 23rd, sixteen days after he entered the ward, when his temperature rose suddenly to 104° F. His respiration was increased; he began to cough and complain of a severe pain in his left side when he breathed deeply.

Examination of the chest revealed a lobar pneumonia at the base of the right lung and at the middle of the left lung, together with pleuritic friction sounds about the same region. Ice bags to the affected areas were ordered and the patient was stimulated; ammonium iodide, 5 grains, was also given every four hours. The sputum was found to contain the pneumococci. He died two days after the onset of the pneumonic condition.

The post-mortem report was as follows: *Heart*. Atheroma of the aorta, and aortic, and mitral valves. Organ yellow in color and fatty on section. Weight, 13 ounces. *Lungs*. Right pneumonia at extreme base; left, adherent and pneumonia at lower extremity of upper lobe. The weight of the right lung was 20 ounces; of the left, 18 ounces. *Spleen*. Enlarged and intensely congested, of a deep red color. Weight, 9½ ounces. *Liver*. Intensely fatty, pinkish in color on section. Gall bladder full. Weight, 4 pounds. *Pancreas*. Normal. Weight, 2 ounces. *Small Intestines*. Ileum and jejunum, mucous membrane congested. No inflammatory process in Peyer's patches. *Kidney and Capsule*. Congested. Both organs granular on section and capsules adherent. The right contained infarct, of cream color on section. Right weighed 6 ounces, and left 6 ounces.

We are to conclude, therefore, that it is the duty of every physician to examine the urine, as well as the blood, carefully and frequently in every case of continued fever. An accurate diagnosis is of most valuable assistance in treating a case, and is the pre-

* Read before the Orleans Parish Medical Society, February 14, 1903.

ventive of much worry and many a severe heart-ache. I believe that many of our cases of autoinfection are cases of infection by the *Bacillus coli communis*, and I feel that an examination of the urine would prove the correctness of my hypothesis.

THE SURGICAL TREATMENT OF EMPYEMA.

By FRANK MCMORROW, M. D.,
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The operative procedure in empyema which may be considered to be radical in its nature, and which now has the confidence of clinicians and is held by many surgeons to be without much doubt the most successful treatment of this affection, is excision of the ribs with insertion of drains. This paper has to deal with that method, and the following is the report of a case and its treatment:

CASE.—A girl, aged seven years. Family history negative. Personal history: had always been well with the exception of measles and whooping cough some three years prior to this present illness, which began with pleuropneumonia on the left side, and ran a regular course for about two weeks. No complete crises occurred at this time. The temperature in the axilla fell to 99° F.; but dulness persisted in the lower part of the chest, and we thought we had to deal with an unresolved pneumonia. During the subacute stage a slight elevation in temperature continued. There were also a dry cough and restlessness at night, and in about ten days the temperature reached 103°, quite irregular. There were chills, emaciation, and pallor. In a short time all symptoms became aggravated with the addition of dyspnoea and distress, the physical signs of fluid in the chest were then well marked, there were immobility and bulging of the left side, lack of fremitus and flatness, which signs were corroborated by the introduction of a large sized needle with which a small quantity of pus was withdrawn.

As the child was very weak, and in order to save as much of her strength as possible by securing efficient drainage, it was thought best to resect a rib. An incision was made in the axillary line on the seventh rib and carried through the skin and periosteum to the bone.

The latter was carefully reflected off the rib from above downward, so as to avoid danger of wounding the intercostal artery. We had practically no hæmorrhage. A piece of rib, about two inches in length, was resected; the anæsthetic was then discontinued, and an opening made into the pleural sac by a separate incision through the intercostal space below, the pus being allowed to drain out slowly. The finger was introduced into the pleural sac, the adhesions which had formed between the lung and chest wall were broken up, and a number of pus clots were freed, which would never escape through the ordinary drainage tubes unless we were content to wait at the expense of the patient's

strength till they become disintegrated or dissolved. The pleural cavity was then washed out with a normal salt solution after which a Wilson empyema tube was inserted, the customary surgical dressings were applied, and the child made an uninterrupted recovery.

The points which I wish to emphasize are, that if it is necessary to open into the pleural cavity, where we seek for our object proper and free drainage, it is always a better method to resect a rib. In children we find the intercostal spaces are narrow and with a simple incision it is difficult to retain a tube of considerable size in the wound. The opposing ribs during respiration are constantly pressing the sides of the tube together, and in this respect the drainage is imperfect. After a tube has been displaced a few times, it is often difficult to replace, and the fact remains that, in some cases where a simple incision through the intercostal space has been made, the second operation, which has for its object the removal of a piece of rib, has to be performed in order to secure perfect drainage. It was formerly supposed that irrigation of the chest cavity was not necessary, and that it caused fatal syncope. Dr. Samuel Lloyd said "Syncope has never followed irrigation of the pleural cavity in my experience, and I do not believe it will occur if the irrigation is carried out simply by gravity, that is pouring the irrigating fluid from a pitcher into the chest instead of letting it run through a tube. It is never possible, in this way, to increase the pressure sufficiently to interfere with the action of the lungs or the heart, and the increasing activity of the compressed lung stirs the fluid around in the chest so thoroughly that it washes out the greater part of the plastic exudation." The opening is so large that there is no chance for the irrigating fluid to be retained, and the exudate to become putrid. Statistics at present show that irrigation does not tend to prolong inflammatory processes going on in the chest. Another danger lies in the child inhaling too much chloroform. As the pus escapes the lung expands and the patient is liable to take into the system an overdose of the anæsthetic, which should be stopped when we enter the pleural cavity. The free filtration of air into the plural sac is not attended with any ill effects; but the source of danger is the ineffectual drainage, which causes retention of old discharges which are apt to become putrid and cause a long period of suppuration and delay in convalescence. This large opening, therefore, permits the numerous encapsuled collections of pus to escape, and enables the operator to break up the adhesions that free the depressed lung, allowing it to resume its normal position and function. If all these adhesions are broken up the lung can very

readily be seen expanding against the chest wall.

It is better to take a little time with this process, so as not to have the compressed lung distended so rapidly that it may lose its power of contraction. This method insures a rapid recovery with an increased lung space, and we shall not have the operation to deal with a crippled lung, which may necessitate an Eastlander's operation to secure proper retraction of ribs against that depressed lung. As there is sufficient space obtained by this operation for the insertion of a drain of considerable size, a Wilson empyema tube answers all purposes, being made of flexible rubber in the shape of a spool. It provides perfect drainage, is self-retaining, and permits of free lung expansion, besides being easy of introduction and removal.

Dr. Lloyd, again, states that where they have no inflammatory processes present at the time of the operation, the patients are usually ready to get out of bed on the second or third day after the operation; but in patients with a pneumococcus infection it takes about one week before the tube can be removed. The mortality is distinctly less nowadays than it used to be, and far below the mortality recorded where the simpler methods of operating are still in vogue.

FATAL MENINGITIS WITH MYOSIS AND SALIVARY SUPPRESSION AS THE ONLY SYMPTOMS. AUTOPSY. A STUDY IN DIAGNOSIS BY EXCLUSION.

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The idiosyncrasies of man in the way of his susceptibility to certain articles of food, drugs, etc., ordinarily considered innocuous, his tolerance of agents of extreme toxicity, the powers of Nature to compensate through the action of other viscera and channels for the incompetence or entire disability of certain organs, and thus to lead us to the supposition that no abnormalities exist, are matters of daily observation. Autopsies not infrequently seem to show no reason why the patient should have died; on the other hand, how often do we wonder how it was that death did not take place months, perhaps years, before.

Clinically and pathologically the case to be reported, which is of unusual rarity, is of exceptional interest for the following reasons: The presence of so severe and extensive a degree of meningitis with no symptoms that could be considered even suggestive of the disease; the absence of all evidences of a general sepsis, in spite of the seeming

virulence of the morbid agent, as seen from the character and extent of the lesions found *post mortem*; and the intermittence of the pyuria, although both kidneys, prostate, etc., were extensively involved. The case is but one of many showing how little reliance can be placed upon the absence of symptoms as indicating the non-existence of even extensive disease. While no positive diagnosis, *intra vitam*, was made—and in the light of our present knowledge it will be seen that none was possible—our study of the case led us to suspect the existence of the meningeal affection. This suspicion was based entirely upon a reasoning by exclusion, and the autopsy findings but again confirm how just is the claim for the superiority of this method over that of direct reasoning. The grounds upon which we excluded other conditions, seemingly possible, will be given later.

The history of the case is as follows:

December 18, 1902. Mr. C. K. H., aged fifty-three years, married, had been ill a number of days, complaining of headache, vague pains throughout the body, general malaise, anorexia, and most particularly of severe pains in the right ear, from which issued a very profuse mucopurulent discharge. A very careful physical examination gave negative results, excepting a slight elevation of temperature, 99.2 ° F., and the presence of a perforative otitis. The patient, however, whom I had not seen for many years, presented that peculiar appearance so characteristic of advanced renal disease. I therefore requested that a specimen of the urine of the night be sent to me the following morning. For the relief of the acute symptoms, which I interpreted as being due to a mild attack of influenza, I prescribed salophen with caffeine, and the usual treatment locally for the ear.

Examination of the night's urine, sent me the following morning, showed: Specific gravity, 1020: reaction, intensely acid; traces of albumin; no sugar: uric acid in marked excess. Microscopically were found in great number—the field being literally covered—granular, epithelial, fatty and hyaline casts, blood cells, degenerated renal epithelium, and some few leucocytes.

December 19th. The patient seemed very much improved as far as the acute symptoms were concerned, with normal temperature and pulse. Close interrogation of the patient regarding his previous history elicited the following facts: For some years past he had suffered considerably from pain in the loins when standing for any great length of time, but his general health, with the exception of occasional attacks of acute indigestion, had been very good. The pain in the loins was at times so very distressing that it interfered with his business; for this reason only he had consulted a number of physicians in his search for relief. Each of these, after examining the urine submitted, reported that, except for an excessive amount of uric acid, this showed no abnormality, and that the pain was of rheumatic origin. He was put on alkalies and ad-

vised to drink plenty of water, preferably some mineral water, which advice he carried out by drinking Poland water in great quantities.

In his history he confessed to a specific infection in early manhood, which had been treated, and of which he had been pronounced cured. Nothing else of importance could be elicited.

The data obtained from my urinary examination and the appearance of the patient led me to suspect a serious kidney lesion, and I immediately ordered him to bed and on a milk diet. The medication prescribed was potassium iodide ten grains every three hours, increasing the dose up to twenty grains every three hours.

December 20th to 30th.—During these ten days the acute symptoms had disappeared, and there was marked and rapid improvement in his general condition. The urine averaged about thirty ounces daily, and was of a specific gravity of 1020; albumin had disappeared, and the casts diminished so greatly in numbers, that on December 28th there were but one or two hyaline or granular casts in each specimen examined. The epithelial cells, so abundant in the first specimens examined, had also disappeared completely. For the microscopical examination precipitation was effected by thoroughly centrifugalizing for five minutes; four specimens were taken from the precipitate of each day's urine and carefully examined under cover glasses 3mm. $\times$ 3mm. A mechanical stage was used, thus guarding against the inadvertent overlooking of portions of the field. The only abnormality shown by the urine was a great excess of uric acid, for which, on December 30th, I prescribed acid nitrohydrochloric, fort., to be taken in ten drop doses, well diluted, three times a day. On December 30th he was permitted to get out of bed.

December 30th to January 3rd.—The improvement continued. There was marked diminution in the amount of uric acid found in the urine, and the patient's digestion, which had been somewhat poor, in consequence of the unaccustomed inactivity and the medication, was very much better. On January 3rd patient went out of doors.

January 3rd to 7th.—The patient's condition during this time, as reported by his wife, remained very favorable, and he himself asserted that he had not felt so well in years. The urine, which at this time was examined every third day, showed but an occasional hyaline cast in many fields examined, and, as was to be expected, was strongly acid in reaction. On January 7th Mrs. H. informed me that her husband complained of severe burning while passing urine. Attributing this to the excessive acidity I ordered a discontinuance of the nitrohydrochloric acid, and substituted the drinking of Vichy water to which sodium bicarbonate had been added.

January 8th.—The urine submitted to me this day suddenly showed large quantities of pus, its bulk being one half the bottle.

January 9th.—On my visit I found the patient feeling well except for the irritation of the scalding urine. He had, however, a urethral discharge of a purulent character, which was more profuse than I had ever seen, even in a gonorrhoea.

Palpation of the urethra revealed marked tenderness immediately behind the fossa navicularis, but none posterior to this. Rectal examination showed an evenly enlarged prostate, with considerable pain on pressure. Massage of the gland forced a bloody, thickish pus through the meatus.

Most careful questioning brought no light as to the ætiology of this suddenly appearing prostatitis and urethritis. The patient denied most emphatically any cohabitation within the past month, and as he had previously voluntarily informed me as to his specific infection I was inclined to believe his statements, particularly as his physical condition did not make it improbable that this urethral discharge was due to irritation from the extremely acid urine, with subsequent accidental infection of the irritated mucous membrane.

Specimens of the pus, stained, showed large numbers of bacteria, particularly a diplococcus resembling morphologically the *Diplococcus intracellularis*, numerous streptococci, and a rod-shaped bacillus, staining rather faintly. The specimens were stained by three different methods: Carbol-fuchsin, Goldberg's method, and a method strongly recommended by Professor Lenhartz for the staining of gonococci, viz., immersion in hot $\frac{1}{2}$ per cent. aqueous solution of eosin, and washing off with a saturated alcoholic solution of methylene blue. Most careful search and examination failed to show gonococci. (The specimens, as well as the pus itself, from the body, were subsequently examined by Dr. Harlow Brooks, of the University and Bellevue Laboratories, who confirmed my findings.)

The only explanation of the causation of the urethral and prostatic condition that seemed plausible, was the one before stated, the irritation of the urethra by the acid urine, infection of the same, and secondary infection of the prostate. The quantity of pus passed was so great that I had but little doubt of the existence of a cystitis. However, there was a possibility that this suspected cystitis did not exist, and for fear of infecting the bladder, if this were true, I did not venture to pass a catheter.

January 9th to 16th.—During this period the general condition of the patient was very good, his only trouble being the local one, which, however, in spite of antibleorrhœal treatment—oleum santali, salol, methylene blue, urethral injections of bichloride solutions, etc., showed no signs of abatement. The prostatic condition did, however, under massage of the gland, improve. The dysuria and ardor urinæ became so severe that on January 16th I found it necessary to prescribe an anodyne suppository consisting of morphine and ext. belladonnæ, aa gramme 0.015 to be used once daily, at night, on retiring.

During this period both temperature and pulse were normal.

January 17th.—Pulse and temperature normal. A marked contraction of the pupils, with extreme dryness of the mouth and fauces was noted. The before mentioned suppository having been used the night previously, no importance was attributed to this condition, which was explained as being due to a special susceptibility to morphine, with consequent inhibition of the antagonistic action (on the pupils, etc.) of the belladonna. There was also

complete retention of the urine, forcing me, *nolens volens*, to pass a catheter. To my surprise the urine drawn from the bladder showed no evidence of pus, either macroscopically or microscopically. It was alkaline in reaction (from the alkaline waters imbibed), of a specific gravity of 1020, no albumin, casts or epithelial cells. (The post mortem findings, to be detailed later, make it important that this fact of the urine being normal should be noted.) Anodyne suppository again used at night.

January 18th.—No elevation of temperature; pulse normal. Pupils contracted; mouth and fauces dry as before. Catheterization again necessary, the urine being similar to that of the previous day; specific gravity, 1020; alkaline reaction, no albumin, casts or epithelial cells.

January 19th.—Temperature and pulse normal. Myosis and faucial dryness, etc., continue. Catheterization resulted in drawing a urine as on previous days, viz., perfectly normal excepting for the slightly higher specific gravity (1020) and alkaline reaction, which was due to the large quantities of alkalis taken. The purulent urethral discharge was very much thinner and less copious, and the prostatic condition seemed almost entirely relieved, as palpation showed but very little swelling, while massage of the gland caused no pain and did not produce the bloody discharge as before.

The patient, however, seemed to be failing in spite of increased nutrition, and moderate stimulation with strychnine.

January 20th.—Normal pulse and temperature. Faucial dryness and myosis as before, in spite of the fact that two days had elapsed since the last suppository had been used. (In all, the patient had used gramme 0.03 each of morphine and ext. belladonnæ, in the form of two suppositories, containing gramme 0.015 of the drugs.)

There seemed noticeable additionally, a slight tendency toward somnolence. The general state of the patient was less favorable, although improvement in the local condition was noted. He, however, claimed to be very much better.

January 21st.—Temperature, pulse, and respirations still normal. Pupils almost pin point; extreme faucial dryness. The somnolence also seemed greater. Patient would immediately respond intelligently and without seeming effort to questions asked him, but would at once doze off into what seemed a natural sleep. Strongly suspecting the presence of a meningitis, and the general condition appearing so unfavorable, I requested consultation. Accordingly Professor Andrew H. Smith, who was called in, saw Mr. H. with me in the evening. At that time I learned that during the afternoon the patient had insisted upon getting up, asserting that he was perfectly well, and would not remain abed any longer. At 9 p. m., when Professor Smith saw the patient, the general condition was about as in the morning. Each of us made most careful and thorough examination going over all the accessible organs, with results absolutely negative. Nothing abnormal was discovered in the chest or abdomen. The liver seemed normal; spleen was not palpable and its area of dulness did not seem increased. There was no tenderness, rigidity of the abdominal muscles, or tympanitis. Aside from the myosis and

dry fauces, no evidence of derangement of the nervous system was discoverable; there was no hyperæsthesia or anæsthesia, no opisthotonos, no muscular rigidity; all the reflexes, palate, knee, ankle, etc., were normal. The only evidences of disease, aside from the patient's appearance, were the contracted pupils, the dry mouth and fauces, and the tendency to somnolence. As before stated, this somnolence was by no means extreme, as the patient was easily awakened, would readily respond to any questions, and assisted us in our examination by assuming and maintaining whatever position we desired, or respiring as directed.

The results of our examination were so favorable that the question of a possible hysterical element in the case was considered. In our consultation every condition at all likely was carefully discussed and gone into fully. We considered hysteria, uræmia, a masked typhoid, miliary tuberculosis, septic infection, cerebral œdema, meningitis, a brain tumor, etc.

The urine, as drawn from the bladder previously to our consultation, and its perfectly normal condition during the whole course of the illness then present (it was considered that this commenced January 8th), eliminated for us a possible uræmia.

The unchanged pulse and temperature, the absence of gastroenteric symptoms, the normal liver, the seemingly unchanged spleen excluded a masked typhoid.

The normal physical signs in the chest, the absence of cough, of fever, of any change in the pulse or respiration, and the negative results of our abdominal examinations made us throw out a general miliary tuberculosis as at all probable.

The clear antecedent history, the psychic condition of the patient, the absence of all the so called stigmata served to exclude hysteria. The urethral discharge and its character, the many bacteria previously mentioned as found therein, notably the *Diplococcus intracellularis*, and the numerous streptococci, made a general septic infection seem the most likely cause of the illness; yet careful analysis of the patient's condition, both subjective and objective, particularly the normal pulse and temperature, made it seem very improbable that we had before us a general sepsis.

For the sake of brevity we will consider the symptoms of meningitis (without differentiating the form or type) as a whole, rather than dividing the disease into two stages, as is usually done. We have headache, usually very violent, delirium, fever, the changes in pulse and respiration, general pains, paræsthesiæ, disturbances of vision and hearing, muscular rigidity, local muscular spasms, and the various minor symptoms depending on the form and location of the meningeal affection. All of these symptoms were absent until four days before

the fatal issue, when the contracted pupils, the dry mouth and fauces—a symptom not usually described as occurring in meningitis—appeared. The day before the patient's death the tendency to somnolence was first noted. While this increased somewhat, it was never very marked, even up to the time of commencing dissolution.

The question before us was, could these three symptoms alone, *i. e.*, the myosis, the faucial dryness, and the somnolence, be regarded as sufficient to warrant even a suspicion as to the existence of a meningitis? Seemingly not, and yet how could we otherwise interpret them? Opium poisoning was out of the question. Even if it had been possible for the patient to obtain any opiate in addition to the suppositories prescribed, the sequence in which the symptoms appeared, the condition of the pulse and respiration, negated the possibility of their being due to narcotic poisoning. The question of idiosyncrasy against opium was also considered. Over four days had elapsed since the administration of the last dose (gramme 0.015, equivalent to $\frac{1}{4}$ grain of morphine, in the form of a suppository) and its possible untoward effect guarded against by an equal quantity of ext. belladonnæ. Obviously, under these conditions, however great the idiosyncrasy, so small a dose could not have so prolonged an effect, which additionally increased and became more marked as the case went on, instead of diminishing.

A cerebral tumor was excluded because of the sudden onset of the disease, the entire absence of previous headache, the normal vision, etc. A possible toxæmia, ptomaine poisoning from decomposing albuminoids, (a condition recently described) was also considered, but the absence of any ætiological factors bearing on this condition served to throw this out.

In our study of the case a number of other conditions were considered as possibilities in causing the symptoms before us, but the probability of their existence was so remote that they need not be here stated. The result of our study and discussion of the conditions before mentioned was that we were inclined to believe a meningitis and a sepsis as the most probable causes of the patient's symptoms. While the temperature, pulse, the normal liver, the apparently normal spleen seemed to disprove the existence of a sepsis, yet we could not account for a meningitis in this case, except as of septic origin, and hence we accepted this as the most probable condition and the cause of the disturbances present. Our conclusion was, therefore, that we most probably had before us primarily a sepsis, with a meningitis as secondary. This diagnosis, as has already been noted, was arrived at as a result of reasoning

purely by exclusion—in no other way was it possible to form even an opinion as to the conditions existing—and the autopsy findings, confirmatory as they are of our tentative diagnosis, must impress upon us the very great value of this method of reasoning. I left the patient at 10.30 p. m., sleeping quietly. He remained thus until about 12.30 a. m., when he became mildly delirious, muttering, but lying quietly. About ten minutes before his death stertor and Cheyne-Stokes respiration developed, persisting until death. He failed rapidly, and died about 2 a. m., January 22nd.

AUTOPSY BY DR. HARLOW BROOKS.

January 22nd.—The body is that of a large and well-formed male. The abdomen is slightly pendulous, and there is a moderately well-developed panniculus. The pupils are uniformly dilated. The conjunctivæ are pale but not jaundiced. There is a moderate amount of posterior cyanosis. The body is still warm, and rigor is just beginning to become evident. The calvarium is well arched, the bone of even thickness. There is a thin purulent exudate between the dura and the pia, and an exudate of the same character, but more abundant between the pia and the cortex, extending over the entire vertex, but much more abundant at the base, over the cerebellum, and continued down over the medulla and the spinal cord. There are small granulosomatous masses throughout this exudate which have the appearance of miliary tubercles, but the pus of the exudate is characterized by its tenacity and its slightly greenish color, like that seen in cerebrospinal meningitis. The exudate has followed up from the base along the tracts of the vessels, and is particularly abundant along the courses of the Sylvians. The origin of this septic meningitis is not apparent. The internal ears are normal!

The brain is large and well formed. It is fairly symmetrical, and the convolutions and sulci are fairly typical and regular. The symmetry is about the usual. The cortical layer of gray matter is thick and regular. The ventricles are distended with a turbid seropus, and the plexuses are matted with a tenacious septic exudate. The thoracic and abdominal musculature is rather poorly developed. The amount of subcutaneous fat over the abdomen is augmented, but is highly colored as though from recent absorption.

The pleural cavities each contain about 500 cubic centimetres of clear serum. There are a few old strands of adhesions over the base of the left lung; otherwise the pleural cavities are free.

There are about 100 cubic centimetres of serum in the pericardium; otherwise the sac is normal. The heart is large, its cavities are universally contracted, except in the right auricle, which is distended and contains a mixed clot. The epicardium is normal, except for a few old areas of pericarditis. The arch and the coronaries show a moderate degree of atheroma, which has also affected the aortic segments to a slight degree. The other valves of the heart are in a normal condition. Weight of heart about ten ounces.

The tongue is thickly coated. The pharynx is

slightly congested, and the lingual and pharyngeal adenoids are slightly enlarged and injected. The œsophagus is normal.

The transverse arch and the large trunks of the neck show a moderate degree of atheroma.

The thyroid gland is small, its tissue is apparently normal. The thymus is absent. The lymph nodes of the neck are moderately enlarged and show a slight anthracosis.

The larynx and the trachea, as well as the large bronchi, show an anæmic mucosa. The passages contain an abundant secretion of mucus. Both lungs show quite marked cyanosis with congestion and œdema, particularly of the posterior portions, the condition being more marked on the right. The lower portion of the left upper lobe contains one small calcified tubercle.

The peritonæum is covered with an abundant secretion of lymph, and in places there is local congestion of the capillaries, as though peritonitis were developing.

The liver is of about the usual size. The capsule is smooth, but slightly thickened in places. The parenchyma is light brown in color, of about normal consistence, and moderately congested. The gall bladder contains about 50 cubic centimetres of mucoid greenish bile. Weight of liver, about four pounds.

The pancreas is large, its parenchyma is anæmic, and there is no apparent increase in the amount of interstitium.

The stomach is large; it contains a small amount of partly digested chyme. The mucosa is congested, and shows a well advanced atrophic gastritis.

The small intestine throughout contains but little substance. The mucous membrane shows alternating areas of anæmia and injection. There is no enlargement of Peyer's patches. The large intestine is distended with gas, its mucous membrane is anæmic as a rule, but the lower portion of the sigmoid shows a congestion which becomes more marked in the rectum, and is clearly due to thrombosis of some of the hæmorrhoidal veins.

The spleen is enlarged to about six volumes. The substance is soft, deep purple in color, and shows occasional small granulomatous particles having the appearance of recent miliary tubercles. The Malpighian bodies are clearly evident on gross inspection. Weight about twenty ounces.

There is a large amount of retroperitoneal fat, particularly about the kidneys.

The right adrenal body is large, its tissue is congested, and the cortex shows quite frequent patches of fatty degeneration. The left adrenal is completely eroded and is replaced by an abscess cavity, about 4 centimetres by 8 centimetres, filled with thick greenish pus and communicating with a suppurative necrosis of the upper portion of the left kidney. Both kidneys are enlarged to about double the normal. The left is riddled throughout its upper third by abscess cavities, while there are numerous smaller abscesses throughout the entire cortex. The parenchyma is so extensively involved by this suppuration that little can be said of it. The parenchyma of the right kidney shows also some small areas of abscess formation, and a few small infarctions of septic origin. The cortex is swollen

and granular, light in color, and very irregular in distribution. There is a moderate increase in the amount of interstitium, and the vessels are universally congested. The pelvis is dilated and shows a recent pyelitis.

The left ureter shows alternating nodes of dilatation and stenosis which have closed off the lumen of the duct in several places apparently spasmodic, but largely resulting from inflammation. The right ureter is dilated throughout.

The bladder is greatly dilated, so that it reaches to the level of the umbilicus. It contains a turbid urine in which flecks of pus and mucus can be seen. The mucosa shows the results of overdistention, but is inflamed only at the trigone. On exposure to the air the mucous membrane turns from a dirty green color to an intense blue, from the methylene blue previously administered.

The prostate gland is greatly enlarged, and is the seat of multiple abscess cavities, mostly of small size, and communicating with the prostatic urethra and the seminal vesicles which are greatly thickened and infiltrated with pus. The surrounding fat and connective tissue are infiltrated with pus and exudate, and several of the prostatic veins are thrombosed, as are also several of the hæmorrhoidal veins. The abscess walls in the prostate do not appear to be tuberculous, but the pus is very thick and slightly greenish in color.

Cause of Death.—Septic cerebrospinal meningitis, probably complicated by a tuberculous meningitis. Pyonephrosis and abscess of the prostate and seminal vesicles. Thrombosis of the hæmorrhoidal veins. Apparently the course of the disease has been as follows: Originating in abscess of the prostate (the lesions here appearing to be the older), infection of the kidneys through occasional distention of the bladder, and infection through the ureters. Thrombosis of the hæmorrhoidal vessels by continuity with the prostatic abscess, and sepsis resulting in meningitis from this origin.

MICROSCOPIC EXAMINATION.

Heart.—There is a moderate fatty degeneration of the heart muscle cells and a rather abundant deposit of pigment in them. The cell nuclei are for the greater part normal, but occasional eccentric and malformed nuclei are found. The cells of the interstitium show many evidences of recent proliferation, and along some of the capillaries are well defined areas of small round cell infiltration. Some of the lymph spaces contain numerous bacteria, seemingly, mostly, at least colon bacillus, and probably of post mortem development.

Spleen.—The tissue is enormously congested, and most of its cells are gorged with pigment. There are frequent patches of infiltration as if from the formation of minute abscesses.

Kidneys.—The parenchyma cells are very extensively degenerated throughout the cortical portions. Most of the convoluted tubules are distended and filled with detritus and broken down cells, many contain granular and epithelial casts. The blood vessels are generally congested and there is a general œdematous condition of the interstitium, which is moderately augmented. The abscess cavities are surrounded by partly formed capsules of connec-

tive tissue; in this poorly formed layer are frequent poorly formed giant cells, in which the radial distribution of nuclei is not evident. The cells filling the abscess cavities are mostly multinuclear pus corpuscles, the cytoplasm of a few of which encloses large diplococci, like either the gonococcus or meningococcus. There are no evidences of tuberculosis, but I do not think that the process is purely a septic one, for it has been of long standing, and is very likely more or less dependent on specific disease.

Meningeal Exudate.—The exudate is made up of a large amount of fibrin and of pus cells. The fibrin is so abundant as to make the exudate an unusually firm one. Numerous bacteria are seen in this exudate, some without and some within the pus cells. A large diplococcus—probably Weichselbaum's meningococcus—is quite frequently found in the cell cytoplasm, but other bacteria predominate outside the cells. In addition, the membranes of both cord and brain show a general fibroid thickening and contain many small corpora amylacea. These changes also extend into the brain and cord, so that the corpora amylacea are frequently seen throughout the gray and white matter, but most often in the white matter. This process of meningitis and myelitis is evidently of some weeks' standing, and the acute infection was probably grafted upon the old disease.

Prostate.—The gland shows the general changes following a suppurative prostatitis of considerable standing. Tubercles are entirely absent. Corpora amylacea are numerous, and most of the acini of the gland show infiltration with pus.

Adrenal.—The left adrenal body is almost completely removed by the necrosis resulting from the infiltration of the abscess into its tissue, only a few occasional groups of adrenal cells are found. No evidences of tuberculosis.

A careful study of the above reported case will impress upon us the following facts of importance:

1. That extensive meningitis can exist without giving rise to its characteristic and usual symptoms.
2. That sepsis does not always cause changes in pulse and temperature, and that their being normal does not warrant our excluding this condition.
3. That a spasmodic and complete occlusion of the ureter, which is not due to impaction of renal calculi, may last for some time and thus prevent the detection of extensive pyonephrosis.
4. That myosis and salivary suppression may be the first symptoms of meningitis or myelitis.

(Corroborative of this is a case which I saw in consultation with Dr. L. Neumann, of New York, some time after the death of Mr. H. Unfortunately I can give but a mere outline of the history as the bedside notes have been lost, and I am thus forced to confine myself to the report, given from memory, by Dr. Neumann.

The patient, a young married woman, who had been under the care of the doctor for some months, suffering from pulmonary phthisis, was suddenly

stricken with an acute lobar pneumonia, of particularly virulent type, rapidly involving the whole of both lungs with the exception of the middle lobe. On the sixth day, when summoned in consultation, I found the patient doing nicely, so far as the pneumonia was concerned, with excellent heart action, and extensive areas of resolution. There was, however, considerable abdominal tenderness, with rigidity and extreme distention, and signs of a peritonitis, probably of diplococcic infection.

The pupils were very much contracted, giving hardly any response to light, and there was almost entire suppression of the salivary secretion. No opium or other drug capable of producing these symptoms had been given, and, having in mind the case before reported. I was led to suspect that the meninges had become involved from invasion by the *Diplococcus pneumoniae*—a meningitis.

The patient gradually developed the characteristic symptoms, headache, delirium, rigidity, opisthotonus, muscular spasms, etc., and was a classical picture of the disease when I saw her for the second time, four days after my first visit. At this time the lungs had almost entirely cleared, there being but few small areas of incomplete resolution in one upper lobe. Ten days later, when I saw the patient for the third time, all evidences of the pneumonia had disappeared; the meningeal affection was on the decline, although still in evidence, but a persistent intestinal paralysis, which had baffled all efforts to control it, both by drugs (eserine, atropine in large doses, strychnine, etc.) and mechanical measures (enteroclysis, massage), had brought her to a very precarious condition, in which she succumbed a few days later. Although every effort was made autopsy was refused. The case was, however, so classical, that there can be no doubt as to the correctness of the diagnosis.)

5. That reasoning by exclusion will enable us to arrive at diagnoses, otherwise impossible of attainment.

153 WEST SEVENTY-SIXTH STREET.

SARCOMA OF THE FEMUR FOLLOWING TRAUMATISM: AMPUTATION AT THE HIP JOINT BY WYETH'S METHOD.

By GEORGE S. BROWN, M. D.

CONWAY, ARKANSAS.

The patient, a woman, aged eighteen years, on August 1, 1902, was kicked on the right knee by a cow. The swelling which resulted from the contusion subsided, but about four weeks later a deep-seated enlargement of the bone and periosteum was evident. This continued to grow with increasing rapidity, and on February 18, 1903, disarticulation at the hip joint was successfully performed. The patient's condition was not so favorable as could have been desired, as, two weeks before, she had been delivered of a seven months' child.

In order to forestall shock, three hours before the operation, the patient being in the knee-chest posture, about two quarts of warm normal salt solution were injected into the large bowel, and this was repeated after the amputation was completed. There

was no shock and the patient made an uninterrupted recovery.

Professor Wyeth's method of hæmostasis was employed and was entirely successful, as there was no bleeding, and disarticulation was accomplished and the vessels secured with the tourniquet still in position. The rubber tubing was only loosened for a moment before applying the sutures, in order to demonstrate that no important vessels had been overlooked.

THE SURGICAL TREATMENT OF ASCITES OF HEPATIC CIRRHOSIS WITH REPORT OF A CASE.*

By L. W. PEARSON, M. D.,
BROOKLYN.

Mr. President and Gentlemen:

The case I now report was referred to me by Dr. H. N. Read. I am indebted to him for a very excellent history of the case, the essential features of which I shall now give.

Mr. N., aged thirty years, consulted Dr. H. N. Read, November 23, 1902, stating that two years previously he had experienced severe pain in the liver region, followed by jaundice. It was thought to be due to gallstones. He has never been quite well since. On November 19, 1902, he drank some federweise, and soon afterward had severe pain in the epigastric region near the liver, with vomiting. Four days later he was seen by Dr. Read. He was then yellow, weak, dyspnoic, and had little or no pain. His temperature was 100° F., pulse 90, respirations 30. The tongue was brown and foul; he was quite nauseated. The gums and lips bled easily. Many bruises and ecchymotic patches presented on the body and limbs. The abdomen was much distended with ascites. The heart was displaced upward and to the left. The chest was 37 inches in circumference, the abdomen at the umbilicus, 50 inches.

The liver was markedly enlarged; the left lobe overcapping the stomach and spleen; no œdema of feet or legs. Bowels constipated; urine scanty, high colored, loaded with urates, and biliary pigments, and traces of albumin were present. Sp. gr. 1028, no casts. Constant spitting of blood; but no hæmatemesis, the blood probably coming from the oral cavity. Patient admitted using alcohol freely. A diagnosis of hypertrophic hepatic cirrhosis was made, and an unfavorable prognosis given. Appropriate treatment was instituted. The patient could not be restrained from an excessive indulgence in alcohol.

December 13th.—The patient's condition became alarming, and Dr. I. Fuhs and I were called in consultation. I saw the patient December 13th. He presented marked mental hebetude. The abdomen was greatly distended by an enlarged and easily palpable liver, and ascitic fluid. His general condition was extremely unfavorable. Talma's operation was suggested, and was decided upon, but with little enthusiasm.

December 14th.—With the assistance of Dr. H. N. Read, Dr. J. J. Sheehy, and Dr. L. Read, the operation was performed. The incision was made parallel to the right costal margin, and about four inches long. Several gallons of ascitic fluid were evacuated. The hand in the abdomen found the liver to be typically hobnailed, and enormous in proportions. It extended nearly to the umbilicus and right iliac crest on the right side; and much overlapped the stomach from the left lobe. The peritonæum gave no evidence of a chronic peritonitis or hepatitis. Friction with sterile pieces of gauze was effected over the liver, the lower surface of the diaphragm, and the parietal peritonæum adjacent to the liver. Two kangaroo sutures attached the liver to the anterior abdominal wall, and five other sutures of the same material were used to appose the omentum to the parietes. The condition of the patient was too critical to pay any attention to the spleen. The wound was closed with silkworm gut, by the cross suture, as taught me by Dr. Fowler, and without drainage. Broad strips of adhesive plaster encircling the abdomen from the xiphoid appendix to the umbilicus held in place a dressing of sterile gauze. Over this, cotton batting was placed and secured by an ordinary binder. During the operation hypodermics of strychnine and brandy were used to combat marked cardiac weakness. The pulse became stronger, and was fairly good when the patient was taken from the table. I was forced to leave town the following night and did not see the patient again; but was informed that he was more or less comatose, and never regained entire consciousness. He died at the end of the second day.

Thus ended my first and only personal experience in the surgical treatment of this desperate malady. It recalls to mind how many other cases have been operated upon after the time to offer surgical relief has passed. And it creates a mortality that unjustly condemns a procedure that should be judged under fairer conditions.

For a long period of time the *Caput Medusæ* has been observed, and known to be of diagnostic value in hepatic cirrhosis. It is an attempt on the part of Nature to assist the impaired venous communication between the portal and systemic circulations. Such a phenomenon is sufficient to direct attention to the subject of inducing a more elaborate and adequate collateral circulation.

In 1877, Eck performed a series of experiments with this object in view. He anæsthetized a dog and made a fistula between the portal vein and inferior vena cava, thus cutting off the supply of portal blood from the liver. Experiments were performed on eight animals; seven died within a week, the other lived over two months and was lost sight of. In 1892, Hahn, Pawlow, Massen and Wencki resumed the experimental study of the Eck fistula, and at greater length. Sixty dogs were operated on, of which about forty died of wound complica-

* Read before the Brooklyn Surgical Society, March 5, 1903.

tions. Among these thrombosis is mentioned. And these experimenters learned that, to avoid this, the wound in the vein, in making the intervenous communication, must be not less than one inch and a half long. First, through the Eck fistula all the blood in the portal vein was directed into the vena cava ascendens; then the hepatic artery was tied, practically shutting off the liver from its functions (I say practically, because the liver still receives blood through collateral branches), and still the animals survived for awhile. During this time they passed through a stage of nervous excitement. Those that survived this stage exhibited marked nervous manifestations and symptoms of toxicity when fed on a rich meat diet, or on one containing salts of ammonium or carbamic acid. All finally died. The formation of bile for the economy is not the essential function of the liver; nor are the nervous symptoms resulting from these experiments thus to be accounted for, since the bile has been directed through fistulæ outside the body without untoward effects. In the urine of dogs in which the portal and hepatic blood supply was prevented from entering the liver, was found a large proportion of carbamic acid, and experiments proved that this was converted by the liver into urea. Analysis of the blood in the portal vein has shown that ammonium salts are three or four times more abundant than in arterial blood; but when the blood is returned to the general circulation without passing through the liver, the amount of contained ammonia increases in the arterial vessels until it attains the percentage in the portal vein, upon which the animal dies. However, when the circulation is normal, the blood enters the liver through the portal vein rich in ammonium salts, and leaving the liver through the hepatic veins, it is relatively poor in ammonia, but richer in urea. This, conveyed to the kidneys, is there separated from the blood, and voided from the economy. The source of this rich supply of ammonia is believed to be "chiefly from decomposition of proteid material in the glands of the stomach and pancreas during secretion." Transmitted at once to the liver it is converted into a substance that is readily voided by the kidneys. It is probably to the lack of this hepatogenous function that we can attribute the nervous symptoms before mentioned in the experiments of Hahn, Eck, and others. And if this is so, it affords a ready explanation of the nervous symptoms frequently present in advanced cases of hepatic cirrhosis. In the light of these studies I believe there are two factors contributing to produce death in hepatic cirrhosis; one being entirely mechanical, the other consisting of the ammoniacal toxine circulating in the system, unacted upon by the liver.

We shall very briefly consider some points in the former.

Liver cells are very soft in consistency, and are held in place by a firmer material—connective tissue fibres. Where the portal vein courses these fibres are much more abundant. The hepatic artery is likewise encircled by them, but more scantily. As cirrhosis begins and develops, these fibres multiply. Soon, both by increase in the mass of fibres as well as by their contraction, the lumen of the portal vein is encroached upon. Changes in the intima lessen still further their capacity. The first effect of this obstruction is to increase the collateral circulation between the hepatic and systemic veins. But the mechanical interference increases; interlobular veins become obstructed and obliterated; the resistance to the blood flow becomes considerable; the volume sent to the liver can no longer pass through the narrowed channels, but dams back; and those changes are effected which permit of the development of ascites. Ascites, if not in some way arrested, kills by exhaustion and in other ways; and this is no doubt one cause of death. But Lange, in an *Inaugural Dissertation* at Kiel, in 1888, reported that of fifty-six persons dying of cirrhosis, 65.6 per cent. had no ascites! Perhaps some died, not of cirrhosis, but of complicating diseases, and the cirrhosis had not advanced sufficiently to induce ascites. Still, there are cases of deaths attributable to cirrhosis in which no ascites existed; and others in which the ascites had been cured and yet the patient died, no adequate cause other than changes in the liver being found. So we are forced to seek another cause of death. The studies of Hahn and his associates throw much light on the subject. The pathological changes induced by circulating alcohols or other causative poisons, consisted in part, as we have stated, in an increase and subsequent contraction of the connective tissue about the blood vessels in the liver. Connective tissue fibres also surround the hepatic lobules, and even the liver cells; and though much less dense than about the portal radicles, their increase and subsequent contraction in conjunction with the blighting influence of circulating toxines, and an impoverished circulation succeed in destroying the liver cells. With the destruction of a sufficient amount of hepatic parenchyma, too large a proportion of ammonium salts is unconverted by the liver cells into urea, and nervous symptoms supervene. These symptoms arise earlier in the course of the disease when meats are largely partaken of. And, with a more extensive pathological change in the liver cells, poisons accumulate sufficiently to induce death. The pathological changes enumerated in preceding paragraphs, while to some extent

invariably present, are separately not uniform in the rate of their development. In some cases the changes producing mechanical obstruction are the more rapid, and consequently need relief; while in others, the destruction of liver cells is the more advanced, and causes death before changes sufficient to result in ascites are established; or these conditions act conjointly, each having progressed far enough to play a part. And by one of these means, I believe all deaths caused by hepatic cirrhosis are induced.

Talma, of Utrecht, with Eck's experiments for consideration, and from observing new collateral channels of circulation obtained at autopsies of persons having had hepatic cirrhosis, conceived the idea of devising an operation for the artificial production of new vessels to assist the normal collateral circulation.

Drummond and Morrison, of England, unacquainted with Talma's work, a little later conceived a similar idea, and chiefly from autopsical observations which I shall briefly review later on. None of these pioneers expected to do more than relieve the mechanical obstruction; though something more was accomplished. With the development of cirrhosis new blood vessels are formed in the fibrous bands intersecting the liver. These vessels are from the hepatic artery, and partly serve to reinforce a set of capillaries given off from this same artery which go to the surface of the liver and there form plexuses. With a formation of new blood vessels connecting with those on the hepatic periphery, the capillary branches of the hepatic artery can enlarge, affording a new blood supply to the liver. This may be of great moment; and if accomplished in time will serve a twofold purpose: that of conveying an additional supply of blood to the liver, to be acted upon by the liver cells; and, by furnishing a better blood-supply, to make possible the formation of new hepatic cells. For A. G. Nichols tells us that the liver possesses the power of reproducing "its specific secreting elements and blood vessels in a striking degree." These, however, he declares, are possessed in cases of various degenerative processes, as cirrhosis, as well as in losses of substance from traumatic causes; and he quotes Ponfick and Von Meister to the effect that from one half to three quarters of the liver can be removed, and, though the original shape is not reproduced, liver tissue is reproduced that serves adequately in its stead. A knowledge of this fact, I think, may increase our expectations of benefit in Talma's operation.

The first operation performed upon man for the purpose of increasing the collateral circulation between the hepatic and systemic circulations was done

by Van der Meulen, in 1889, for Talma. The patient died within a few hours of shock.

Schelkey, in 1891, was the second to operate. This, too, as also the following operation, was done for Talma. Schelkey's patient died of sepsis.

Lens, in 1892, followed. His patient recovered from the operation, but died twenty-two weeks later from a recurrence of the disease.

Some six or seven years later, Tillman, under the influence of Talma's inspiration, conducted a series of experiments upon dogs. In one set of animals he did a laparotomy and irritated the peritonæum over the liver, spleen, and parietes apposed to them, setting up a collateral circulation. Later, he opened the abdomen again, and ligated the portal and mesenteric veins; these animals lived. In another series of animals he ligated these veins without previously inducing a collateral circulation, with the result that they all died. He has thus given us new proof of the possibility of establishing an efficient circulation between the liver and general system without the use of the portal vein.

Drummond and Morrison were led to devise an operation for the relief of ascites for the following reasons, which I shall give almost in their very words: Drummond observed in a series of post mortem observations of hepatic cirrhosis without ascites the existence in many cases of vascular adhesions connecting the parietes with the viscera. In one of these, the patient was known to have had cirrhosis for nearly twenty years, and yet he died of other causes. In many of these cases a direct and ample communication existed between the portal and systemic veins, and this, they believed, accounted for the absence of ascites. They thought that, while occasionally an enlargement of the natural anastomotic vessels sufficed to prevent ascites, generally, an accessory collateral circulation was needed.

Morrison removed an ovarian cyst the pedicle of which had been twisted for three days, and in that brief time there had developed a sufficient number of new vessels between the tumor and the omentum to carry on a sufficient circulation in the tumor. He observed at other times that new vessels of large size developed in omentum adherent to new growths. Believing in the theory of the mechanical cause of ascites, in view of the observations just enumerated, Drummond and Morrison thought the establishment of an abundant accessory collateral circulation would cure the ascites of hepatic cirrhosis, and would thus remove one of the chief causes of death in this disease. They gave the normal collateral circulation between the portal and systemic circulations from Sappey's *Anatomy*, as follows: "Sappey demonstrated the existence of veins running in the subperitoneal tissues lying between the folds

of the hepatic ligament connecting the portal trunk with the phrenic vein, and vena azygos major. Another "large vein running in the round ligament, and connecting the left branch of the portal with the epigastric, and other veins in the abdominal parietes." These veins, ordinarily small, say Drummond and Morrison, gradually increase in size and number when the portal vein is obstructed, and many of them penetrate the capsule of the liver. "The coronary veins communicate with both azygos veins through the œsophogcal plexus; and the inferior mesenteric with the internal iliac by means of the inferior and middle hæmorrhoidal plexuses." "The pancreatic veins also communicate with, and can empty themselves into, the retro-peritoneal branches." These, continue Drummond and Morrison, are the ordinary channels of communication; when adhesions form between parietes and viscera, innumerable new vessels develop and assist this circulation.

Austin Flint wrote that "The conservative effect of compensatory development of veins communicating with the two circulations is shown by the fact that examples of great enlargement of vessels upon the abdomen may be observed in patients who are free from dropsy, notwithstanding a notable amount of cirrhosis."

Morrison operated upon a patient in October, 1895: the patient recovered and enjoyed good health for two years. In 1897 she presented herself again to be cured of a ventral hernia. She was operated upon for this, and died in coma on the second day. "At the post-mortem he removed abdominal viscera and parietes, except the skin, *en masse*." The specimen proved an interesting one. "The liver, spleen, and intestines were attached to the parietes by numerous band-like adhesions. Many seemed to consist of but little except a blood vessel. Several of these vessels were four inches long. Many of them were fully the size of the radial artery." And this was the first case cured by operative means. Morrison operated in a case of ascites, in 1894, but the diagnosis of cirrhosis was not verified when the abdomen was opened. This patient died; and the failure to cure whatever it was, has been counted against Talma's procedure for hepatic cirrhosis. As an example of what the operation can accomplish I shall give a brief history of Drummond and Morrison's first successful case.

A woman, thirty-nine years of age; alcoholic; ill early in 1895. Shortly after Easter she noticed the abdomen was swollen. About the middle of July she was tapped, and one gallon of fluid withdrawn; first week of August she was again tapped, two gallons and one quart being evacuated. By the end

of August two gallons and one quart were obtained; and late in September, two gallons and a half. On October 18th the patient was now very feeble, emaciated, and had to be propped up in bed. The legs were œdematous; the abdomen enormously distended; the skin full of fluid; and again she was tapped. The operation was performed on October 22, 1895. On opening the abdomen the liver was found to be typically cirrhotic. An opening for purposes of drainage was made just above the pubes; a glass tube passed through here, the lower end in the pelvis. By the end of three weeks fluid ceased to escape, and it was withdrawn. "The wound healed at once, and the patient went home. She soon regained her health, led an active, busy life, and got stout."

The steps of the operation as performed by Morrison are as follows: The abdomen is made as aseptic as possible. An incision is made midway between the ensiform cartilage and umbilicus; the finger is inserted for diagnostic purposes; the incision is extended from the xiphoid appendix to the umbilicus. Another incision is made three inches above the umbilicus, and large enough to admit a glass drainage tube into the rectovesical pouch. After drying the abdominal cavity the anterior surface of the liver, spleen, exposed coils of intestine, and the parietal peritonæum adjacent are firmly sponged. The omentum is now widely sutured to the anterior abdominal wall, and the wound above the umbilicus closed. A glass drainage tube is inserted in the opening above the symphysis, and the wound closed about it. Dressings are applied, and over them, long, wide strips of adhesive plaster, encircling the abdomen from the xiphoid appendix to the drainage tube. In the after treatment, the nurse was ordered to keep the drainage tube dry by frequently emptying it with a pump.

Infection having occurred in a subsequent case on account of drainage, it has been advised to close the wound entirely, and if fluid reaccumulates, to remove it by tapping. In very weak patients with an abundant accumulation of fluid, it would perhaps be better not to remove all the fluid, but to hasten the operation, and remove it subsequently by tapping. Much valuable time may be saved in this way. I think most of you will also agree with me in not applying irritation to the intestines, depending upon the liver, spleen, and omentum to furnish an adequate supply of new vessels. The incision has been modified by some operators; being made by some in the linea semilunaris or thereabouts, and by others, parallel to and near the right costal margin. Nor has even the suturing of the epiploon remained unchanged. The modifications consist in placing it between the peritonæum and abdominal muscles; by others, between the abdominal muscles and the integument and tissues immediately subjacent; and

in merely suturing it to the edge of the wound. The autopsical findings in Morrison's first successful case would seem to teach that suturing the epiploon to the anterior abdominal wall would suffice; the only point of consequence being that it should be sutured over a sufficiently wide area.

The suturing material, like the suturing, must needs to be varied to suit the caprice or experimental tendency of the operator. Silk, catgut, and kangaroo tendon have each been used. One operator transfixed the entire anterior abdominal wall in the suture had held the omentum to the parietal peritonæum. I confess to a liking for kangaroo tendon; as it is less likely to be too quickly softened and absorbed by the moisture of the abdomen, but is unlike silk, which is not absorbed at all. These comprise all the steps and variations of importance in the operation.

As to the anæsthetic, chloroform, ether, and cocaine by infiltration, have been tried. In one case cocaine proved unsatisfactory after the peritonæum was arrived at, and a general anæsthetic was then administered.

While preparing this paper I intended tabulating all the cases hitherto published; but was discouraged from such an undertaking by the meagreness of the details in so many of the reports. Another factor tending to lessen the value of such compilation in the cases reported, is the uncertainty of the disease causing death. Some of the patients were almost moribund at the time of operation, and were suffering from diseases other than hepatic cirrhosis, which perhaps were sufficiently grave, with the added shock of a laparotomy, to induce a fatal termination. Other patients were operated upon in whom the ascites was not due to hepatic cirrhosis at all.

Dr. Greenough, of Boston, has attempted a summary. The results, as nearly as he could classify them under the circumstances, are in 115 cases: 29.5 per cent. died; 40 per cent. were improved; 31.5 per cent. were not improved.

I am in hopes that a sufficient number of men, who are at the same time good surgeons and careful reporters, will do enough work in this line to give us a fair idea of what we may expect.

One fact is assured—the operation will often cure ascites. Yet some of these patients will die of hepatic cirrhosis in spite of the cure of the ascites.

Work already performed has taught us that Talma's operation will not always restore to apparently good health patients suffering with hepatic cirrhosis. Now, it remains to be ascertained, what patients suffering with this dread malady can be benefited. With some, epiploplexy will be performed only as a last resort, and consequently will be dis-

appointing; such has already been the case. Such operations do not form a fair test of the efficacy of a procedure. It is a fair test as to the limits of the good to be derived; but not a fair test as to whether good can be derived. Each case should be studied of itself. Consider the coexisting diseases and their stages; consider the amount of liver destruction as nearly as possible, by studying the duration of the disease, the cause, and the symptomatology; forgetting neither the hopelessness of doing nothing, nor the evil repute conferred upon a procedure by operating *in extremis*.

The pathology of the disease, and the experiments and observations upon collateral circulation, are such as to make me hopeful that some percentage of cases may be permanently benefited, and I hope future clinical facts will be more cheering than those already chronicled.

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OPERATION IN A CASE OF EXTRADURAL HÆMORRHAGE THE RESULT OF WHOOPING COUGH.*

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Extradural hæmorrhage, in nearly all instances, occurs as the result of injury to either the anterior or posterior branch of the middle meningeal artery. The common causes are blows, gun-shot, stab, and surgical wounds. It is also caused, in rare instances, by the violence of the paroxysms of whooping cough. The textbooks are somewhat meagre of information on this last cause. They all mention it briefly, but usually in a way that leads one to suspect that the writers had had no personal experience with the complication and were at best but little interested in the matter. Only two, indeed, that I can find say anything worth mentioning about it. Holt says that the hæmorrhage is always extradural and that in nearly all cases recovery takes place. He gives no statistics, however, and does not say whether sequelæ, such as paralyses, convulsions, or other brain symptoms are common or not. I have heard of two cases in the short time I have been interested in the subject, in which complete recovery did not occur: one patient being at present the subject of epilepsy, and the other's brain impaired in some other way. From the three cases that have thus fallen under my knowledge, I am impressed with the idea that the accident may not be so rare or so harmless as the books seem to imply. Charles W. Townsend, writing in the old edition of the *Reference Hand Book*, says "of twelve cases of cerebral hæmorrhage due to whooping cough, reported by twelve different observers—five were fatal and seven recovered. Unfortunately cases of recovery are more often reported than fatal cases, a fact which negatives any value of the list for statistical purposes." This article does not say whether the seven patients recovered completely or not. In this list of twelve cases all are supposedly cases of rupture of the middle meningeal artery, though in another place I found mention of an autopsy where punctate hæmorrhages in the brain substance were found as the cause of convulsions and death following whooping cough. Other autopsies have shown effusions under and between the membranes in patients that have died from the convulsions of whooping cough. Intracranial hæmorrhage may be from the cerebral arteries, in which case it is submeningeal or subdural as the case may be, or it may be from the middle meningeal artery, in which case it is extradural or subcranial. The middle meningeal artery, the one most often ruptured, en-

More Power to the Illinois Board of Health.—A bill has been recently passed in the legislature of the State of Illinois giving additional power to the board of health and imposing on that board the duty of enforcing systems of sanitary ventilation in practically all buildings with the exception of single private residences and private offices.

* Read before the Alabama State Medical Association, April, 1903.

ters the skull through the foramen spinosum, being a branch of the internal maxillary, and quickly divides into the anterior and posterior branches. From its situation under a much exposed portion of the skull it is easily seen why the anterior branch is most often the source of the bleeding in cases of injury. Why it is also always the source of the hæmorrhage in whooping cough is not easily explained.

The symptoms of intracranial hæmorrhage are those of pressure. They differ from the symptoms of the pressure caused by a depressed bone by always showing an interval, a period of normal consciousness, between the reception of the injury and the onset of the symptoms. When a bone is depressed the symptoms ensue immediately.

The symptoms of hæmorrhage from the middle meningeal artery are gradually deepening somnolence, tending toward coma and death. There are also, as a rule, pain, paralyses, and convulsions; one or two or all, according to the size and location of the clot. Convulsions due to pressure occur, as a rule, only in children, and are not to be confused with the convulsions caused by the poison or the effusions due to the whooping cough *per se*; the latter, of course, are not accompanied by paralysis.

The case I have to report is that of a patient whose history is as follows:

A. C., aged seven, white, a healthy boy, had had whooping cough for four weeks, the paroxysms of which had been pronounced but had not been regarded as severe, when on Sunday, February 8, 1903, he complained of pain in his head and was noticed to be irritable and impatient. Sunday and Sunday night he complained at intervals a great deal. Monday morning, February 10th, a doctor was called in, but did nothing as the child was asleep when he called. At midday the writer was called and found the patient suffering intensely from a pain in the right temple, the seat of the pain being indicated at about one inch from the external angle of the orbit. The pain was so severe as to suggest even then that a blood vessel might have been ruptured, particularly as there was then a sufficient degree of somnolence to arouse suspicion. Morphine was given to relieve pain and nothing further was heard from him until the next morning (Tuesday) at three o'clock, when, being sent for hurriedly, I found him in great pain, somnolent, semi-delirious, pulse slow, temperature 103° F., and with the left arm completely paralyzed. A hypodermic of morphine again quieted him until ten o'clock in the forenoon, when he was given another. At three o'clock the same afternoon he had a slight convulsion, thought by the patient's father to have been confined to the left side. At this time Dr. Parke and Dr. Berry were called in consultation, and I presented for their consideration the advisability of operating in case the symptoms of intracranial hæmorrhage did not abate or became more pronounced. Our consultation

resulted in a decision to have the patient moved to my private hospital and to hold another consultation at nine o'clock that evening. This was done, and at nine p. m. his condition was about the same, except that he had had no more convulsions and the somnolence had increased. The agonizing pain continued, very much aggravated by the severe attacks of coughing, for which he was given $\frac{1}{12}$ grain of heroine hydrochloride every four hours. Owing to lack of precedent in such cases, it was again decided to postpone operative intervention until morning, or until the symptoms demanded it more urgently. Notwithstanding his almost narcotized condition from the heroine, at twelve o'clock he had a very severe left-sided convulsion, which was followed within the hour by two more, each one more prolonged and severe than the last. As his condition was alarming, and as it seemed clear that he was suffering from the effects of a clot in the right motor area of the cortex, it was quickly agreed that operation was urgent. He was accordingly put under the influence of ether and removed to the operating room. The head was entirely shaved and cleaned. It will be remembered that the Rolandic fissure begins, according to Thane (Treves) at a point half an inch behind a point midway between the glabella and the external occipital protuberance. It then runs a course at an angle with the longitudinal fissure of about sixty-seven degrees, downward and forward for an average length of three inches and three eighths. In children the angle is said to be smaller, varying from 52 to 67 degrees. Taking into consideration the differences in the shapes and sizes of skulls and the variation in the angle made by the fissure of Rolando with the longitudinal fissure, it would seem to be a fairly safe thing to risk locating it without the use of the cyrtometer, which we did not have and did not have time to improvise. After locating the upper end of the fissure after the manner mentioned above, we turned down a flap well above the temporal region and applied the trephine one inch above and in front of the parietal prominence. This compromise location was made with the view of following the course of the trunk of the artery in case we failed to find the clot in the motor area. This was a mistake, and was a part of our general unpreparedness, of late, for work in this field of surgery. After following the trunk of the artery a short distance on account of a suspiciously collapsed condition, due, we afterward found, to the bulging of the membranes causing the edge of the bone to press upon it, I returned to my original intention of heeding nothing but the symptom of the arm paralysis as the indication to be followed, and extended the bone opening upward toward the middle of the Rolandic area as nearly as we could approximate by the eye. We failed to find anything and then made a small opening in the dura with a like result. The child's condition not being favorable for a further search, and hoping that the removal of the bone would relieve the pressure and the symptoms, he was returned to his bed. The next day the symptoms were all better except the paralysis; the temperature was normal, the pulse quicker, and the somnolence was entirely gone. The patient was bright and talkative. The second day he was not so well,

but the principal trouble seemed to be the violence of the coughing. On the early morning of the 13th (forty-eight hours after the operation) he had three more hard convulsions in quick succession. As I had never been satisfied with the negative results of the first operation, the operating room had been kept in readiness for an emergency of this kind, so the patient was at once taken there and with the help of one assistant, the wound was reopened. The wound seemed clean. The organizing clot on the dura was removed and another small button of bone removed from further up toward the median line of the head. Again finding nothing, the dura was opened to the extent of one inch with a like result. It was then immediately sutured. Upon then cutting away a small corner of bone from the last trephine wound with the rongeur, a small clot of blood, the size of a white bean, was found. Owing to the small size of this clot, it was thought at first that it might have been left there by the first operation. So fearing still that we had perhaps not found and relieved the trouble, the wound was reclosed without replacing the bone fragments and with a small catgut drain. The wound healed primarily, I may say now, which was hardly to be expected after the reopening. The patient moved his arm within an hour after being returned to his bed, and it was as strong as ever in two days. He had no further symptom except the cough (which was controlled in part by the administration of heroine and entirely disappeared in about ten days). The patient was sent home well ten days after the first operation, and in another week was out at play.

Had the clot been found at the first operation I should have replaced the bone fragments and the result would have been ideal. As it is, the defect in the skull is somewhat larger than it should have been, but, as chance and hurried operations of this kind are often attended with the results of inaccuracies of judgment and detail, we have to be content with the good *general* result and the security, I think, that the defect in the bone will, in a few years, be about obliterated. The defect, as now felt through the scalp, is about one inch wide at its widest part and two inches long, and over it he wears a hard rubber protector sewed into his cap.

I have been unable to find (after a somewhat limited search it is true) any account or hint of a similar operation anywhere in the literature of whooping cough or cerebral surgery. I believe the accident is not actually uncommon and it seems strange that operative relief has not been attempted before, particularly when such operations are so very often demanded and performed for traumatism. Such operations for injury often prove fatal, or rather are followed by death the result of the accident, while operations for the hæmorrhage of whooping cough ought to cure in every case.

I should be very grateful for information of any other work in this line.

Therapeutical Notes.

An Eye-Wash.—The *New Orleans Medical and Surgical Journal* for April says that one of the best eye-washes is the borax-boracic, the well-known "B. and C.," made after the following formula:

℞ Sodium bichlorate..... } of each 10 grains;
Boric acid..... }
Camphor water.....1 drachm;
Water to.....1 ounce.

S. Drop in eyes *ad libitum*.

This is pleasant and cooling, and is indicated in cases of conjunctival hyperæmia or mild catarrh. It makes an excellent mildly astringent detergent, free from irritating properties, for use after operations on the eye, and has the great advantage of doing no harm when it cannot do good, a property unfortunately not possessed by many of the applications too often made use of when diagnosis is uncertain. It may be instilled with a dropper or used in an eye cup.

For the Fever of Acute Diseases.—Bocquillon-Limousin (*Formulaire des médicaments nouveaux*, 1902) gives the following:

℞ Basicin.....5 parts;
Chloroform.....37.5 parts;
Alcohol.....12.5 parts;
Olive oil.....45 parts.

M. To be used in frictions three or four times daily.

[Basicin is a preparation containing two parts of quinine and one part of free caffeine.]

Apocodeine in Constipation.—According to Bocquillon-Limousin (*Formulaire des médicaments nouveaux*, 1902), Combemale finds the following administered by hypodermic injection, useful in functional constipation:

℞ Apocodeine hydrochloride....50 centigrammes (7½ grains);
Sterilized water.....50 grammes (12½ drachms).

M. The quantity injected is usually 2 cubic centimetres (about 15 minims).

For Acute Infection of the Digestive Organs in Nurslings.—Perier (*Revue française de médecine et de chirurgie*, March 23rd) recommends the following treatment:

1. Suspend all milk (breast or bottle) and give a corresponding quantity of pure or boiled water, rice or barley water, etc. Milk must only gradually be resorted to again as improvement takes place.

2. Every two hours the following mixture in teaspoonful doses for a child under three months, and in dessertspoonful doses above that age.

℞ Benzonaphthol....from 0.30 to 0.50 gramme (4½ to 7½ grains);
Bismuth salicylate...from 0.50 to 1.00 gramme (7½ to 15 grains);
Syrup of orange flowers....30 grammes (1 ounce);
Gum water.....90 grammes (3 ounces).

M. ft. mist.

3. If the stools are fœtid, infrequent, and with tympanites, the following must be given from the outset:

℞ Calomel....0.05 to 0.10 gramme (¾ to 1½ grains);
Sugar of milk.....0.10 gramme (1½ grain).

M. ft. pulv.

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YELLOW FEVER AND THE PANAMA CANAL.

We are indebted to an English physician, Dr. Louis W. Sambon, for a copy of a notable paper read before the Epidemiological Society of London on February 25th, entitled *The Relation of the Panama Canal to the Introduction of Yellow Fever into Asia*, by Dr. Patrick Manson, who for many years past, as the medical world well knows, has been adding materially to our knowledge of the causes and modes of diffusion of epidemic and endemic diseases. Dr. Manson foresees that the opening of the Panama canal will provide the first comparatively short line of communication between the yellow fever area of America and the Orient, and he confidently predicts that the disease will promptly be conveyed to Asia, where it has never before existed, unless special precautions are taken to prevent such a catastrophe. With his usual clearness of vision, Dr. Manson accepts without reserve the mosquito theory of the conveyance of the disease; while he admits that some details of the theory still remain to be worked out, he pertinently asks if one would wait to master the chemistry of combustion before calling in the fire department in case his house was on fire.

A man might be bitten by an infected stegomyia in Rio de Janeiro, he says, go on board a fast steamer the same day, and reach New Orleans before he had ceased to be infective; or a man might be bitten by an infected stegomyia in Havana and land in New Orleans before he had shown any clinical evidence of infection. But a like occurrence would be impossible in the case of a person with yellow fever infection contracted in America who subsequently landed in Asia: his infectivity

would have disappeared weeks before he landed. "There is no danger, therefore, in shipping yellow fever at Panama, and no necessity for quarantine measures directed against yellow fever patients shipped for Asia, *on one condition*. This condition, however, is all-important. There must be no mosquito on board the ship in which the yellow fever patient travels—no mosquito to keep up and transmit infection, whether to fellow passengers or to the inhabitants of the Asiatic port of destination." Moreover, "independently of yellow fever patients shipped in America, the mosquito may come on board already infected. * * * * * Such a mosquito might very well set up fever on board after the ship had cleared from Panama, at any time during the voyage to Asia, or after the arrival at the Asiatic terminus."

The lodgment of yellow fever in the Orient, with its European and American colonies, would be a calamity of the first magnitude. The disease would there find virgin soil on which to run riot, for it would encounter no "immunes." Solicitude, not only for the natives, but for their colonists, must necessarily be felt by various European nations and by the United States—most deeply, of course, by Great Britain, since her Asiatic colonies are so numerous. To guard against such a catastrophe, Dr. Manson would disregard the yellow fever patient and institute no quarantine, but stringently enforce the destruction of all mosquitoes and their ova and larvæ in all ships before the ships were allowed to clear from the Pacific end of the canal. "To carry out this important sanitary measure," he says, "an organization and funds are necessary. To insure its efficiency, the organization should be altogether independent of the local canal functionaries; it must be liberally subsidized, its official head must be responsible to the Secretary of State, in Washington, or other central authority, and his position should be such as to secure him freedom of action and freedom from interference by the local authority. The funds might be provided by a special toll on ships using the canal, or by a pro rata contribution from the Asiatic governments interested. The chief of the sanitary staff must, of course, be an American citizen—such a man as Gorgas—possessed of ability, experience, energy, independence of character, and, above all, imbued with a thorough belief

in the efficacy of antimosquito measures. The detail of the staff might be selected from those nationalities whose ships are most likely to use the canal."

We as a people stand ready to finish the canal. From the commercial point of view, it will be chiefly to our advantage, but we must see to it that we do not reap that advantage at the expense of other nations in so momentous a matter as that of spreading disease and death over a great portion of a hemisphere. Dr. Manson's warning comes none too soon; we should have our sanitary organization perfected in time to anticipate the calamity which he foresees as the almost certain result of any slip in the completeness of our arrangements. But perhaps Mexico should have taken the initiative, for, in the discussion which followed the reading of Dr. Manson's paper, Dr. Sambon announced that a steamship service between that country and China was to be begun on the 1st of March. This, of course, has nothing directly to do with the Panama Canal, and it is not a matter in which the United States could intervene.

THE MILK OF TUBERCULOUS COWS.

Interest still continues in the question of the communicability of bovine tuberculous disease to man. Perhaps we may not infer unequivocally that its communicability to certain of the lower animals establishes its transmissibility to the human subject, but at least its capability of such transfer to those animals may be held tentatively to be indicative of its power to infect man. Numerous experiments bearing on the subject are recorded and commented on by Dr. John R. Mohler, chief of the Pathological Division of the Bureau of Animal Industry, in *Bulletin No. 44*, recently issued by the Department of Agriculture.

Dr. Mohler feels justified in saying that the positive results obtained from the feeding and inoculation experiments, as well as from microscopical examinations of the centrifugalized sediment of milk and cream, are to the effect that one or more of the guinea pigs fed with milk from nine different cows succumbed to typical tuberculous disease—in other words, that the milk of 16.07 per cent. of fifty-six cows that had reacted to tuberculin had been found to be pathogenic to guinea pigs. Of

lesser applicability to the actual conditions of human life, of course, but still with a direct bearing upon the main question, were the results of experimental inoculation. In each of six different instances of a series of experiments, at least one guinea pig died of tuberculous disease after intraabdominal inoculation, showing that the milk of 10.9 per cent. of fifty-five reacting cows proved fatal. In a second series of intraabdominal injections, the milk of seven cows out of forty-five examined, or 15.5 per cent., was demonstrated to possess virulent tubercle bacilli.

The author draws from his experiments the deduction that it is necessary to sterilize the milk of cows that react to tuberculin before allowing it to be used as food by human beings, and he adds that "the danger to the consumer of this raw milk seems palpable, although it is not assumed to be in direct proportion to the positive results obtained in such susceptible animals as guinea pigs."

A PUBLIC AWAKENING TO THE VALUE OF VACCINATION.

In spite of the widespread prevalence of a mild form of smallpox in the United States during the past year or more—manifest smallpox, however mild—there have, to the discredit of our profession, not been lacking physicians who were willing in cases of the disease to make a diagnosis of chickenpox or of some fanciful variety of "itch"—anything to distract the popular attention from that dreadful pestilence which, mildly as it may disport itself at times, now as in centuries long past, may yet at any time burst forth in all its old-time fury. At the same time the antivaccinationists have improved the opportunity, accentuated by certain untoward results of another inoculation unwittingly imparted at the time of vaccination or fortuitously following upon it, to debauch the public understanding.

It is gratifying, therefore, to learn from the *Bulletin of the Illinois Board of Health* for April that the high mortality during the preceding month aroused in the people of the State such an awakening to the value of vaccination that they hastened to avail themselves of its benefits. That vaccination will prevent smallpox, and that there is no other sure means of prevention, says the *Bulletin*, "is as clear in the minds of that portion of intelli-

gent humanity which comprehends what vaccination has done for the world as that the world moves and the sun shines." It seems hardly necessary, after more than a hundred years of the benefits of vaccination, to cite specific instances, but we presume it will be well to do so so long as the anti-vaccinationists are as active as they are at present. We therefore quote the following from the *Bulletin*: "In one report coming from Montgomery County it is shown that all members of a family in which there was a case of smallpox escaped the disease by timely vaccination after exposure, except an uncle of the patient, who refused vaccination. This gentleman was highly incensed at the quarantine, which he regarded as unnecessary, and to emphasize his belief in his immunity from contagion he slept with the patient. It is unnecessary to add that in two weeks he was covered with overwhelming evidence of his error."

It is known that within recent years a man, apparently a sane person, has offered to bet a large sum of money that the earth is flat, not globular. Almost on a par with his fatuity is that of the opponents of vaccination, and we rejoice to learn that in Illinois they are being weaned from their infatuation.

THE VISITS OF EUROPEAN PROFESSORS TO THE UNITED STATES.

Following upon the visits of Professor Lorenz to this country, we are now honored by the presence of another celebrated European surgeon. Professor Johann Mickulicz, of Breslau, arrived recently in the United States to attend, as we understand, the Congress of American Physicians and Surgeons, which takes place at Washington, D. C., in May. At the invitation of Dr. Polk, the dean of Cornell Medical College, Professor Mickulicz, on April 20th, performed three operations in Bellevue. The first was a case of hernia operated on by Kocher's method, which is perhaps less well known than those of Bassini and McEwen. The second was a gastrotomy on a patient with cancer of the œsophagus, and the third was the removal of an abdominal fibroid tumor from a woman. These operations displayed the precision combined with rapidity and directness in operating for which Professor Mickulicz is well known. They were witnessed by a large number of his American *confrères*, who gave him that kind of hearty welcome which the medical profession of this country takes delight in according to

its eminent colleagues of all lands. Professor Ewald, of Berlin, and Professor Hans Kehr, of Halberstadt, will, we understand, also shortly be with us. Probably nothing could do more both to demonstrate and to consolidate the catholicism of medical science than these interchanges of professional demonstrations which are now happily, thanks to increased facilities of transportation, becoming more and more general.

THE SENSELESSNESS OF VOLUNTARY EX- POSURE TO INFECTIOUS DISEASE.

While we have no sympathy with those who become panic-stricken in the presence of infectious disease, we cannot tolerate voluntary and unnecessary subjection of either one's self or one's children to the risk of infection. This, we think, is the view generally held by the members of our profession and inculcated by them in their intercourse with the families in which their practice lies. Seldom has the conviction been more forcibly put than it has recently been by Dr. Arthur Reynolds, the energetic health commissioner of Chicago, who, in the Chicago Health Department's *Bulletin* for the week ending April 11th, says: "Equally mischievous [with the reputed Patagonian belief that measles is best treated by exposure to noise and cold, since the disease is 'caused by a devil who may be driven out by these agencies'] is the too commonly held theory that there is no use in trying to protect the child against the infection of measles—that it must have the disease sooner or later, and 'better have it now and get through with it.' The younger the child the less its powers of vital resistance as well against measles as all other diseases of children. About 60 per cent. of all deaths from measles are among those between six months and two years of age. After the fourth year the mortality rate falls rapidly, but one out of every four infants attacked with the disease dies. Therefore keep the baby from contact with measles as long as possible." This is the best of advice, and we believe that the people of Chicago are clever enough to heed it.

A RUSSIAN JOURNAL OF PATHOLOGY DISCONTINUED.

With the issue of December 31, 1902, the *Russian Archives of Pathology, Clinical Medicine, and Bacteriology* (*Roussky Archiv Pathologiyi, Klinicheskoi Meditsiny i Bakteriologiyi*), edited by M. V. V. Podwyssotzky, professor of general pathology and dean of the medical faculty of the University of Odessa, was discontinued on account of

insufficient funds to carry on its work. This journal has been published for seven years, in monthly issues of about sixty octavo pages with a supplement of an equal number of pages, devoted to a continuous series of reviews of literature. These reviews, it seems, were what ruined the journal financially. They were arranged by subjects, each issue containing reviews of the entire literature of a year on a certain subject in general or special medicine. The reviews required a great amount of work, as they covered almost every medical book and journal published in all languages. There were very few advertisements, and the subscription price was not sufficient to maintain the publication. The editor, not willing to give up the reviews, which were the most costly part of the *Archives*, decided to discontinue the publication rather than to lower his standard of quality. The remainder of the *Archives* was given up to original articles, synthetic critical reviews, news items, abstracts, etc. There were no editorials. The chief reason why the subscription list of *Roussky Archiv* did not grow was that it published too few articles of practical value to the physician, as the editor himself acknowledged in a recent announcement. The illustrations which appeared in the Russian Archives were always admirably executed, often on hand made paper, in beautiful lithography in colors. In tone the journal ranked as one of the foremost of its kind in Europe. The editor, Professor Podwysotsky, is now the editor of the leading Russian medical weekly, *Roussky Vrach*. We admire his decision. He has shown that he can sacrifice something for a principle. Such men are rarer in our profession than they should be.

RADIUM IN THE TREATMENT OF LUPUS.

The itch for therapeutic novelties has led to the topical use of radium in the treatment of lupus. The results, contradictory as they have thus far been reported to have been, seem closely comparable to those produced with the Röntgen rays. In the *Annales de dermatologie et de syphiligraphie*, 1902, pp. 720, 723 (*Zentralblatt für chirurgie*, March 7th), Hallopeau and Gadaud report a case of lupus verrucosus in which radium, kept applied to the middle finger for seventy-two hours and to the forefinger for a hundred and twenty hours, gave rise to ulcerations that persisted for six months and to such a degree of sclerosis of the skin as to lead to curvature of the fingers. On the other hand, Danlos reports four cases of lupus vulgaris cured with radium, such smooth and soft scars resulting as, in his opinion, could hardly have been expected from any other treatment.

News Items.

Society Meetings for the Coming Week:

MONDAY, April 27th.—Medical Society of the County of New York; Lawrence, Mass., Medical Club (private); Cambridge, Mass., Society for Medical Improvement; Baltimore Medical Association.

TUESDAY, April 28th.—Metropolitan Medical Society, New York (private); Buffalo Academy of Medicine (Section in Obstetrics and Gynaecology); Richmond, Va., Academy of Medicine and Surgery; New York Medical Union (private); Rome, N. Y., Medical Society; Boston Society of Medical Sciences (private).

WEDNESDAY, April 29th.—Auburn, N. Y., City Medical Association; Berkshire, Mass., District Medical Society, Pittsfield (annual meeting).

FRIDAY, May 1st.—Practitioners' Society of New York (private); Clinical Society of the New York Post-Graduate Medical School and Hospital; Baltimore Clinical Society; The Manhattan Clinical Society.

SATURDAY, May 2d.—Manhattan Medical and Surgical Society, New York (private); Miller's River, Mass., Medical Society.

Change of Address.—Dr. Kenneth W. Millican to 101 Hamilton Place, New York. Dr. W. States to 35 West Thirty-first Street, New York.

The Registration of Nurses will be required under the law enacted by the legislature of the State of Illinois on April 16th.

The Cleveland Academy of Medicine.—At the meeting held on April 17th Dr. Morris Richardson, of Boston, read a paper on the Surgery of the Biliary Passages.

The Rochester Academy of Medicine has adopted and made public a resolution urging the people of the city to boil the city water before using it for drinking purposes.

Dr. James H. Richardson, the first graduate of the University of Toronto was given a banquet by his former students in Toronto, Ont., on April 15th. A portrait of Dr. Richardson was presented to the university on this occasion.

Another Fire at the Medico-Chirurgical College in Philadelphia destroyed over \$700 worth of valuable apparatus on April 19th. The flames were discovered in the bacteriological laboratory to which the fire was confined. The hospital which adjoins the laboratory was not involved.

The American Urological Association will hold its second annual meeting in the amphitheatre of the New Orleans Polyclinic, on May 8th and 9th. A preliminary agenda has been issued embracing some thirty-nine titles.

Professor Lorenz has removed the plaster casing from Lolita Armour's thigh and according to the newspaper reports the child is found to have made a most satisfactory recovery. Some weeks of further treatment will be required before the patient will be considered discharged, though she now walks without difficulty.

American Medical Association.—The committee of arrangements in New Orleans has had frequent sessions, and much has been done in the way of preparing for the expected influx of visitors. Various excursions have been arranged including a visit to the sugar house of the Stanton plantation.

Typhoid Fever at Leland Stanford University.—Some sixty or more cases of typhoid fever have developed at the Leland Stanford, Jr., University and Palo Alto, Cal. The cases have been of a mild type and seem traceable to the milk supply of one of the Palo Alto dairies. An examination of the water supply of the university is said to have demonstrated its freedom from typhoid bacteria.

The Sale of Cocaine in Minnesota is to be regulated under a bill recently introduced in the lower house of the legislature of Minnesota. Under this bill cocaine may be sold at retail only by pharmacists and at wholesale only to pharmacists. Drug-gists may sell cocaine only on the written prescription of a physician or dentist and such prescription may be filled only once. It is also provided that any patent medicine, catarrh powder or remedy, snuff, cream or other mixture containing cocaine, must have a label stating that fact in the English language. A violation of the act is made a misdemeanor, punishable by a fine between \$50 and \$100 or imprisonment from thirty days to one year. One half of all such penalties shall go to the state pharmacy board and one half to the county school fund.

A "Specialist in Consumption" Punished.—The board of health of the city of New York recently turned over to the Medical Society of the County of New York a complaint against a "Professor Henry Surson, Specialist in Consumption, Asthma, and Nervous Affections." The society prosecuted the offender who was convicted and the full penalty, including a fine of \$100 and imprisonment for thirty days was imposed. This is the first time that both fine and imprisonment have been imposed, and in sentencing the prisoner the presiding justice took occasion to express his appreciation of the efforts of the society in causing the punishment of men like the prisoner who prey upon a class of people who can least afford to lose the money extorted from them.

The Medical and Chirurgical Faculty of Maryland will hold its annual meeting at Baltimore on April 28th, 29th, and 30th. The preliminary programme includes papers from the following authors: Dr. John Turner, Dr. Robert W. Johnson, Dr. J. C. Hemmeter, Dr. Charles F. Davidson, Dr. E. B. Claybrook, Dr. Thomas S. Latimer, Dr. Robert Reuling, Dr. Henry F. Cassidy, Dr. Francis C. Bayne, Dr. W. B. Wolf, Dr. R. Percy Smith, Dr. Julius Friedenwald, Dr. Lewis J. Rosenthal, Dr. William H. Pearce, Dr. Charles O'Donovan, Dr. W. S. Baer, Dr. Henry W. Kennard, Dr. Thomas R. Brown, Dr. A. G. Barrett, Dr. Frank Martin, Dr. J. C. Clark, Dr. Theodore Cook, Jr., Dr. C. Hampson Jones, Dr. William Royal Stokes, Dr. L. K. Hershberg, and Dr. Henry Barton Jacobs.

The West Virginia State Medical Association will hold its thirty-sixth annual meeting at Charleston, on May 26th, 27th, and 28th. The programme, as at present proposed, is an unusually interesting one, and all the members are urged to attend. The representative of the American Medical Association will be present. Papers to be read at this meeting should be in the hands of Dr. William W. Golden, of Elkins, W. Va., not later than May 11th.

The Academy of Medicine.—At the annual meeting of the New York Academy of Medicine of New York County, held on April 20th, a resolution was adopted urging the passage of an ordinance that all dogs should be muzzled while at large in the city. The following officers were elected for the ensuing year: President, Dr. Alexander Lambert; first vice-president, Dr. Francis J. Quinlan; second vice-president, Dr. S. Busby Allen; secretary, Dr. Ogden C. Ludlow; corresponding secretary, Dr. John J. Nutt; treasurer, Dr. Charles E. Denison.

The Amended Antivaccination Bill Passed in Minnesota.—The senate of the legislature of the State of Minnesota has passed the Gregory bill prohibiting boards of health from requiring the vaccination of school children. The amendment gives boards the power to order vaccination in epidemics. The amendment introduced by Senator W. W. Dunn, of St. Paul, reads as follows: "Except in cases of epidemic of smallpox such boards of health and boards of education may, by joint action, require such vaccination by a duly licensed and practising physician, to be selected by the person to be vaccinated; provided that any child may be exempted from the provisions of this act, where a reputable physician certifies in writing, that on account of said child's physical condition, such vaccination would be dangerous to the health of the said child." The opponents of vaccination are not content with the bill as amended as they assert that the amendment practically nullifies the main feature of the bill as originally drawn.

Moving Against Mosquitoes.—The physicians of this city have been requested by the health department to report promptly all cases of malaria which come under their notice. They have also been requested to keep their patients under mosquito bars so as to avoid the further spread of disease from any infected patient. The board of health has made arrangements to follow up closely all reported cases of malarial fever and will endeavor to destroy all mosquitoes wherever cases of malaria have developed. An attempt is being made to educate the owners of property as to the necessity for taking the proper steps to destroy mosquitoes and to protect all standing water from being visited by them. The health department has issued a number of pamphlets giving instructions to the public on the relation between mosquitoes and malaria and the best methods of destroying mosquitoes. The co-operation of the park department authorities have been enlisted, and it is hoped that the public in general will cooperate with the health department in its efforts to banish the mosquitoes from the city and its environs.

Commencement Exercises at the Army Medical School.—A class of thirty-eight assistant surgeons received diplomas from the army medical school on April 14th. The commencement exercises were held in the main lecture hall of the National Museum and the diplomas were presented by the Secretary of War. Before the diplomas were presented Colonel and Assistant Surgeon General Calvin DeWitt, the president of the faculty of the school, announced that Dr. Harry L. Gilchrist, Dr. Samuel L. Deloffre, Dr. John W. Hanner and Dr. Ed. M. Calbott were the honor men of the class. The Hoff medal for the student officer making the highest average in examination was awarded to Dr. Harry L. Gilchrist. The other graduates were Dr. George H. R. Gosman, Dr. Reynold M. Kirby-Smith, Dr. William H. Moncrief, Dr. George L. Collins, Dr. Nelson Gapen, Dr. William T. Davis, Dr. Charles F. Morse, Dr. Samuel E. Lambert, Dr. Haywood S. Hansell, Dr. Junius C. Gregory, Dr. Jay W. Grissinger, Dr. Will L. Pyles, Dr. Thomas Devereux, Dr. William M. Smart, Dr. Robert H. Pierson, Dr. Cary A. Snoddy, Dr. Harry S. Purnell, Dr. Robert M. Blanchard, Dr. James Bourke, Dr. Louis C. Duncan, Dr. John A. Clark, Dr. Samuel J. Morris, Dr. Noel I. Barron, Dr. Jacob M. Coffin, Dr. Levy M. Hataway, Dr. Alexander Murray, Dr. Philip W. Huntington, Dr. James D. Fife, Dr. William A. Powell, Dr. Leon T. LeWald, Dr. Jesse R. Harris, Dr. George H. Scott, Dr. Edwin D. Kilbourne, Dr. Robert L. Carswell.

The Late Dr. T. Gaillard Thomas.—At the meeting of the New York Obstetrical Society, held April 14th, the following resolution upon the death of Dr. T. Gaillard Thomas, presented by the committee appointed at the last monthly meeting, was adopted:

In paying its tribute of respect to the memory of T. Gaillard Thomas, the New York Obstetrical Society takes pride in the thought that he was one of the founders, several times its President, and for many years one of its most active and honored members. It is a pleasure to recall the various incidents and upward steps in his career, how he came to New York a poor young practitioner without friends, and with hardly an acquaintance, and how, by sheer ability he soon made himself felt, and left the impress of his personality wherever it was his destiny to labor.

In his day he was a leading authority on all gynecological and obstetrical subjects. As an operator, he was *facile princeps*. He was not only theoretically the master, but his technique was unexcelled.

Who, that listened to his lectures, was not impressed with the forcefulness of his style, and the breadth of his erudition?

He has passed from among us, having reached the forefront of professional eminence, satisfied and content, and rich in the rewards and honors of his career.

It is proposed that these words be entered upon our minutes and a copy be sent to the family and to the medical journals.

CLEMENT CLEVELAND,
J. E. JANVRIN,
GEORGE TUCKER HARRISON,
Committee.

The Governor Vetoes a Centralization Bill.—The Ransberger bill has been vetoed by Governor Odell. The character of the bill is shown in the following excerpt from the veto message which also states the ground for the veto.

This bill, with some of whose features I am in accord, provides for such a radical departure from existing laws governing the institutions under the control of the Commission in Lunacy, that I have been led to disapprove it. It seeks, in the first place, to create two new and separate departments, with the additional expenses necessary for their maintenance, a proposal which does not seem to be warranted by the necessities of the service. It provides for a treasurer for all of the hospitals, which in itself would be desirable were it not for the fact that the bill proposes to place under his control all of the estimates of expenses, and authorizes him to make drafts on the Comptroller by quarterly estimates, instead of by monthly estimates, as heretofore. This might possibly lead to large and unnecessary drafts on the Comptroller.

A more serious feature of the bill is that which proposes to take away from the stewards of the various institutions the purchasing power, and lodge it in an official to be appointed by the Commission. This would be conferring on this department power not possessed by any other department of the State government. The proposal in the bill is a departure that I do not care to sanction, as it might lead to abuses and scandals which are almost impossible under the present system of conducting the affairs of these institutions.

The American Academy of Medicine will hold its twenty-eighth annual session at the Arlington, Washington, D. C., on Monday and Tuesday, May 11 and 12, 1903. The following papers have been promised: The Home Life and Education of Our Girls as Affecting Their Future Health, by Dr. James H. McBride, of Pasadena, Cal.; a symposium on The Teaching of Hygiene in the Public Schools: (I) The Teaching of Personal Hygiene, by Dr. Walter L. Pyle, of Philadelphia; (II) Hygiene *versus* Anatomy and Physiology, by Dr. George G. Groff, of Lewisburgh, Pa.; (III) The Teaching of Physiological Breathing, by Dr. G. Hudson Makuen, of Philadelphia; (IV) Hygiene as Related to the Causes and Prevention of Tuberculosis, by Dr. A. Mansfield Holmes, of Denver; (V) The Teaching of School Hygiene, by Dr. Helen C. Putnam, of Providence; (VI) The Michigan Method of Teaching Hygiene, by Dr. V. C. Vaughan, of the University of Michigan; (VII) The Training of Teachers by Dr. Thomas D. Wood, of New York; The Social Danger of Gonorrhœa, Especially in Relation with Marriage, by Dr. Prince A. Morrow, of New York; another symposium on Required and Elective Studies in the Medical Course, will embrace the following papers: (I) Anatomy, by Dr. Frederic H. Gerrish, of Portland, Me.; (II) Pathology, by Dr. William H. Welch, of Baltimore; (III) Internal Medicine, by Dr. S. G. Bonney, of Denver; (IV) How Much Knowledge of Special Branches Should be Required for Graduation, by Dr. L. Duncan Bulkley, of New York; (V) A Theory and a Condition, as Illustrated by Ophthalmology, by Dr. Edward Jackson, of Denver; The Influence of the Doctor on the Birth Rate, by Dr. Roland G. Curtin, of Philadelphia.

New Hospital for the Bronx.—The trustees of Bellevue and Allied Hospitals have commissioned John Howard Galen and D. Everett Waid, of 156 Fifth avenue, architects, to construct designs for the new hospital to be erected in the Bronx, under authority of the bill passed by ex-Senator Joseph R. Hennessy. The new hospital is to cost \$500,000, will be four stories in height, and is to have accommodations for 150 patients. It is to be an up-to-date hospital in every respect, and is designed to be to The Bronx what Bellevue is to Manhattan. The trustees now have several sites under consideration, but none has been definitely selected. The selection will, however, be made in the near future, as it is intended to begin work in August.

A Dispensary for Tuberculous Patients.—The commissioner of health of the city of New York has asked the board of estimate and appropriation to provide for the erection of a special dispensary in this city for the treatment of consumptives. The site recommended is the vacant lot to the south of the health department building. The commissioner purposes to have a corps of nurses and doctors there to treat patients who apply for relief or to go to their homes, if necessary. Plans for the dispensary are nearly completed and will soon be submitted to the board of estimate and apportionment. If the effort of the commissioner to provide means for the establishment of a camp in Orange County for the open air treatment of tuberculosis patients should not be successful it is stated that he will establish such a camp on North Brother Island.

Medical Legislation in Connecticut.—Several bills have been before the General Assembly of considerable interest to the medical profession. Perhaps the matter of the greatest importance is the amendment to the Medical Practice Act, which allows the examining committees to issue a license to a physician to whom a license has been issued in another State after an examination of as high a grade and kind as that required by the examining committees of this State, etc. Section II of this bill was introduced simply to restore that part of the act to its original condition, it having been inadvertently changed by the revision committee in the last revision of the General Statutes. The amendment received the unanimous approval of the committee on public health and safety, has passed the House without opposition, and without question will be approved by the Senate. A bill was introduced exempting cancer from the provisions of the Medical Practice Act. This was done in the interests of one man (not a physician), in the eastern part of the State, who had met with considerable success in removing superficial cancer by some external application, and who had quite a following among the members of the legislature from that section. This bill has been rejected by both branches of the Assembly. The same fate befell a bill, which, if passed, would have given equal privileges to all reputable, registered physician in the State, in all hospitals receiving State aid. Six bills were introduced aiming at a change or repeal of the vaccination laws. In spite of an adverse report by the committee on public health and safety, a motion to accept the report of the committee and reject the

bills was lost in the House by a vote of 99 to 109 and the bills were recommitted by that body. The Senate, however, accepted the reports of the committee and rejected the bills, the House voted to adhere to its former action and called for a committee of conference, which was to have been held this week. It does not seem probable that the anti-vaccinationists can secure a majority of the Senate, although there is an antivaccination league in the State, which contains many able men, and they are doing all that time and money can do to secure the repeal of the vaccination laws. These people have considered mere assertions as solid facts and have made many intelligent members of the legislature believe the most horrible things in relation to vaccination.

Official News.

Infectious Diseases in New York:

We are indebted to the Sanitary Bureau of the Health Department for the following statement of cases and deaths reported for the two weeks ending April 18, 1903:

DISEASES.	Week end'g April 11		Week end'g April 18	
	Cases.	Deaths.	Cases.	Deaths.
Measles	227	12	298	1
Diphtheria and Croup.....	389	47	345	51
Scarlet fever.....	313	23	272	28
Small-pox	0	0	2	1
Chicken-pox.....	83	0	83	0
Tuberculosis	284	168	318	183
Typhoid fever.....	39	11	64	5
Cerebro-spinal meningitis....	0	0	0	0

Public Health and Marine Hospital Service:

Official List of Changes of Station and Duties of Commissioned and Non-commissioned Officers of the Public Health and Marine-Hospital Service, for the Seven Days ending April 16, 1903:

- WILLIAMS, L. L., Assistant Surgeon-General. Granted leave of absence for seven days, from April 11. Granted extension of leave of absence for one day.
- IRWIN, FAIRFAX, Surgeon. To proceed to Washington, D. C., for special temporary duty.
- WICKES, H. W., Passed Assistant Surgeon. Granted leave of absence for one day.
- RUSSELL, H. C., Assistant Surgeon. Relieved from temporary duty at the Immigration Depot, and directed to rejoin his station at Stapleton, N. Y.
- BILLINGS, W. C., Assistant Surgeon. To proceed to Quebec, Canada, for duty in the office of the United States Commissioner of Immigration.
- WARREN, B. S., Assistant Surgeon. Granted leave of absence for five days, from April 16th.
- FOSTER, A. D., Assistant Surgeon. To proceed to Southport, N. C., and assume temporary command of the station at that port during absence, on leave, of Assistant Surgeon B. S. WARREN.
- DEVEREUX, JOHN, Acting Assistant Surgeon. Granted leave of absence for twenty-three days, from April 2nd.
- McCONNELL, A. P., Acting Assistant Surgeon. Granted leave of absence for three days, from April 20th.
- McCONNELL, E. F., Acting Assistant Surgeon. Granted leave of absence, on account of sickness, for thirty days.
- SLAUGHTER, A. W., Acting Assistant Surgeon. Granted leave of absence for six days, from May 5th.
- WALKER, R. T., Acting Assistant Surgeon. Granted leave of absence for thirty days, from April 8th.

Board Convened.

Board convened to meet at Washington, D. C., April 15, 1903, for the physical examination of an officer of the Revenue Cutter Service. Detail for the board: Assistant Surgeon-General W. J. PETTUS, chairman; Assistant Surgeon-General H. D. GEDDINGS, recorder.

Naval Intelligence:

Official List of Changes in the Medical Corps of the United States Navy for the Week ending April 18, 1903:

BARBER, G. H., Surgeon. Detached from the *Monongahela*, and ordered to the Naval Training Station, Newport, R. I.

CORDEIRO, F. B. J., Surgeon. Detached from the Naval Training Station, Newport, R. I., and ordered to the *Solace*.

DRAKE, N. H., Surgeon. Detached from the *Solace* and ordered to the *New York* as Fleet Surgeon of the Pacific Station.

HARRIS, H. N. T., Surgeon. Detached from the *Monocacy* and ordered to the *Glacier* at Manila, P. I.

LANGHORNE, C. D., Passed Assistant Surgeon. Detached from the Naval Hospital, Port Royal, S. C., and ordered to the *Monongahela*.

RUSSELL, A. G. H., Surgeon. Detached from the Naval Museum of Hygiene and Medical School, and ordered to the *Newark* as Fleet Surgeon of the South Atlantic Station.

Army Intelligence:

Official List of Changes in the Stations and Duties of Officers serving in the Medical Department of the United States Army for the Week ending April 18, 1903:

CARROLL, JAMES, First Lieutenant and Assistant Surgeon. Detailed to represent the Medical Department at the annual meeting of the American Medical Association to be held at New Orleans, La., May 5 to 8, 1903.

CHURCH, JAMES R., First Lieutenant and Assistant Surgeon. Ordered to Fort Turnbull, Conn., for temporary duty.

DEVEREUX, JOHN R., First Lieutenant and Assistant Surgeon. Order amended so as to direct him to proceed to Fort Snelling, Minn., instead of to Fort Columbus, N. Y.

FISHER, HENRY C., Captain and Assistant Surgeon. Ordered to Fort Howard, Md., for temporary duty.

GILCHRIST, HARRY L., First Lieutenant and Assistant Surgeon. Will proceed to Philadelphia, Pa., and New York City, N. Y., on official business pertaining to the Medical Department of the Army, and upon completion of this duty will return to Washington, D. C.

KENNEDY, JAMES M., Captain and Assistant Surgeon. Upon completion of the duty for which he was ordered to Washington, and upon the expiration of his present leave of absence, Captain KENNEDY will proceed to Allentown, Pa., New York City, N. Y., Boston, Mass., West Point, N. Y., Buffalo, N. Y., Cleveland, Ohio, Chicago, Ill., and St. Louis, Mo., on business pertaining to the Medical Department of the Army and will then return to his proper station at the Presidio of San Francisco, Cal.

LAGARDE, LOUIS A., Major and Surgeon. Detailed to represent the Medical Department at the annual meeting of the American Medical Association, to be held in New Orleans, La., May 5 to 8, 1903.

MASON, CHARLES F., Major and Surgeon. Detailed to represent the Medical Department at the annual meeting of the American Medical Association, to be held in New Orleans, La., on May 5 to 8, 1903.

Births, Marriages, and Deaths.*Married.*

DEMING—HAWTHORNE.—In New York City, on Wednesday, April 15th, Dr. William Champion Deming and Miss Imogen Hawthorne.

DICKINSON—RAYMOND.—In Summit, New Jersey, on Wednesday, April 22d, Dr. John Walker Dickinson, of Boston, and Miss Grace Egerton Raymond.

FURRY—JONES.—In New York City, on Tuesday, April 14th, Dr. Samuel Elersley Furry and Miss Edith Jones, of Seattle, Wash.

HELLER—FREUND.—In New York City, on Tuesday, April 21st, Dr. I. M. Heller and Miss Zippora Freund.

JAGGAR—KLINE.—In San Francisco, California, on Wednesday, April 15th, Dr. Thomas A. Jaggar and Miss Helen Kline.

JONES—RAMSAY.—In Baltimore, Maryland, on Thursday, April 16th, Dr. Clarence W. Jones and Miss Hannah L. Ramsay.

KNICKERBOCKER—BATCHELDER.—In Brookline, Massachusetts, on Monday, April 13th, Dr. Percy Gates Knickerbocker, of Allston, and Miss Alice Gertrude Batchelder.

NORRIS—SIMS.—In Troy, New York, on Thursday, April 9th, Dr. Samuel Norris, United States Army, and Miss Florence Elizabeth Sims.

PURNELL—KENLY.—In Berlin, Maryland, on Thursday, April 16th, Dr. Harry S. Purnell and Miss Kenly.

QUICKSALL—BRADEN.—In New York City, on Thursday, April 16th, Dr. William Edward Quicksall, of Philadelphia, and Miss Florence Elizabeth Braden.

REYNOLDS—SMYTHE.—In New York City, on Tuesday, April 21st, Dr. Harry Campbell Reynolds and Miss Florence J. Smythe.

RICHARDSON—FLYNN.—In Washington, D. C., on Monday, April 20th, Dr. James Julius Richardson and Miss Dorothy Blanton Flynn.

ROSENTHAL—CASHMAN.—In San Francisco, California, on Sunday, April 12th, Dr. Adolph G. Rosenthal and Miss Madeline T. Cashman.

SATERLEE—HOELGER.—In New York City, on Tuesday, April 21st, Mr. Ernest K. Saterlee and Miss Marie Valerie Hoelger, daughter of Dr. Richard L. Hoelger.

STEELE—WILLIAMSON.—In Wayne, Pennsylvania, on Wednesday, April 15th, Dr. John Dutton Steele, of Philadelphia, and Miss Edith Caldwell Williamson.

STEINACH—DUFF.—In Waterloo, New York, on Monday, April 21st, Dr. William Steinach, of New York City, and Miss Anna Rose Duff.

WARBASSE—DYER.—In Brooklyn, New York, on Wednesday, April 15th, Dr. James Peter Warbasse and Miss Agnes Louise Dyer.

WENDELL—KLEIN.—In Newark, New Jersey, on Wednesday, March 25th, Dr. Augustus V. Wendell and Miss Catherine F. Klein.

WOMACK—SHIELDS.—In Washington, D. C., on Sunday, April 12th, Dr. J. H. Womack and Miss Rena Shields.

Died.

CHAPMAN.—In New Haven, Connecticut, on Wednesday, April 15th, Dr. S. Hartwell Chapman, in the fifty-ninth year of his age.

CRAIG.—In Chicago, Illinois, on Monday, April 13th, Dr. James D. Craig, in the seventieth year of his age.

CURRY.—In Baltimore, Maryland, on Friday, April 10th, Dr. William H. Curry, in the sixty-first year of his age.

DAVIS.—In Utica, New York, on Sunday, April 19th, Dr. William R. Davis, in the forty-eighth year of his age.

GORDON.—In Jacksonville, Illinois, on Sunday, April 12th, Dr. J. C. Gordon, in the sixty-first year of his age.

GRIFFITH.—In Philadelphia, Pennsylvania, on Monday, April 20th, Dr. William M. Griffith, in the fifty-fourth year of his age.

HASTINGS.—In Blooming Grove, Indiana, on Sunday, April 12th, Dr. Zero Hastings, in the fiftieth year of his age.

PINEO.—In Brooklyn, New York, on Sunday, April 19th, Dr. Thomas Pineo, in the thirty-eighth year of his age.

REBER.—In St. Louis, Missouri, on Friday, April 10th, Dr. Van Buren S. Reber.

SHERMAN.—In Ballston, New York, on Wednesday, April 22d, Dr. Franklin A. Sherman, in the seventy-fourth year of his age.

WILLIAMS.—In Williamsburg, New York, on Sunday, April 19th, Dr. Frank B. Williams, in the fortieth year of his age.

Pith of Current Literature.

PRACTICE OF MEDICINE.

The Diagnosis and Treatment of Aneurysm of the Abdominal Aorta.—Dr. M. U. Gourievitch (*Roussky Vrach*, February 15th) speaks of a case of aneurysm of the abdominal aorta in which he obtained good results with the use of sodium iodide. He attributed the improvement attained in this instance to the action of the drug alone, as a strict diet according to Tuffier was not followed. In his opinion the value of gelatin injections has not yet been established and their employment is very inconvenient. A good result may be expected from the use of sodium iodide only in those cases in which (as in the present case) there had been syphilis in the past history of the patient. A correct diet and hygiene contribute to the alleviation of the symptoms of aneurysm of the abdominal aorta more than any other therapeutic measure.

A Case of Werlhof's Disease—(Morbus Maculosus) in a Child Aged Nine Months.—Dr. Marcello Codeca (*Gazzetta degli ospedali e delle cliniche*, February 22d) found Werlhof's disease, (rheumatic purpura) in the cadaver of an infant aged nine months, and reports the case on account of the rarity of this affection in the first months of life. The child showed a hæmorrhagic eruption, pains in the joints, and hæmorrhages from the mucous membranes. The author could not find anything in the child's heredity that would predispose to hæmophilia. He points out that living in damp dwellings has a tendency to predispose to Werlhof's disease.

The Treatment of Tuberculous Perinephritis by Durante's Method.—Dr. A. De Blasi (*Gazzetta degli ospedali e delle cliniche*, February 15th) reports a case of tuberculous perinephritis with extensive suppuration about the kidney, in which the repeated injection of a solution of iodine, as recommended by Durante, produced the healing of the abscess and the absorption of the perinephritic focus. Primary tuberculous perinephritis, *i. e.*, not due to tuberculosis of the kidneys or suprarenals, is rare and difficult to diagnosticate. The patient in this case was a man aged twenty-seven years, whose paternal aunt had died of pulmonary tuberculosis. He was admitted with chills and a daily rise of temperature, upon which quinine did not have much effect. No plasmodia were found in his blood on repeated examinations. On the eighth day he was seized with acute pain in the right loin, which proved very tender on pressure. Two exploratory punctures gave negative results, but the pain and fever continued and the patient preferred the recumbent position, with his right thigh flexed, adducted and rotated inward. He walked with the right flank curved in. On palpation he showed a hard, immovable ill-defined tumor beneath the twelfth rib in the loin, which extended downward to within three fingers' breadth of the iliac crest. There was no frequency of urination and the urine contained no pus and no blood, only a small amount of mucus, a slight trace of albumin, and epithelia from the lower parts of the genitourinary tract. The repeated

punctures remained negative in evidence. At the advice of a consulting surgeon, Durante's method, the injection of a solution of iodine in doses of 2 centigrammes ($0.02 = \text{grain } \frac{1}{3}$) each were employed. After ten injections the fever disappeared; after thirty injections the patient could walk freely, and the lumbar tumor was reduced by more than half its volume, leaving a slight dulness over the original area of its extent. The patient was discharged in excellent condition. The author's diagnosis, based on the facts above summarized, was tuberculous perinephritis with infiltrated and sclerosed perinephritic tissues. An affection of the kidneys was excluded, from the absence of pus and blood from the urine. The author calls attention to the success attained in this case by Durante's method and recommends it for further trial in similar cases.

The Treatment of Malignant Pustule with Injections of Antianthrax Serum given Subcutaneously and Intravenously.—Dr. Ciro Bottignani, (*Gazzetta degli ospedali e delle cliniche*, March 1st) reports five cases of anthrax in which he has used antianthrax serum with some success. In the first two cases the diagnosis had been made very late by the attending physician, and in the first patient the disease had advanced so far that it was useless to try the serum, but the remedy was administered, as a matter of conscience. The patient died a few hours later, and the autopsy and bacteriological examination confirmed the diagnosis. In the second case the diagnosis was made somewhat earlier, as the patient was a tanner and liable to anthrax infection. This patient was admitted in a condition of septicæmia from anthrax, but recovered after intravenous injections of Sclavo's serum. The remaining three patients presented well-marked cases of anthrax and were discharged cured after the use of the serum. The examination of the pus in all these cases showed the presence of the bacillus of anthrax. The author concludes as follows: (1) The antianthrax serum possesses the power of curing the gravest cases of malignant pustule—a power possessed by no other means of treatment. (2) The serum impedes the aggravation of early stages of anthrax with absolute certainty. (3) With the use of the serum, convalescence soon sets in and is soon followed by recovery. (4) In extremely severe cases the use of intravenous injections of the serum should be tried, for it does not produce any unpleasant symptoms, and is more efficient than the subcutaneous use of the serum. (5) Tanners can carry the germs of anthrax to their families, infecting others with whom they come into contact. (6) The authorities should insist on personal prophylactic measures to be observed by all tanners. (7) The anthrax bacillus dies in the healing pustules, so that the convalescents cease to be a source of contagion.

Heat Stroke.—Andrew Duncan, M. D., Lond., (*Edinburgh Medical Journal*, March, 1903) divides heat stroke into two varieties: A. Heat collapse; B. Heat stroke, which again is subdivisible into (a) direct heat stroke, or sunstroke proper; and (b) indirect heat stroke. In the author's experience, indirect heat stroke is the more common form.

Warm days in the cool season of the year are especially dangerous. Moist air, absence of wind, and hot winds, all favor the onset of attacks. New arrivals in a hot climate are particularly predisposed to attack, as are also the plethoric and intemperate, those suffering from fatty heart, or who have had syphilis.

In all cases where a traveller is exposed to a hot sun, alcoholic drinks should be eschewed, and tea or coffee be the chosen beverage. The good effect of tea is clearly perceptible when we consider that the sun's action diminishes the action of the skin, lessens nervous activity, causes less carbon dioxide to be exhaled, and induces cardiac paralysis. In their action, tea and coffee have exactly opposite effects; and, moreover, they both counteract the onset of fatigue, so deadly a factor in heat stroke. Neutral tinted eye glasses should be worn. A thick woolen pad should be sewn into the coat to protect the spinal cord. The dress should be loose, the material of light wool, and the lining orange red in color.

On the occurrence of heat stroke, the patient should be moved into the shade, his clothes opened, and cold applied to his head and neck. Ammonia should be applied to the nostrils, a large mustard poultice to the chest, and a turpentine enema should be administered. In Italy, in cases of direct heat stroke, the administration of a solution of trinitrin (1 in 1,000), twenty drops, to water, 4,500 minims, every quarter of an hour until the complete disappearance of the symptoms, has been found successful.

The author does not agree with Dr. Sambon as to the microbic origin of sunstroke, and he leans to the side of those who uphold the chemical view of heat stroke.

How Easily We Can be Mistaken in the Diagnosis of Cancer of the Stomach. By Mark I. Knapp, M. D. (*Medical News*, March 28th).—It is not safe to base a diagnosis of cancer of the stomach on the clinical symptoms. There may be pain, the vomiting of a chocolate-colored material, or even of some bright red blood, some emaciation, and a palpable tumor in the pyloric region, and yet the patient may be free from malignant disease. The stomach contents must always be carefully examined in all doubtful cases. The author gives the histories of two cases of what he calls "gastrosia fungosa," to show how closely the clinical picture of malignant disease may be simulated. In one of the cases reported the chocolate colored vomit was due to the presence of an immense crop of a dark red mould. The blood originated outside the stomach. The tumor that is at times present in the pyloric region in certain affections of the stomach is nothing more than the spastically contracted pylorus. The author called attention to this condition in a number of papers published some time ago.

SURGERY AND ANATOMY.

Acute Suppurative Inflammation of the Thymus Gland.—Dr. A. A. Abrazhanoff (*Chirurgia*, February, 1903) relates a case of suppuration of the thymus gland, which is noteworthy on account of its rarity. The normal thymus does not suppurate

except under unusual conditions, but when this gland is the seat of degenerative changes it may suppurate. The causes and character of these suppurative inflammations are still obscure, though Kocher and others have thrown a good deal of light on the subject. Inflammations of the thymus should be divided into two classes: metastatic forms, transmitted from suppurative areas elsewhere; and primary forms. Kocher contends that every suppuration of the thymus (strumitis) is secondary, as is shown by the finding of colon bacilli in the pus of some of these cases. There are, however, certainly cases on record in which there was no lesion of any kind in any part of the body, and yet strumitis developed. The infectious character of strumitis has been confirmed since Kocher by the finding of the *pneumococcus* (Wölfler, Demme) the typhoid bacillus (Tavel), the *streptococcus* and *staphylococcus* (Tavel) in the pus in these cases. There have been some instances, however, in which no germ could be found in this pus. In the primary cases the bacteriological data have been thus far very scanty. The *Staphylococcus pyogenes aureus* has been found in some of these cases. These germs reach the thymus unquestionably through the blood and lymph. Clinically strumitis runs an acute course; is accompanied by fever, is a rapidly growing tumor, hot to the touch at times. The swelling in the neck may not be very marked; the skin is red and inflamed if the suppuration is superficial. There is difficulty of respiration, even asphyxia, enlargement of the veins of the neck, a peculiar timbre to the voice, the head is thrown backward, and there is difficulty in respiration. In the case here reported the abscess developed quickly, and the patient refused operation until she was almost asphyxiated. She was in a state of syncope and had ceased to breathe when the tumor was incised and a lot of pus welled out suddenly. She recovered consciousness after about a minute, and the wound was tamponed on account of profuse hæmorrhage. The wound healed by granulation and the patient was discharged cured in twenty days.

Hydatid Cysts of the Spleen. Recovery after Simple Exploratory Puncture.—Dr. Miceli Capurbano (*Gazzetta degli ospedali e delle cliniche*, February 22nd) had a patient, a woman aged sixty years, who showed a tumor in the left flank that reached almost to the iliac crest, was fluctuating, and movable from side to side. An exploratory puncture showed the presence of a watery fluid, which did not contain the parasites, but which had all the characteristics of echinococcus fluid. The cyst was situated in the spleen, as an examination of the surrounding organs excluded the presence of echinococci elsewhere. The noteworthy fact in this case was, that after the exploratory puncture, the cyst gradually disappeared, so that six months later no trace of it was left.

A Case of Bilateral Fracture of the Head of the Fibula.—Dr. V. V. Zender (*Roussky Vrach*, February 22nd) reports a very unusual case in which there was a simultaneous fracture of the fibulae on both sides. Unilateral fractures of the head of the fibula are rare enough, McCosh having found

that Dumollard, in 1882, had only collected twelve cases from literature. The author believes that a bilateral fracture of this kind has not been reported hitherto. The patient in the present case was a man aged twenty-eight years, who had been caught in the belt of an electric motor and twice turned over in the air, when the motor suddenly stopped. He was thrown to the ground upon his feet, the soles of his shoes being almost completely torn away by the violence. He lost consciousness and could not stand up when he came to himself. In spite of massage, baths, etc., he could not stand on his legs, and was referred for surgical treatment to the hospital. He was found to lie with knees flexed, with both feet flaccid and in the position of equinovarus. Thickenings were felt at the sites of the heads of the fibulae and these heads were found to lie at the external and posterior aspect of the condyles of the femora. The distance of the head of the fibula from the rest of the bone on the right side was two finger's breadths, and on the left, one finger's breadth. Both heads were slightly movable laterally, and on flexing the knees, there was a slight reapproachment of the fragments. Abnormal lateral movements of the knees could be obtained, sometimes accompanied by crepitus. Pain was felt on pressure behind the heads of the fibulae, and over the internal condyle of the right femur. The extensor muscles were paralyzed on both sides and sensation was abolished over the region of the fibular nerves, at the outer sides of the knees. Skiagraphy showed that the head had been splintered into three fragments on the right side and had been torn away as a whole on the left side. On operation it was found that the left nerve had been torn to fragments and that its ends could not be found. The bone was then sutured by means of two aluminum-bronze wires, uniting the two fragments. The limb was placed in plaster of Paris, and the dressing was removed after eight days, the skin sutures removed, and a new plaster of Paris splint put on. This was removed after two weeks, and the patient allowed to walk on splints. No improvement was noted in the paralysis, the foot continued to drag, and no bony union had been obtained up to the time of writing. The author calls particular attention to the mechanism of the injury, which was due in this instance to sudden hyperextension of the knee, without any traumatism directly applied to the bone.

The Electrothermic Angeiotribe in Lieu of Ligatures in the Open Operation for the Relief of Varicocele. By Orville Horwitz, B. S., M. D. (*Philadelphia Medical Journal*, March 28th).—Every experienced operator finds that occasionally the ligatures applied to the veins, in the open operation for varicocele, give rise to infection. This may be due, either to the difficulty of sterilizing the skin of the scrotum, or to the catgut ligatures not being thoroughly sterile. Any method of operating that promises a reduction in the number of such accidents should be welcomed. Dr. Horwitz reports one case operated upon with the electric angeiotribe as applied by Dr. Downes. The method of procedure is very simple. The dilated plexus of veins is first exposed and separated from the vas

deferens. It is next folded into a loop, so as to shorten the cord to the desired extent. The loop is grasped at its base by the angeiotribe and the current passed for forty seconds. The loop is then cut off above the jaws of the instrument. No sutures are needed to unite the proximal with the distal ends of the severed veins, since this has already been accomplished by the angeiotribe. Two silkworm gut sutures close the wound. The author considers the above the ideal method of performing the open operation for varicocele. The advantages of the Downes' instrument over the simple angeiotribe suggested by Freeman are thus summarized by the author: (1) The substitution of a more scientific, less crude, and less dangerous method than that depending on violent traumatism so as to produce hæmorrhage. (2) Less danger of secondary hæmorrhage. (3) Less danger from thrombus. (4) Operation is not followed by pain. (5) The use of the electrothermic instrument is not conducive to the production of orchitis, a condition commonly attending operations in the vicinity of the cord. The electrothermic angeiotribe has been used successfully in place of ligating the cord after castration, as well as for the resection of thickened and vascular sacs of large hydroceles.

Arthritis due to the Staphylococcus Pyogenes Aureus, Following Intravenous Injections, With out any Injury to the Joints.—Dr. Jietro Fiorentini (*Gazzetta degli ospedali e delle cliniche*, February 22nd) obtained a pure culture of *Staphylococcus pyogenes aureus* from the contents of a knee joint which was the seat of an acute suppurative arthritis. He inoculated this culture into the veins of rabbits of adult size, and produced an arthritis, although there had been no injury to induce the localization of the process in the joints. The author thinks that his experiments show that the staphylococcus which he dealt with possessed a specific selective property for the joints, because it was first obtained from the cavity of a joint. The author calls attention to the fact that, in a number of other instances, certain staphylococci obtained from a given lesion, manifested selective qualities for tissues similar to those from which they were originally obtained. Thus, for example, Dreschfeld, Gilbert, and Lyon obtained virulent staphylococci and colon bacilli from the vegetations of infectious endocarditis, and when these germs were grown in pure culture and the latter injected into animals they produced endocarditis. Similarly, Roux and Lannois produced a generalized glandular inflammation with a staphylococcus obtained from an adenitis, and the injection into animals of fragments of tuberculous glands produced a glandular tuberculosis not involving the viscera, and Charrin, Mosny, Gouget, and Josué isolated a streptococcus which had the tendency to become localized in the vermiform appendix producing experimental appendicitis. Very recently the following case was reported by Vaquez and Laubray (*Policlinico*, Suplemento, No. 11, 1903): Two sisters were infected with gonorrhœa by the same man. They both developed gonorrhœal arthritis, and the man who was the source of the infection was also found to have had the arthritic complication of his urethral trou-

ble. The author believes that these facts show that not only do certain tissues possess certain affinities for given germs, but also that certain germs elect special tissues as culture media, naturally selecting those tissues in which they have already become acclimatized. The affinity of some germs for some tissues may be compared to that of certain bacteria for certain laboratory culture media. This affinity of a germ for a special tissue, after it has been acquired may be perpetuated for a number of generations and become hereditary for this particular germ.

Mechanical Disinfection of Rubber Gloves.—Dr. O. Wandel and Dr. O. Hæhne (*Münchener medicinische Wochenschrift*, March 3rd) have demonstrated that rubber gloves previously infected can be superficially cleansed by scrubbing them thoroughly and energetically with soap and water, even when no brush is used. The hands should be rigorously disinfected, nevertheless, and to avoid tearing the gloves, they should be thoroughly powdered with talcum.

OBSTETRICS AND DISEASES OF WOMEN.

Secondary Perinæorrhaphy in the Puerperal Period.—Dr. G. E. Bohnstedt (*Journal Akouscherstva i Gienkich Boliesney*, December, 1902) reports ten cases of secondary perinæorrhaphy, performed during the puerperium, within two weeks after labor. In eight of these cases sutures were applied immediately after labor, but no union was obtained. In the other two cases no sutures were applied after labor, and the patients were operated on on the fifth and the thirteenth days respectively. In no case was there a complete failure after secondary perinæorrhaphy, although a relative failure resulted in four cases, of which three were referable to suppuration in the catgut sutures. The author operated upon all the cases of perineal tears that were found to be incompletely healed, and did not select cases in which the wound was covered with fresh granulations. He did not pay special attention to this circumstance, because he denuded the wounded surface very carefully, removing any false membranes that had formed. Evidently germs reached the denuded surface from these false membranes. Hence, the rule should be that a secondary perinæorrhaphy should never be performed until the wounded surface has not cleaned up completely. The operation must also be avoided if the woman is showing even a slight elevation of temperature, as its success is not probable in such cases. The author recommends the use of cocaine as a local anæsthetic in these operations.

The Treatment of Uterine Fibromyomata, with a Record of Twenty-eight Consecutive Abdominal Hysterectomies by the Supravaginal Method.—F. W. N. Haultain, M. D., F. R. C. P. Ed. (*Edinburgh Medical Journal*, March, 1903) asserts that the presence of a fibroid of the uterus, even though of considerable size, if it gives rise to no symptoms is no indication for treatment of any kind being adopted. The possible chance of its be-

coming malignant is so remote, that its removal from that aspect is totally unworthy of the slightest consideration; and should it begin at any time to give rise to symptoms, treatment can then be adopted as required. On the other hand, whenever marked symptoms appear, treatment is urgently demanded, as the general tendency is for these to continue and become aggravated unless the climacteric intervenes.

In the typical case of a patient aged thirty-five years, who is more or less invalided from menorrhagia, the result of an interstitial fibroid the size of an orange, it is extremely difficult to decide on the proper course to pursue. While we must admit that the chances are distinctly against her bleeding to death, a prolonged course of tinkering treatment, such as ergot, resting at the periods, hot douching, etc., is unworthy of our profession, and curative methods ought to be recommended in all such cases. Electrical treatment deserves much greater respect than is shown to it. Resulting, as it does, in a fair proportion of complete cures, it ought certainly to be advanced as an alternative to the more severe operative methods of treatment, in cases suitable for its adoption, and also where operation is absolutely repudiated by the patient. In unsuitable cases, such as submucous tumors, it tends to aggravate hæmorrhage by stimulating uterine contractions, which thus drive the growth more into the uterine cavity, but when used for interstitial tumors of medium size it seldom fails to prove beneficial. In many cases an accurate diagnosis of the variety of tumor can only be acquired by thorough dilatation of the cervix and digital examination of the uterine cavity. By this means many a uterus may be saved by the recognition of a stalked growth which can be easily removed, and the patient saved from undergoing a more dangerous operation.

Should operative measures be consented to, the alternative procedure of removal of the appendages or of the tumor by myomectomy or hysterectomy must be discussed; the former with a possibility of a 15 per cent. failure and a minimum of risk; the latter of an absolute cure but with a questionable 6 per cent. mortality. The author advises the radical method. Whatever method is followed by competent hands, the risk is now so comparatively small that it seems well worth taking, as an absolute cure can be guaranteed in almost every instance.

NERVOUS AND MENTAL DISEASES.

Spinal Concussion, So Called. By Carl E. Black, M. D. (*Medical News*, March 28th).—The author believes that there is no such disorder as concussion of the spine. A review of the literature on the subject shows that each author defines the condition differently, or at least gives a different description of the signs and symptoms which are supposed to pertain to the affection. If the term concussion were applied to the method by which the injury were produced, instead of also being applied to describe the results of the injury, much of the confusion now existing would be eliminated. At the present time the term concussion is made to denote a number of conditions which, judged purely by the descriptions and definitions of them put forward by different authors, should be classified under one or more of the following heads: Sprains of the

spine, shock and collapse; hysteria, either acute or chronic; neurasthenia; hæmorrhage into the cord or its membranes; effusion about the cord or its membranes; chronic myelitis; and malingering. The author further believes that a not inconsiderable number of cases of so called concussion are of a purely psychical nature and have no pathological underlying lesion. They are produced through autosuggestion at the time of the accident. The author suggests the following classification. Concussion; the way the injuries are produced. Results of concussion: (1) Primary results: (a) Sprain; (b) contusion of the spinal cord; (c) minute hæmorrhage into or around the cord. (2) Secondary results or complications: (a) Shock or collapse; (b) acute hysteria; (c) neurasthenia; (d) chronic hysteria. 'One or more of the primary lesions may, of course, coexist and, as a consequence, the secondary results may be far from simple. As a rule, hæmorrhage must be accepted as the basic lesion. When, however, it is possible to exclude hæmorrhage, sprain, and contusion, then the case is purely psychical and should be treated as such. Dr. Black, in his experience as a railroad surgeon, has found the whole subject of spinal "concussion" to be in a very unsatisfactory condition, both from the practical and from the scientific point of view.

Relations Between Epilepsy and Migraine.—

Dr. Wilhelm Strohmayer (*Münchener medicinische Wochenschrift*, March 10th) says that a review of his cases demonstrates the frequent coexistence of epilepsy and migraine. Usually, the epilepsy appears later than the migraine. He has found no cases on the border line, in which one of the conditions might be mistaken for the other. In instances where such a condition might have been possible, it was seen that the migraine was a symptom only of the underlying epilepsy or the epilepsy appeared as a new element in addition to the migraine. It is not always easy to decide in atypical cases whether epilepsy or migraine is the main pathological condition. A neuropathic predisposition is always present in these cases, and frequently secondary ætiological elements are present, syphilis, alcohol, and other intoxications, injuries, arteriosclerosis, excessive physical or mental efforts, etc.

MATERIA MEDICA, PHARMACY, AND THERAPEUTICS.

Some Therapeutic Applications of Cerebrine.

—Dr. Attilio Muzzarelli (*Gazzetta degli ospedali e delle cliniche*, February 22nd) reports the results which he observed with the use of cerebral extract, in the treatment of a case of epilepsy, a case of infantile convulsions, and a case of hysteria with dysmenorrhœa. He has also used cerebral extract in conjunction with testicular extract in the treatment of neurasthenia. The infantile convulsions occurred in a child aged seventeen months. The child was cachectic and had been subject to daily attacks of convulsions for several months. The results of injecting cerebrine in this case were remarkable. After the first injection, the accesses diminished in intensity; while, after the second, they disappeared completely. The child rapidly improved in intelli-

gence, though it had been previously very dull. The accesses did not recur. The patient with epilepsy was forty years old, and for twenty years had been having fairly frequent attacks of epileptic convulsions. After ten injections the frequency of the paroxysms diminished considerably. Unfortunately, the treatment could not be continued for any length of time, and the final result could not be judged. In the cases of neurasthenia the author obtained very favorable results, combining injections of cerebrine with testicular extract.

A Tuberculosis Antitoxine.—M. Guerder (*Revue de médecine*, March 10th) concludes that the active principle of cod liver oil, among other substances, is capable of neutralizing the arresting action of the toxines of tuberculosis upon phagocytosis, and of permitting the latter to continue. Its action is especially marked locally and it therefore constitutes an excellent method of treatment for local tuberculous processes. The systemic action is also remarkable when the substance is injected and appears to be consecutive to the local effect. The subcutaneous injection of this extract at the site of the lesions, will cure recent tuberculous infections without leaving any traces. It renders immobilization of affected joints a useless procedure and cures suppurative tuberculous conditions through evacuation of the morbid contents. It can also be successful when the patient is far advanced and is suffering from severe cachexia. Its mode of action is similar to that of Nature in effecting a spontaneous cure, by provoking the reaction against the tuberculous toxines in the healthy cells.

Treatment of Pneumonia with Toxic Doses of Digitalis.

—Dr. Adolfo Prandi (*Gazzetta degli ospedali e delle cliniche*, February 15th) studied the effect of large doses of digitalis in the treatment of pneumonia. Lucatello showed that digitalis acted as an antitoxine against the pneumococcus of Fränkel, and that it could be given in large doses in pneumonia with good effects. The present author treated six cases of pneumonia by this method, in which the diagnosis could not have been in doubt, owing to the clearness of the symptoms and physical signs. The ages of these patients varied between twenty and fifty-five years, and the patients had been previously healthy, none of them showing any previous affection of the circulatory system. Five of these patients were first bled to the extent of from 200 to 500 cubic centimetres; the sixth was not bled, owing to the fact that his arterial tension had not markedly increased, and the toxic symptoms were not accentuated. All the patients were given on the first day of the disease the following mixture: Digitalis leaves, 4 grammes (1 drachm) in 120 grammes (4 ounces) of water, to make an infusion. To this was added melissa water 80 grammes (2½ ounces); anisated ammonia water, 2 grammes (½ drachm); and syrup, 20 grammes (5 drachms). A teaspoonful should be given several times daily. In four patients this treatment was continued for three days; in four others for four consecutive days, so that the former took 12 grammes of the drug (3 drachms) and the latter 16 grammes of it (4 drachms) during this

period. In two of the patients, who had taken the lesser amount, there was a slight intolerance to the drug in the shape of nausea and diarrhœa. The drug was discontinued on the fourth day, not because there were any contraindications against its use, but because the symptoms were so far relieved that there was no longer any need to continue the medication. In almost all the cases the crisis ensued before the seventh day; in two cases on the sixth, in two on the fourth, in one on the fifth, in one on the seventh. Only in one case, that in which the crisis took place on the seventh day, did the pulse fail to react to the drug by being lessened in frequency. In some cases it was reduced to 40 beats a minute. This shows that the digitalis overcame the poisons of pneumonia. The patients were weak and anæmic when convalescence set in, so that strychnine had to be used, as well as other means of reestablishing nutrition and tone. The author insists that digitalis in high doses is really a specific against the pneumococcus of Fränkel, and that this mode of treatment is to be employed by preference in cases of lobar pneumonia.

Scopolamine — Morphine Narcosis.—Dr. L. Wild (*Berliner klinische Wochenschrift*, March 2nd) reports eight cases of narcosis by means of Schneiderlin's method.* The patients were all healthy individuals. In one case severe cardiac and respiratory disturbances appeared several hours after the operation. The time in which the drugs showed their effects, as well as the duration of their action, was very variable, nor did the length of the time of the narcosis bear any relation to the dose of the drugs. Ether frequently had to be given to secure the desired effects. Vomiting occurred in three cases. The author does not regard the procedure as a harmless one, especially in view of the considerable quantity of morphine required.

Dr. Schneiderlin (*Münchener medicinische Wochenschrift*, March 3rd) draws the conclusions from his experience that this method of anæsthesia has the disadvantage of not being certain and that hence time is lost in some cases, and that it is necessary to watch the respirations after the operation. Among the advantages, he mentions its lack of danger ordinarily, the dispensing with the services of the anæsthetizer, and the absence of psychical shock to the patient, who is probably familiar with the dangers of chloroform. He attributes lack of success to other operators in having administered the drug in too large doses, and in not waiting sufficiently long for the advent of the narcosis.

Leprosy; Its Treatment.—According to the statement made by M. F. Alfonso (*Revista Médica Cubana*, March 1st) 143 lepers were treated in the San Lazaro Hospital, in Havana, during the year 1902; and the latest statistics show the presence of 1,297 lepers in the Island of Cuba. Of this number it has fallen to the author's lot to treat a goodly share; and in his somewhat extended experience with leprosy subjects, he has found that the disease

is not highly contagious, and that, although the bacillus of Hansen is pathognomonic of the malady, the number of these microorganisms present bears no relation to the gravity of the patient's condition; the bacilli, in some severe cases, not being found in the serum extracted from the affected regions, and being isolated solely from the ulnar nerve, which in this affection is almost always indurated. On the other hand, the bacilli may abound in comparatively insignificant lesions. In the treatment of this condition, Alfonso has found proper alimentation and hygienic measures as potent for good as in tuberculosis, and believes that this disease is curable in the early stages as is that due to Koch's bacillus. This belief is borne out by his experience with a child who was cured, both from the clinical and bacteriological standpoint, after a year's care, supplemented by the administration of tannic acid, beginning with eight grains daily and increasing to sixty grains. Hot baths are, in his experience, a valuable adjunct to the treatment; these being given every night before retiring and being of fifteen minutes' duration. The tubercles yield promptly to the thermocautery or to the application of tincture of iodine; and ulcers to ointments of ichthyol, salol, or iodoform, the base of which is vaseline. The internal administration of oil of chaulmoogra has also been found serviceable, though it is sometimes difficult of assimilation.

The Action of Suprarenal Extract on the Animal Organism.—Dr. P. P. Bielavetz (*Roussky Vrach*, February 15th) concludes as follows concerning the physiological action of suprarenal extract as the result of an experimental study of the subject. The rise in blood pressure produced by suprarenal extract is due to a spasm of the blood vessels and the stimulation of the heart itself. The spasm of the vessels depends upon an immediate effect of the drug upon their walls. Suprarenal extract at first stimulates, and later paralyzes, the vagus nerve, but does not produce any effect upon the nerve endings thereof. In small doses it increases the gaseous exchange, while in large doses it markedly decreases it, thus lowering the temperature. The drug kills animals by paralyzing the respiratory centre. It acts as a depressant to the central nervous system. Suprarenal extract should be given very cautiously internally and subcutaneously, owing to the inconstancy of its action. Owing to the hygroscopic nature of suprarenal extract it is best to employ it in powders that have been previously weighed out, or in solution. The solutions do not perceptibly lose in strength after changing color. If the pulse increases in frequency after one internal dose of suprarenal extract, or after a subcutaneous injection, no additional dose should be given.

LARYNGOLOGY, RHINOLOGY, AND OTOTOLOGY.

A Demonstration of Some Experiments on the Nature and Specific Treatment of Hay Fever. By Sir F. Semon. (*British Medical Journal*, March 28th).—From his experiments the author draws the following conclusions: (1) There can be no doubt that Dunbar has succeeded in extracting from the

* This consists in the hypodermic injection of three decimigrammes of scopolamine and one centigramme of morphine; in from one to two hours, the injection is repeated and a deep narcosis results. Chloroform is given, if narcosis does not follow the second injection.

pollen of certain grasses (maize, wheat, rye, etc.) a toxine which, when instilled into the eyes or nostrils of people predisposed to hay fever, produces in these parts the characteristic subjective and objective symptoms of the disease. (2) The toxine, when injected into the eyes or nostrils of people not predisposed, produces in the great majority of cases, no symptoms whatever. But it certainly appeared as if there were instances of transition in which, although the persons experimented upon never suffered from typical hay fever, they were yet more susceptible to the influence of the toxine than the ordinary run of people. (3) The effects of the toxine in people suffering from hay fever are as variable in intensity as are the attacks of the affection itself, both with regard to the local and the constitutional symptoms. (4) Dunbar's antitoxine certainly produced immediate disappearance of the subjective, and after a few minutes, great amelioration of the objective, symptoms. (5) The mixture in equal parts of a toxic solution (1 in 500) and the antitoxic serum suffices to neutralize the specific effects of the toxine. (6) The effects of the antitoxine appear in some instances to be sufficient to prevent a reappearance of the subjective symptoms, while in other instances, repeated instillations of the antitoxine were required to produce ultimately the return to normal conditions. But all we know at the present is not sufficient to build therapeutic hopes on, and this for the reason that we are ignorant of the nature of the special predisposition which exists in hay fever subjects.

A Leech in the Trachea. Tracheotomy. Recovery.—Dr. G. Mollica, (*Gazzetta degli ospedali e delle cliniche*, February 22nd) reports the case of a boy, aged thirteen years, who was brought to the hospital in a state of asphyxia. This condition had come on suddenly, without warning, the boy having been previously perfectly well. The presence of spasm of the glottis being suspected, the boy was given a hypodermic injection of morphine, with the effect of arresting the spasm and relieving the symptoms. A few minutes later, however, a new and more intense paroxysm of asphyxia set in. The short time which had elapsed between the injection of morphine and the arrest of the symptoms, made the author suspect that there was a foreign body in the larynx. The second attack of spasm, indeed, ceased after a time, the boy becoming perfectly quiet and comfortable. A new attack set in, however, with increasing intensity, and tracheotomy was finally resorted to in order to save the patient's life. When the tube was inserted, the breathing became quiet, but after a time a new attack of asphyxia set in, with the tube in place. The tube was then withdrawn and a large leech was seen crawling in the cannula. It was removed from the cannula, and the latter was replaced, with the effect of securing perfect breathing. The patient was well in a few days. The author thinks that the effect of the morphine in this case should not be attributed to the action of the drug, but to the change of position of the leech which crawled about in the boy's windpipe, giving him at times enough room to breathe, at times not. Tracheotomy should be performed in all cases in which a man is menaced with

suffocation from some unknown cause, for, if the diagnosis of a foreign body is erroneous, no harm is done, and if it is correct the life of the patient may be saved.

Suppuration of the Frontal, Ethmoid and Sphenoid Sinuses. By Edgar M. Holmes, M. D. (*Boston Medical and Surgical Journal*, March 19th and 26th).—Dr. Holmes first considers the anatomy of the accessory sinuses and calls special attention to their various outlets, since these are of the first importance, both in diagnosis and treatment. All the sinuses are lined by a thin mucoperiosteal membrane, with a layer of ciliated epithelium upon the surface. Following the study of the anatomy of the sinuses the author discusses sinus affections under the following heads: (1) *Ætiology*. (a) Anything that impairs the general health and lowers vitality; (b) infection by any of a numberless host of microorganisms. (2) *Pathology*. The pathological conditions are those that can be found in the mucous membranes of any other part of the body. If the inflammatory process should last for a sufficient length of time, then the underlying bone will become involved and necrosis will follow. The discharged pus may infect the nasopharynx, and the Eustachian tube and middle ear may become secondarily infected. (3) *Symptomatology*. The symptoms vary greatly in character and severity. A suppurative process may be present in one or more of the nasal sinuses without giving rise to symptoms of sufficient severity to arouse the patient's attention. Excessive secretion of various character, is not infrequent. Pain is a very irregular symptom. It is usually worse in the morning. Its localization depends, to a considerable extent, on the sinus affected: (a) In frontal sinus disease there is a sense of pressure at the base of the nose, over the eyes, and occasionally there is pain about the temples. (b) In ethmoidal disease there is pain and pressure about the eyes, the pressure often being complained of as deep in the head. Occasionally pain is complained of in the temples, forehead or occiput. (c) In sphenoidal disease the pain is deep and boring, and there is also nearly always pain in the occiput. In addition to what may be called the strictly local symptoms there are usually a number of secondary ones. Mental depression is often very marked. The eyes are often complained of and many eye symptoms, such as strabismus and ptosis, may be present. (4) *Diagnosis*. It is often easier to suspect suppuration of one of the accessory sinuses than it is to prove it. The best aids to diagnosis are: (a) Transillumination. A valuable, though at times, misleading, aid. (b) Inspection. This should be done first without clearing the nose, and then with a clean nose and under cocaine. If pus is found one must endeavor to ascertain its origin, and even when this is not possible, its location will, as a rule, point to one or other of the sinuses as the seat of trouble. If there are distressing symptoms, together with a purulent discharge of unknown origin, it is justifiable to remove the whole of the middle turbinate in order to obtain a better view. (c) The probe and cannula. With either of these instruments valuable data can often be obtained. (5) *Treatment*. The fundamental principle of treat-

ment is free drainage. All abnormal growths must be removed, and if necessary, the middle turbinate should also be removed. Following this, either the normal openings leading to the various sinuses must be enlarged, or new openings must be made. The author discusses in some detail the best ways of operating by either method and gives an outline of the necessary after treatment. (6) *Prognosis*. This is discussed at some length and the author gives some statistics based on his own results.

HYGIENE AND SANITARY SCIENCE.

The Negative Side of Sterilization of Milk in the Artificial Feeding of Infants.—Dr. N. P. Daniloff (*Roussky Vrach*, February 15th) concludes, after a critical study of this subject, that the disadvantages of sterilizing milk in the artificial feeding of infants lie chiefly in those changes effected in milk by high temperatures. These alterations are not only chemical, but also physical, and are so profound and important that they interfere seriously with the absorption and assimilation of the milk. A prolonged feeding with sterilized milk not only destroys the balance of nitrogenous metabolism, but also interferes with the growth of the body, all the more because the salts are changed in character by sterilization, and so an insufficient amount of the salts necessary for nutrition is absorbed. Sterilized milk, therefore, induces a defective development of the body and renders it more susceptible to the invasion of diseases, especially to maladies of the blood, the general metabolism and constitutional diseases. These facts, the author believes, should be sufficient to relegate sterilization to the past.

OPHTHALMOLOGY.

Endogenous Infection as a Cause of Diseases of the Eye.—Dr. I. V. Zelenkovsky (*Roussky Vrach*, February 15th), in a clinical lecture delivered recently at St. Petersburg, called attention to the various infectious diseases of the eye that could arise through the transmission of germs from within the eyeball through the general circulation. While this subject is as yet but imperfectly developed, yet a certain amount of experimental work has been done, which throws some light on the question as to the ætiology of endogenous infections of the eye. The author reviews the work embodied in four recent experimental studies on the subject, and finds that 150 experiments were recorded in these studies (Panas, Moll, Voitsekhsy, and the author himself). His conclusions were as follows: The normal exchange in the aqueous humor, its unfavorable character as a culture medium, and the early onset of leucocytosis are all factors which protect the anterior chamber of the eye against the invasion of germs within the eyeball. The posterior chamber of the eye is more difficult to reach for the bacteria, but is a more favorable culture ground for them. Irritation and traumatism of the eye favor the penetration of slightly pathogenic bacteria into the aqueous and vitreous humor, which are ordinarily reached only with difficulty by germs circulating in the blood. Very virulent infections are apt to affect both chambers of the eye. The more or

less marked virulence of an endogenous eye infection, when the initial cause is the same, is explained in all probability by the fact that in slight cases the primary focus is in the anterior chamber, while in severe cases it is in the posterior chamber. The rarity of severe endogenous infections of the eye is explained by the difficulty of infecting the posterior chamber. Endogenous infection apparently does not play any rôle whatever in the production of sympathetic ophthalmia.

School Epidemics of Trachoma.—Dr. H. Zia (*Münchener medicinische Wochenschrift*, February 17th) advises that teachers be instructed in the practice of prophylaxis of the contagious eye diseases. Affected children should be isolated, and schools should not be closed, but should be kept open under medical supervision. All conjunctivitis cases are not trachomatous, and under proper conditions in the schools, trachoma will not be likely to be spread. Prophylactically, cleanliness in the school should be enforced, as by frequent washing of the hands, the cleansing of the desks, etc.

PHYSIOLOGY AND PATHOLOGY.

The Knock-Out Blow on the Point of the Jaw. By J. G. Duncanson, M. B. (*British Medical Journal*, April 4th).—The most effective blow of the fist with which one pugilist "knocks out" another is that delivered on the point of the jaw. It is practically never fatal, and requires no great amount of strength, yet a man receiving such a blow instantly collapses, falls to the ground, and becomes unconscious. The author holds that its effects are not due to concussion or shock, but to a sudden rotatory movement imparted to the endolymph in the semi-circular canals of the ear. The nerve endings are stunned by the sudden impact of the endolymph, the power of sustaining equilibrium is hopelessly lost, and the man falls to the ground unconscious. The blow must be such as to impart a rotatory movement to the head, or head and body.

Theories of Immunity and Their Clinical Application. By Dr. A. S. F. Grünbaum. (*Lancet*, March 21st, 28th, and April 4th).—The Goulstonian Lectures. [These important and interesting series of articles will be abstracted in a forthcoming special article on Ehrlich's theory of immunity.]

Note on the Changes in the Red Cell Produced by the Malignant Tertian Parasite. By Dr. J. W. W. Stevens and S. R. Christophers, I. M. S. (*British Medical Journal*, March 28th).—The stippling of the red cell (Schüffner's dots) produced by the simple tertian parasite is well known. The author calls attention to the fact that the stippling in cases of malignant tertian malaria is quite distinct from, though probably of similar character to, that seen in simple tertian. In malignant tertian the staining dots are few in number (two to six), and are coarse in size and irregular in outline. In addition the red cell as a whole may stain with Romanowsky a peculiar deep yellowish-red color, quite different from the non-infected cells.

Letters to the Editor.

THE JEWS AS IMMIGRANTS.

NEW YORK, April 8, 1903.

To the Editor of the NEW YORK MEDICAL JOURNAL:

Sir: In the *New York Medical Journal* for April 4th Dr. Maurice Fishberg displays in his communication on The Jews as Immigrants an unusual facility in disputing facts which he himself has been at considerable pains to set forth. I quoted all of his statements regarding the physical inferiority of the immigrant Jew without comment, and I have not, as he alleges, considered mere shortness of stature to be a sign of deficient vitality. Dr. Fishberg has shown, however, that the immigrant Hebrew is wanting in other respects than in height, and I think it will be generally conceded that anæmia, a narrow chest, and a poor muscular development are indications of a lack of bodily vigor, and, conversely, that the possession of a good physique is one of the elements of health. It is hardly fair to apply the casual observations which Mr. Herbert Spencer has made on the exaggerated devotion to athletics among robust Englishmen of the leisure class to our defective immigrant population, among whom entirely different conditions prevail. When the Jewish immigrant forsakes his sweat shop for the cricket field, and the modern representative of the nation of Milo abandons his push cart for the prize ring or golf links, it will be time enough to issue a note of warning against the dangers of the athletic heart, and to declare that "brute force is not required as a weapon in the struggle for existence."

I regret that, in this discussion, an attempt has been made to inject an animus which I do not feel, and I must positively disclaim any discrimination against Jews which Dr. Fishberg may be inclined to attribute to me. I have not accused "these people of disseminating tuberculosis in the city," except in so far as they with other nations have contributed to the stream of illiterate, diseased, and impoverished immigration which many good observers believe to be detrimental alike to the health and institutions of the country. It may be doubted, however, that the mortality statistics of the health department afford a sufficient measure of the prevalence of tuberculosis among the Hebrew population of New York city. In my experience tuberculosis is less fatal in the Hebrew race, and often assumes a more chronic and less dangerous form than among other peoples. In the Irishman or negro, tuberculosis of the lungs is rapidly progressive and results in the death of the patient more frequently than in the case of the more resistant Hebrew. The greater chronicity and diminished mortality of his disease in the consumptive Jew may, however, render him a more dangerous source of infection to others than tuberculous individuals of less favored races, unless he is scrupulous in observing a careful hygiene. The admirable observations of Dr. Fishberg and the valuable reports of the United Hebrew Charities have done much to make known the true condition and character of the Jewish immigrant population in this city. No similar service, so far as I am aware, has been rendered for other nationalities. Were like deductions and figures available for other

racés, I would gladly have incorporated them in my recent article on Immigration a Factor in the Spread of Tuberculosis in New York City. Carefully collected sociological data of this character regarding other immigrant nationalities would, I am convinced, only serve to strengthen the position of those who believe that restriction of immigration would be an unqualified benefit to this city.

HENRY L. SHIVELY, M. D.

THE PASSING OF THE CORONER.

NEW YORK, April 15, 1903.

To the Editor of the NEW YORK MEDICAL JOURNAL:

Sir: Of all a community's offices, that of coroner seems at the present time to be least based upon a public want. Relic of mediæval times, this office, originally filled by appointment from the crown, has come in our day to be but a step in the political treadmill machine. The danger in the office, aside from its uselessness, lies in the fact of the proneness of the official to overstep his duties. The legal aspect of the coroner is that of an inquirer into the conditions surrounding a violent death; the powers assumed, almost without exception, are those of a judge. As physicians we are more than any other class of individuals subject to the action of this official, and it behooves us to unite for the removal of this clog. Through the direct channel of the district attorney's office, aided by the discriminating knowledge of the health board, we have a short route to the investigation of death by crime.

The coroner, possessed of neither a knowledge of law nor that of medicine, becomes truly a sorry figure of twentieth century civilization.

FREDERIC GRIFFITH, M. D.

Book Notices.

Arbeiten aus dem pathologischen Institute zu Helsingfors (Finland). Herausgegeben von Professor Dr. E. A. HOMÉN. Die Wirkung einiger Bakterien und ihrer Toxine auf Verschiedene Organe des Körpers. Mit 13 Tafeln. Helsingfors: Druckerei der finnischen Litteraturgesellschaft, 1902. Pp. iv-220.

This book contains seven separate articles embodying the results of research work done in the Pathological Institute of Helsingfors during the last eight years. The work was carried on partly by Professor Homén himself, and partly by his assistants under his direction. Its aim is the study of the effect of certain bacteria and their toxins upon various organs of the body.

The studies have apparently been very carefully conducted, with the proper scientific spirit of investigation, and an attempt made to eliminate all sources of error. The bacteria used for purposes of injection were as follows: *Staphylococcus pyogenes aureus*, *Diplococcus pneumoniae*, *Bacillus coli*, *Bacillus typhosus*, and a form of proteus. Over a thousand rabbits were required to complete the studies.

Dr. Homén's article gives a detailed account of researches upon the effect of certain bacteria and

their toxins upon the peripheral nerves, spinal ganglia, and spinal cord. His experiments and the methods employed are minutely described, and the microscopic appearances are illustrated by three large plates.

Of interest both to the surgeon and to the physician is the work of Dr. Ernst Ehrenrooth, the results of whose experiments on trauma as a predisposing factor in the pathological changes in the brain caused by bacteria, form the basis of the second article. Some of the conclusions drawn from his experiments are as follows: (1) Trauma upon the head is a predisposing condition for bacterial invasion of the brain or its membranes in rabbits injected with cultures of streptococcus, staphylococcus, pneumococcus, or *Bacillus typhosus*. (2) The degree of inflammatory change is to a great extent determined by the severity of the traumatism. (3) The probabilities of local infection are greater the less the interval between the time of the traumatism and that of the infection. (4) The circulatory disturbances produced by the trauma are apparently the chief pathological predisposing factors. (5) The brain substance itself is an unfavorable pabulum for the growth of bacteria.

Dr. Max Björkstén, who studied the effect of certain bacteria and their toxins upon the liver, also discusses some interesting points. Among other things he was able to show that streptococci and staphylococci could appear in the bile, and that cirrhosis could be produced experimentally in rabbits by streptococcus injections into the ductus choledochus communis. As regards the pathological changes in cirrhosis, he leans to the view that there is a primary degeneration of the liver cells which is followed by the formation of connective tissue; that the productive inflammation, however (which he considers reparative in nature), continues and in its turn causes compression atrophy of the healthy liver parenchyma.

One of the most important of these investigations is that conducted by Dr. Oswald Streng, on the effect of certain bacteria and their toxins upon the kidneys. The question as to whether bacteria can pass through the intact kidney epithelium is emphatically answered in the negative. Rabbits were injected intravenously with bouillon cultures of various bacteria. In the animals without pathological changes in the kidneys he was unable to cultivate bacteria from the urine. The probability of contamination is reduced to a minimum in his work, as the urine was not obtained by catheter, but directly from the bladder after killing the animal.

In the volume there are two short and incomplete investigations concerning the lungs and muscles. On the whole, the volume is an excellent exposition of the very admirable work that is being done in the Pathological Institute in Helsingfors.

The Mind of Man. A Textbook of Psychology. By GUSTAV SPILLER. London: Swan, Sonnenschein & Company. New York: The Macmillan Company, 1902. Pp. xiv+11 to 552. (Price, \$2.75.)

This work is, in a sense, a new departure in the study of psychology. It is an attempt largely to apply the method of introspection to the investiga-

tion of mental phenomena. The Herbartian school is almost entirely disregarded. There are no mathematical data in the volume, or measurements of time reaction. The various mental processes are described in as simple and straightforward a manner as is possible. At every step the author's line of reasoning is illustrated by examples taken from daily life, which cannot help appealing to the understanding of every layman. In fact, the book is written so lucidly that, unlike most psychological treatises, it does not require exhaustive preparation in philosophy and logical thought. It is very entertaining, which is saying much for a book on such a subject.

It cannot be said to be a popular work in the sense of superficiality, for it is extremely critical, and the author tries to treat every question and fact from all points of view. The organic conception of the life of thought and action is the mainspring of the book. Spiller is somewhat of an iconoclast. He rejects the commonly accepted mechanical view of association for the teleological view of Paulhan. Actions are determined by ends. "Each fraction of thought is not determined primarily by its predecessor, but by the end in view." Novel features are the chapters on the nature of genius, with special reference to Shakespeare, the nature of dream life, including Spiritualism and the problem of æsthetics.

The work is designed especially for students, and hence the text is filled with quotations from psychologists, and throughout there is constant reference made to original sources. A complete bibliography adds greatly to the value of the volume to any one desiring to pursue investigations in this field of knowledge.

A Manual of Materia Medica and Pharmacology, comprising all Organic and Inorganic Drugs which are or have been Official in the United States Pharmacopœia, together with Important Allied Species and Useful Synthetics, especially Designed for Students of Pharmacy and Medicine, as well as for Druggists, Pharmacists, and Physicians. By DAVID M. R. CULBRETH, Ph. G., M. D., Professor of Botany, Materia Medica, and Pharmacognosy in the Maryland College of Pharmacy, etc. Third Edition, Enlarged and thoroughly Revised. With Four Hundred and Seventy-three Illustrations. Philadelphia and New York: Lea Brothers & Company, 1903. Pp. 7 to 916.

The author has thoroughly revised the entire book, and has added everything which is at all necessary to the student of this subject. The outlined list of the proposed official drugs for the forthcoming pharmacopœia has been used as a guide, accepted drugs being treated prominently, while discarded ones are considered briefly.

The drugs are grouped, whether organic or inorganic, as nearly as possible, according to their origin. Most careful attention has been paid to the pronunciation and definition of terms. The book is rich in illustrations, especially of the plants from which drugs are derived. The descriptions are most concise, yet complete. Enough is given of the physiological action and the therapeutics, in each instance, to render the subject interesting to the

student. The book includes a chapter upon the microscope and accessory apparatus and reagents used in the study of *materia medica*. The appendix contains a list of poisons, with antidotes, a short article upon prescription writing, etc.

As a ready reference book, this work cannot be recommended too highly.

La gymnastique de chambre sans appareils. Avec 32 figures explicatives. Par le Docteur de FRUMERIE, de la Faculté de Médecine de Paris, etc. Paris: A. Maloine, 1903. Pp. 5 to 106.

The subject of room gymnastics without apparatus having recently become very popular, this small volume appears quite opportunely. It deals ably with the more important gymnastic movements useful as therapeutic agents, and includes a few introductory remarks upon their physiological action.

The book contains numerous photographs which illustrate the text, and render it thoroughly comprehensible. A list is appended including the diseases that may be relieved by gymnastic exercises, with the various movements to be employed in each case. To both practitioner and layman this little book will be found of distinct value.

BOOKS, ETC., RECEIVED.

Recherches cliniques et thérapeutiques sur l'épilepsie, l'hystérie et l'idiotie. Compte-rendu du service des enfants idiots, épileptiques et arriérés de Bicêtre pendant l'année 1901. Par Bourneville, avec la collaboration de MM. Ambard, J. Boyer, Crouzon, L. Morel, Paul-Boncour, Philippe et Oberhur. Volume XXII. Avec 14 figures dans le texte et 16 planches. Paris: Felix Alcan, 1902.

Les obsessions de la psychasthénie. Par le Dr. F. Raymond, Professeur de cliniques des maladies du système nerveux, etc., et le Dr. Pierre Janet, Professeur de psychologie au Collège du France, etc. Avec 22 figures dans le texte. Paris: Felix Alcan, 1903. Pp. xxiv-542.

Lectures on the Use of Massage and Early Passive Movements in Recent Fractures and other Common Surgical Injuries. By Sir William H. Bennett, K. C. V. O., F. R. C. S., Senior Surgeon to St. George's Hospital, etc. Second Edition. With 17 Illustrations. London, New York, and Bombay: Longmans, Green & Company, 1903. Pp. x-115.

Reports of the Society for the Study of Disease in Children. Volume II. Session of 1901-1902.

The Johns Hopkins Hospital Reports. Volume X. Nos. 6, 7, 8, and 9.

Miscellany.

Increase in the Medical Corps of the Navy.—We have been requested by the Surgeon-general of the Navy to publish the following:

The Fifty-seventh Congress in its last session provided for an increase of 150 numbers in the medical corps of the navy, 25 of which are to be appointed each calendar year for six years. By the enactment of this law there is afforded to the young physicians of the country an opportunity to take service in the navy of the United States and an assurance of the continuance of this opportunity for the next six years. The number of vacancies in this corps occurring from retirements, resignations, and casualties averages about ten a year, which, added

to the 25 created by new legislation, make 35 appointments open to ambitious young medical men yearly.

These appointments are to be made in the grade of assistant surgeon and are within the reach of any well-qualified physician between the ages of twenty-one and thirty years who is a citizen of the United States. Examinations to determine the fitness of candidates for appointment are held in Washington, D. C., and at Mare Island, Cal., and the boards of examiners are in continuous session throughout the year. It is only necessary for any physician of the required age and citizenship desiring to enter the medical corps of the navy to apply to the secretary of the navy for permission to be examined, to insure being given an opportunity. No political or other influence is required, and the only testimonials needed are those bearing on moral standing and citizenship.

The examinations to determine the fitness of candidates for these appointments are conducted in the following order: (1) physical, (2) professional, (3) collateral.

The physical examination is thorough, and the candidate is required to certify, on oath, that he is free from all mental, physical, and constitutional defects. Acuteness of vision $\frac{12}{20}$, for each eye unaided by glasses, but capable of correction by aid of lenses to $\frac{20}{20}$, is obligatory. Color perception must be normal and the teeth good. If the candidate is found to be physically disqualified his examination is concluded. If found to be physically qualified his examination is continued, as follows:

(1) Letter to the board describing in detail his general and professional education.

PROFESSIONAL EXAMINATION.

	Written questions.	Percentages required.
Anatomy (2) and physiology (1)	3	80
Surgery	3	85
Medicine	3	85
Pathology (1) and microscopy (1)	2	60
Obstetrics (1) and medical jurisprudence (1)	2	60
Materia medica and physiological action of drugs	2 ^a	80
Chemistry (2) and physics (1)	3	60
Hygiene (1) and quarantine (1)	2	80
General aptitude	.	80
Literary and scientific branches	.	80
Required aggregate	.	750

Bandaging; tourniquets; four operations on cadaver; clinical cases (a written report being made in one case, giving history, diagnosis, prognosis, treatment, one prescription, at least, being written out in full in Latin); uranalysis (chemical and microscopical examination of one specimen of urine); practical microscopy, and recognition of five mounted specimens (histological, pathological, and bacteriological); recognition of surgical instruments.

ORAL EXAMINATION.

This follows the written work in each branch and the required percentage is made up from the combined results of the written and the oral examinations.

The percentages given are not absolute, however, as losses in some branches may be made good in others, provided the standard is reached in the car-

dinal subjects of anatomy, physiology, medicine, and surgery.

COLLATERAL EXAMINATION.

This embraces spelling, punctuation, the use of capital letters, grammar, arithmetic, geography (descriptive and physical), languages, history, general literature, elementary botany, geology, and zoology. While due credit is given for a knowledge of languages and the sciences, it is not essential except in the case of physics. A knowledge of the common school branches is essential, and deficiency in this respect will cause rejection, even though passing marks may be gained in professional subjects.

These examinations, while necessarily thorough and comprehensive, are simple and practical, and are not beyond the attainments of any well-educated physician. The oral and written questions are similar to those asked by the best medical colleges in examination for graduation.

The future prospects of the medical officer of the navy, both for promotion and professional opportunity, are very bright, and the plan of enlargement of the naval establishment already adopted and authorized, as well as that in contemplation, gives assurance that this outlook will grow even more promising.

The medical corps of the navy consists to-day of the following numbers and grades: One surgeon-general with the rank of admiral (equivalent to brigadier-General in the army); 15 medical directors with the rank of captain (equivalent to colonel in the army); 15 medical inspectors with the rank of commander (equivalent to lieutenant-colonel in the army); 85 surgeons with the rank of lieutenant-commander (equivalent to major in the army); 23 passed assistant-surgeons with the rank of lieutenant (equivalent to captain in the army); 56 assistant-surgeons with the rank of lieutenant, junior grade (equivalent to first lieutenant in the army), with 152 vacancies. There are 27 vacancies in the grade of assistant-surgeon for the year 1903.

Assistant-surgeons, after three years' service as such, will be eligible for promotion to the next higher grade—that of passed assistant-surgeon—and from a study of the above table it may be observed that the small number of passed assistant-surgeons insures promotion to the middle grade—that of surgeon—after a short period of service. To illustrate, the junior officer of the grade of surgeon to-day has reached this grade after less than five years' service and is in receipt of a salary of \$3,000 per annum. While this is somewhat exceptional, the prospects of promotion to this grade for the assistant-surgeons now entering the service are very nearly as good.

The following is the pay table of the medical corps of the navy:

	At sea.	On shore.	Allow- ances per annum.*
Assistant surgeons, rank of lieutenant (junior grade)	\$1,650.00	\$1,402.50	\$288.00
Passed assistant surgeons, rank of lieutenant	1,980.00	1,683.00	432.00
After five years in the service	2,160.00	1,836.00	432.00
After ten years in the service	2,340.00	1,989.00	432.00

* Only when quarters are not furnished by the Government. Eight cents a mile is the allowance when traveling under orders.

Surgeons, rank of lieutenant-commander—			
After ten years in the service	3,250.00	2,762.50	576.00
After fifteen years in the service ...	3,500.00	2,975.00	576.00
Medical inspectors, rank of commander—			
After fifteen years in the service...	4,000.00	3,400.00	576.00
Medical directors, rank of captain—			
After fifteen years in the service	4,500	3,825.00	720.00
Surgeon-general, rank of rear admiral	5,500.00	5,500.00	720.00

The professional opportunities afforded the officers of the medical corps are very good at present, and are constantly improving. The first assignment to duty of a newly appointed assistant-surgeon is usually to some one of the fourteen naval hospitals, where he remains until the opening of the course at the Naval Medical School in Washington, early in October. At the naval hospitals the service is most instructive and valuable, the larger of these institutions having a capacity of from 150 to 200 beds, and at most times carrying a full quota of patients. The medical school is essentially a post-graduate school, designed to fit the young officer for the intelligent application of his professional knowledge to the requirements of the naval service, and to give him a training in certain specialties peculiarly important to naval work and in which he has not had the opportunity or time to perfect himself in his college course. The course of instruction comprises the following subjects: Military medicine, military surgery, tropical medicine, naval hygiene (its chemistry and biology) quarantine, the duties of medical officers, hospital corps, drill and administration, ophthalmology, naval law, manual of the sword and extracts from tactics, instructions in signals. Bacteriology, blood examination and the study of animal parasites form very important branches of this course, and are given in one of the most modern and fully equipped laboratories in this country. Five months is devoted to this school work, and after its completion the assistant surgeon is assigned to sea duty. Here, again, his work follows the line of advanced medical and surgical procedure. He is provided with the latest and best instruments of precision and operation, and is given every encouragement to perfect himself in the practice of his profession. The most recently constructed battleships and large cruisers are equipped with hospital facilities equal to those found in most of our best organized small cities. Vessels of this type carry a crew of from 600 to 700 men, and for the care of the sick of these small villages afloat, there is furnished for the medical officer a small hospital of from 20 to 30 beds, an isolation compartment, a dispensary, and an aseptic operating room. These are equipped with every modern appliance for the prevention of disease, the care of the sick and wounded, for operative procedure, and for the prosecution of scientific investigations as far as practicable aboard ship. Other duties to which naval medical officers are assigned are those pertaining to the needs of navy yards, naval stations, receiving ships, and recruiting work. Opportunity frequently occurs also for attendance of medical officers upon the meetings of medical and other scientific societies both at home and abroad, as the accredited representatives of the navy department and the government.

Priapism Extraordinary.—Dr. Elmer Sothoron (*Virginia Medical Semimonthly*, January 9th) reports the case of a clerk, aged twenty-seven years,

whom he was called to see in consequence of a persistent priapism. On inquiry, he found that the beginning of the erection dated back about six days previous. The patient awoke early in the morning and found his penis strongly erect, in which condition it had continued ever since. He had used almost every remedy suggested by his friends and by various druggists, and had even tried sexual intercourse; but, to use his own words, "the more he used it, the harder it got." There was no history or evidence of disease, save a gonorrhœa about three years previously. Four sounds, the largest being No. 12, American scale, passed easily, thus excluding stricture. Bromide, iodide, morphine, opium, and even chloroform, failed to relax the spasm. Incisions were then made into the perinæum on each side of the urethra, in search of pus, but none was found. The fibres of the suspensory ligament of the penis were next divided, in the hope of relieving the venous constriction, but without result. Finally, incisions into the corpora cavernosa were made on both sides near the root of the penis. The author did not see these operations, which were done by Dr. W. C. Carr, but contrary to Dr. Carr's opinion, he did not notice any material softening of the organ, or any relaxation from its previous state of erection when he saw the patient two days later. Two weeks later still, on the patient's return from the hospital, Dr. Sothoron found the penis in about the same condition as previously. The patient then left Washington; but about four months after that time the doctor heard, through his patient's brother, that he was in a hospital in Philadelphia, suffering from the same complaint.

A Form for Recording Case Histories.—

In an article entitled *Observations on the Subject of Diagnosis*, Dr. Addison W. Baird, of New York, publishes in the February number of the *Alkaloidal Clinic* the following form for a record of case histories:

Name, address, date, number.

Personal statement: Age, occupation, married, children, youngest, habits, alcohol, tobacco, venereal, etc.

Family History: Including chronic diseases, rheumatism, tuberculosis, cancer, etc.

History of Previous Disease: Childhood, adult age.

Onset of this Disease: First symptom noted, subsequent history.

Present Symptoms: Pain, tenderness, swelling, headache, sleep, nerves, mental state, appetite, diet, stomach, bowels, urination, fever, chills, sweat, cough, expectoration, hæmorrhage, loss of flesh, of strength, heart and circulation, genital, menstruation, discharges.

Chief Complaint:

Physical Examination: Height, weight, etc., head, face, eye, ear, nose, mouth, tongue, throat, neck glands, skin, eruption, glands elsewhere, tenderness, swelling limbs, joints, temperature, hour.

Pulse: Frequency, regularity, volume, tension, state of arteries and veins.

Heart: Apex, dilated, hypertrophied, sounds, friction, murmur.

Respiration: Rate, character, amount and symmetry of movement.

Chest: Palpate, percuss, auscult for friction, râles, breathing, voice.

Abdomen, stomach, liver and gall bladder, intestines, kidneys, spleen, bladder.

Genital organs.

Tests: Nervous system (in special cases).

Laboratory: Urine, blood, sputum, fæces, vomitus.

Touching as a Mode of Healing.—Most people are familiar with the old-time practice of "touching for the King's evil," but aside from this, the belief in the efficacy of touching by certain persons as a therapeutic measure existed in many ages and places. On this point, as on many others of interest to physicians, much entertaining reading may be found in the *Athenian Oracle*. This *Athenian Oracle* was a collection "of the most valuable questions and answers" that had appeared in the defunct *Athenian Mercury*, the first of the popular journals, published in England between March 17, 1690-91, and June 14, 1697, on which date the last number (No. x of Vol. xx) appeared. The *Athenian Mercury*, or *Gazette* as it was first called, was issued with the purpose of "resolving weekly all the most nice and curious questions propos'd by the ingenious." Very shortly after its institution the name *Gazette* was ("to oblige authority," as we are told) changed to *Mercury*. Questions of science, religion, history, ethics, manners, and in fact of every imaginable kind, were "resolv'd" therein, and selections of a few pertaining to medical matters may prove not uninteresting to our readers. Here is one on touching for the King's evil: "Q. What are we to think of the Kings of England who by their touch only cured the Evil? A. They themselves healed not, but God—according to the words used by the Bishop, viz., *the King touches, but God heals*; so that we ought not to ascribe such cures to any natural causes; though in history we meet not only with private persons but whole families that have a particular gift of healing such and such distempers, and of others that could inflict such and such distempers. Of the last it is related of the Psylli, Tribales, and Illyrians, who bewitched whom they touched; and Philostratus makes mention of one in the Life of Apollonius, who killed by his very aspect as the basilisk does. Of the former Vespasian, as Tacitus affirms in his fourth book of his Histories, restored to a blind man his sight. Adrian, as Aelius Spartianus relates, healed a man born blind only by touching him; and Plutarch mentions that Pyrrhus, King of the Epirotæ, healed all that were troubled with the spleen in his time by touching their spleen with the great toe of his foot; of which toe there was a far greater opinion conceived after his death, in that it was found entire and not consumed by the fire as all the rest of his body was. 'Tis related that the family of St. Hubert in France heal such as are bitten by mad dogs. In Italy the family of St. Paul and St. Catherine do as strange things, the first curing the stings of serpents, and the last cure burning, and handle burning coals themselves without any hurt at all. In Spain, the families of

the Saludators and the Ensalmadores have the gift of healing many (otherwise) incurable diseases only by touch; some of which instances being done by ill persons, 'tis supposed were assisted by the devil, God Almighty sometimes permitting strange things to be done for secret reasons best known to himself."

The Anatomical Seat of the Soul.—One of the above referred to "ingenious" querists having asked "whether the seat of the soul be in the Glandula Pinealis?" is answered as follows: "That the soul operates in the head in another manner than in any other part of the body, and that the function of thinking or reasoning is performed there, our very senses do almost teach us by that sort of pain which we feel there, after any intense meditation; as we have formerly observed. There we say it must be, because there it operates, one of which unanswerably follows upon the other. But how it is, we are as much to seek as how it operates, and where as how, if the precise point, or place, be demanded. Monsieur des Cartes' opinion was generally embraced in the last age, who finding that small gland in the head, which had no use by anatomists assigned thereto, he concluded it the principle and immediate seat of the soul; but later anatomists have since found a much lower office for it, and that fancy of his is as much decried as it was heretofore almost universally embraced."

Lung Surgery: Historical and Experimental.
By Benjamin Merrill Ricketts, Ph. B., M. D. (*Continued from page 725*).

POLYPI OF BRONCHI.

Only a few cases of this type have been reported; however, they exist more often than is generally supposed. They may become detached and expelled by coughing. They may partially or completely occlude the bronchial lumen. They may undergo fibrous degeneration, become infected or gangrenous or cause pulmonary abscess, or they may remain indefinitely without causing trouble.

Clark (1700) reports one of the earliest recorded cases.

Sanber (1719) reported a case of a polypus coughed up from the windpipe.

Hankel (1837) reported cases of chronic tracheitis and bronchitis due to polypi of the bronchi.

Their presence when pedunculated is noticeable in the change of bronchial sounds caused by the polypi swinging back and forth. But when the bronchus is occluded the sounds will cease.

Lymphoma is a malignant growth rarely found in the lungs. It is generally secondary. The harder growths are yellowish, white, and dry, rarely spreading beyond the capsule, and never undergoing cheesy degeneration. Suppuration is, indeed, rare; it is found oftener in men than in women, probably due to occupation. The lungs of cobalt miners of Schneeberg are said to be invariably affected with lymphosarcoma.

Chondromata, as a rule, are due to trauma, and usually appear in the cartilages of the bronchi (enchondroma), but they may originate in the absence of cartilages, which is the rarest form (ecchondroma). They may be combined with sarcoma. A

primary enchondroma was reported by Courment (1895).

Osteomata.—Three varieties form in the lung: First, osteoma eburneum; second, osteoma spongiosum; third, osteoma medullosum. All are supposed to be due to syphilis, and are found in the form of thin plates which are of slow growth. Brambella (1895) records a case of multiple osteoma of the lung due to gout or syphilis.

Dermoid is rarely found in the lung.

Godlee (1889) opened a dermoid of a lung, removed the process, and drained with recovery.

Sormain (1891) and Ogle (1896) each report a case of dermoid cyst of the lung.

SURGICAL TREATMENT OF TUMORS.

Dissection of the capsule of the tumor is not necessary. Benign tumors require no interference, except when troublesome on account of size. The treatment of malignant tumors of the lung, thus far, is very unsatisfactory, as the malignant tissue cannot be entirely removed.

There are many cases of sarcoma and carcinoma of the lung reported, one of the earliest publications of cancer of the lung being Bricheteau's case (1832).

Huber (1890) is probably the first to report sarcoma of the lung. Since then there have been twenty-six contributions to the subject.

Carcinoma is less frequent than sarcoma, there being but nineteen contributions to the subject.

BACILLI.

Anthrax of the lung was discovered by Davaine and Rayer in 1850. The domesticated animals of Algiers are said to be immune to this disease.

Schottmueller (1898) reported two cases of anthrax in the human lung. One of the patients made baskets from strips of hide. In the other the cause could not be ascertained.

Bacillus Œdematis Malignæ has been found in the lungs of animals.

Bacillus Aerogenes Capsulatus is found most frequently in cases following trauma.

The *Johns Hopkins Hospital Bulletin*, Vol. iii, pp. 81-91, 1892, offers the first contribution on this subject.

Ohlmacher and Loeb (1900) have written extensively upon this subject, in the *Boston Medical and Surgical Journal*, Vol. cxliii, p. 73, 1900.

Bacillus Tuberculosis was first described by Koch in 1883.

Bacillus typhosus (Eberth) has been found in abscess of the lung by Ramsey (1890). He also found it in gangrene of the lung and spleen. It is probably of secondary and not primary origin, and when found is associated with tissue necrosis arising after the third week from the onset of the fever.

Bacillus pneumoniae was first described by Friedlander, and is found in alveoli exudates and in the exudates of the pleura and pericardium in cases of croupous pneumonia. It is a short thick bacillus resembling cocci enveloped in a gelatinous capsule. Sometimes a single capsule contains two or more bacilli.

[More of Dr. Ricketts's article will be published as space permits.]

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Original Communications.

THE TENDO ACHILLIS SHORTENED FOR THE RESTORATION OF THE FUNC- TION OF THE CALF, LOST AS A RESULT OF A PREVIOUS TENOTOMY.

By RUSSELL A. HIBBS, M. D.,
NEW YORK,

SURGEON IN CHIEF OF THE NEW YORK ORTHOPÆDIC DISPENSARY
AND HOSPITAL.

In the *New York Medical Journal* for July 10, 1902, I published a report of eighteen cases in which the tendo Achillis had been divided subcutaneously for the relief of equinus following infantile paralysis. A study of these cases was made, as there stated, with the distinct object in view of determining the question of whether or not the division of this tendon affected the function of the



FIG. 1.—Case I (Ella L.). Before tenotomy. This was Fig. 5 in Dr. Hibbs's article in *New York Medical Journal* for July 10, 1902, and is so referred to in the quotation here.



FIG. 2.—Case I (Ella L.). Six years after tenotomy. This was Fig. 6 in Dr. Hibbs's former article.

calf group of muscles. It may be seen in that report that in eleven cases the function of the calf was lost, so far as being of any value in walking was concerned.

An operation has been performed in three of these cases for shortening the tendon, Cases IV, XIII, and XVII, in that report, from which I quote the note upon the condition of the calf, tendo Achillis, etc., in each case, as such was the condition when this last operation was performed.

CASE I.—(Previous report, Case IV.)—“Ella L., aged thirteen, left foot. Condition previous to operation: All of the anterior group of muscles weakened, though none completely paralyzed; calf



FIG. 3.—Case I (Ella L.). Appearance of the foot after shortening of the tendon.

not affected. Foot in a position of marked equinus at 135° . See Fig. 5, from a photograph of a plaster cast of the foot before operation. Operation, November 30, 1896. Subcutaneous division of the tendo Achillis. Present condition: Marked displacement of os calcis downward. Tendo Achillis thin and so elongated that there is marked retraction of the calf and its power to raise os calcis is completely lost. Force of calf cannot be felt beyond 80° . There is one inch shortening of the limb." Fig. 1 shows Fig. 5, and Fig. 2 shows Fig. 6 (after tenotomy, the condition which existed before shortening was done) referred to in quotations.

Operation, July 2, 1901.—The tendo Achillis was exposed through a four inch incision to its outer side. The tissues immediately under the skin were infiltrated with fat and there was no sheath, the tendon being adherent to the skin. It was found to be much smaller than the normal tendon, flattened, frayed out into the surrounding structures, with the difference in appearance from the normal tendon so marked that the contrast between it and the proximal end of the old tendon was distinct; it did not have the character or formation of the normal tendon with its glistening fibres bound together in parallel lines. These fibres, frayed out into the surrounding tissues, were dark in color and instead of being bound closely together were infiltrated with fatty tissue through their entire length and breadth.

This structure, about four inches in length, filled in the gap between the ends of the old tendon. It was split longitudinally at its middle point, the two halves being folded one above and one below on the tendon, and held so by through and through No. 5 silk sutures, being thereby shortened about three inches. This amount of shortening was accomplished only by forcing the foot into a position of extreme equinus. The ordinary dressings were applied to the wound and the foot was held in that position for six weeks.

Present condition, January, 1903.—The tendon is large, strong, and well shaped, and has retained its shortening to the extent of not allowing the foot to flex beyond 100° , and the action of the calf group of muscles has been so remarkably restored that it can be safely expected eventually to perform practically its normal function. The patient can now, standing on the foot alone, raise the heel from the floor. The size of the calf has increased. Fig. 3 is from a photograph of the foot as it now appears.

CASE II (formerly Case XIII).—"Lizzie S., aged nine. Right foot. Condition previous to operation: Complete paralysis of anterior tibial and weakness of common extensors. Foot in a position of marked equinovarus at an angle of 135° to the leg. See Fig. 19, from a photograph of a cast. Operation, April 25, 1898. Subcutaneous division of tendo Achillis. Present condition: Os calcis displaced downward to a marked degree. Tendo Achillis long and thin. Action of calf in raising the heel completely lost. The force of the muscle cannot be felt except when the foot is flexed extremely (beyond 80°). See Fig. 20, from a photo-



FIG. 4.—Case II (Lizzie S.). Photograph of the cast made before operation of tenotomy. This was Fig. 19, Case XIII, in previous report, and is so referred to in the quotation here.

graph of the foot." Fig. 4 is Fig. 19 in former report, and Fig. 5 is Fig. 20 in that report, and shows the foot after tenotomy.

Operation, May 8, 1902.—Upon exposing the tendon in this case its condition was found to be very similar to that of the other, namely, composed of structure simulating tendon to some extent, though with infiltration of fatty structure; its fibres frayed out and were darker in appearance; it was smaller than normal, and there was no sheath. It was flattened and slightly adherent to the skin. It was shortened about two inches and a half in the same manner as in the case described above. The wound was dressed and held in a position of marked equinus for six weeks.

Present condition, January, 1903.—The tendon is larger, its shape improved, and the action of the calf restored to some extent. It can be felt in extending the foot to 110° with a fair amount of force, though not sufficient to raise the heel when standing on the foot alone. The size of the calf has increased some-

afterwards, and now with the equinus restored. Case II is in a similar way interesting.



FIG. 6.—Case II (Lizzie S.). Appearance of the foot after shortening of the tendon.



FIG. 5. Case II (Lizzie S.). Photograph of the foot four years after the operation of tenotomy. This was Fig. 20, Case xiii, in previous report, and is so referred to in the quotation here.

what, though it does not appear probable that it will have sufficient power restored to it to make it of much practical value in walking. See Fig. 6, from a photograph of the foot as it now appears.

It is interesting to notice the Figs. 1, 2, and 3, showing the appearance in Case I before tenotomy,

CASE III (formerly Case XVII).—"John G., aged ten. Left foot. Condition previous to operation: Paralysis of anterior and posterior tibials. Good power in all other muscles. Foot in a position of equinovalgus.

Operation, May 4, 1896.—Subcutaneous division of the tendo Achillis. Present condition: Foot in a position of marked calcaneus; no action of the calf can be felt after the foot reaches 80° in extension. Tendon elongated and small, muscle retracted. See Fig. 26, from a photograph of the foot."

Operation, April 9, 1901.—Upon exposing the tendon in this case it was found to be much smaller than in either of the two previous cases, not being more than $\frac{1}{4}$ inch broad and $1\frac{1}{16}$ inches thick. The condition of this tendon was in appearance similar to that in the two cases above. The extreme position of calcaneus made it impossible to elevate the heel sufficiently to shorten the tendon more than an inch. This was done as in the other cases and the foot held in this position for six weeks.

Present condition, January, 1903.—There has been no appreciable improvement in this case and the calf remains inactive, the tendon small, and the foot in a position of extreme calcaneus, as may be seen in Fig. 7, from a photograph of the foot be-

fore the operation, which is the same as Fig. 26 of previous report, referred to above, and shows the foot as it now appears.

It is fair to assume that the other cases of this group previously reported, in all of which an operation was refused, would have presented similar conditions to those found in these three, and this suggests that the explanation there given for the loss of function of the calf was correct, as it appears in the following quotation from that report:

"It thus appears that by lengthening the tendo Achillis it must be expected that there will be still further shortening of the calf and modification of its function; which fact accounts to some extent for



FIG. 7.—Case III (John G.). Fig. 26, Case xvii, in previous report. Photograph of the foot six years after the operation of tenotomy. Present appearance unchanged.

the results here seen. It does not fully account for them, however, because in the eleven cases in which the function of the calf was practically lost there was no such impairment of its function or lengthening of the tendon immediately after the operation as now exists, which is evidence that after the patient began to walk the tendon gradually elongated, allowing still further shortening of the muscle and modification of its function. It is obvious that such elongation as occurred must have been of the structure filling in the gap between the divided ends of the tendon."

Certainly it is true that in these three cases the structure had elongated, and must necessarily have done so, as it was dissimilar to the normal tendon in every important particular, especially in not being non-stretchable.

The facts revealed by the operation for shortening the tendon in these cases, namely, the dissimilarity in every important particular of the structure filling in the gap between the ends of the old tendon to normal tendon, may be considered unmistakable evidence that the subcutaneous division of the tendo Achillis is not always so successful as it has long been considered to be; that while in some cases the healing process seems to reproduce a structure sufficiently strong to perform the function of tendon, in others exactly similar, it does not do so; and that one cannot be sure in a given case what the result will be. Therefore, there must be some condition or conditions necessary in order that the healing process may be entirely successful, which cannot be secured with certainty by that operation, and I am convinced that they are: 1. The preservation of the sheath. 2. The preservation of the continuity of the tendon. And these cannot be secured except through an open operation.

136 MADISON AVENUE.

A CASE OF NÆVUS OF THE SCALP AND NOSE TREATED BY HOT WATER INJECTIONS.

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The coagulating power of heat in hot water has been turned to good account by Dr. Wyeth, in the injection method of treatment for nævoid growths, which he has devised and published in the *New York Medical Journal* for January 3, 1903. The following history is the report of a case in which I employed the method with good effect.

CASE.—A. B., an infant girl aged seven months, was brought to me early in January, 1903, for consultation regarding nævoid growths one situated upon the crown of her scalp, the size of a silver half-dollar; the other, upon the end of the nose, outlined by that organ's limits and extending out from the tip.

The growths were congenital (maternal impressions, however, were not brought forward as the cause), painless, and pulseless. That upon the scalp was red and presented a granulated surface. The nose growth was pale and bluish in color, excepting when exposed to the chill air of the season, when it became of a bright, rose-red color, with dilated capillaries which continued until reaction of warmth caused the engorgement to disappear. As both areas were growing, it seemed advisable to attempt some form of radical treatment. Owing to the location of the marks, that of the scalp extending partly over the anterior fontanelle and that of the nose affecting decidedly the contour of the face, I decided that hot water injections were preferable

to either excision or ligation. Accordingly, I commenced treatment of the scalp mark, after cleansing the area, by peripheral injections by means of a sterilized hypodermic syringe and needle of sterile water at a temperature of from 180° to 200° F. One fluid drachm was injected without the aid of any anæsthetic. Reaction was manifested by distention of the mark until it became a tense, blanched, cystic tumor, which was painful, though the child ceased fretting when put to its mother's breast. A few drops of blood and water followed withdrawal of the needle. A light, dry, fluffed gauze dressing was applied, with narrow, overlapping, thin rubber-tissue strips next the wound, and the mother was ordered to return the child for examination at the end of three days. At the second visit the mother



reported that the child had fretted the first night, but was undisturbed thereafter. Upon examination, swelling was found to have almost disappeared, the area presenting a mottled appearance made up of white and purplish spots. There had been exudation, as shown by some crusting. Another injection of one fluid drachm of sterile, hot water was made at this time. But little pain was caused and œdema was less marked. Injections were continued, at intervals of three or four days, during the course of the subsequent two weeks, varying in quantity from ten drops to one fluid drachm. Further growth ceased after the first injection, and shrinkage, with flattening of the surface of the mark to the level of the surrounding skin, took place. Turning my attention to the nose area I injected ten drops into the centre, from the needle entered at the side. Great delicacy was required in the manipulation. Blanching occurred, with swelling. Two subsequent injections were made, with the result that further development of the growth has ceased and the nose now presents a satisfactory outline. In neither instance was the skin-surface damaged by the heat of the injections. The growth upon the scalp was of the capillary (arterial) nævoid development; that upon the nose partook more of the nature of the venous type.

The chief danger following the employment of this method of treatment is that of embolism, but the tendency seems to be overcome by having the water near the boiling point when injecting, thereby insuring prompt and firm coagulation.

805 MADISON AVENUE.

THE TREATMENT OF GASTRIC AND DUODENAL HÆMORRHAGES.*

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Hæmorrhages of the stomach are due to disintegration of blood vessels in consequence of ulceration, seldom of erosions. The hæmorrhages occurring in cancer of the stomach belong to the same group, for they owe their origin to the same process. The so called capillary hæmorrhages are the result of extreme congestion of the mucosa and occur, but very rarely, in vicarious menstruation, cirrhosis of the liver, or in some instances without any reason so far apparent.

The duodenal hæmorrhage is almost always due to a distinct ulcer of this portion of the gut.

The diagnosis of gastric and duodenal hæmorrhages is, as a rule, easily made. There is generally hæmatemesis, which is often accompanied or followed by melæna. It is certainly necessary to exclude the possibility of hæmorrhages from the mouth and respiratory tract, in which blood may have been swallowed and thus carried to the stomach. In the latter instances there are always some indications of the real source of the trouble. Thus, a preceding nose bleed, nasal polypi, trauma of the head, and affections of the lung will direct our attention to these organs as a possible source of the hæmorrhage.

In real gastrorrhagia and duodenorrhagia there are usually present some indications for the localization of the disease in these organs. Thus, there are generally dyspeptic symptoms and gastralgia present, frequently of long standing, almost always, at any rate existing for some time previous to the attack. In rare instances, however, such a hæmorrhage appears without any previous gastric symptoms.

As to the disease causing the hæmorrhage—whether ulcer, superficial ulceration, capillary bleeding or cancer—there is usually no great difficulty in arriving at a correct diagnosis if the preceding history and the symptoms present are taken into consideration.

*Read before the Medical Society of the County of New York, February 23, 1903.

The differential diagnosis between gastric and duodenal hæmorrhages can seldom be positively made. As a rule, a probable diagnosis in this respect will have to suffice.

As is well known, the following points speak in favor of a duodenal affection: 1. Pains about two or three hours after meals; 2. considerable melæna associated with hæmatemesis or existing alone; 3. the pains are often found in the right hypochondriac region.

The treatment of gastric and duodenal hæmorrhages consists, first, in measures directed toward checking the bleeding; secondly, in combating the underlying disease producing the hæmorrhage. In so far as the second proposition embraces the management of ulcers of the stomach and duodenum, erosions, superficial ulcerations, and cancer of the stomach, as well as cirrhosis of the liver, it is obvious that its discussion would require more space and time than are allotted to me to-night. I will, therefore, limit my remarks merely to the means at our command toward checking the hæmorrhage.

Small hæmorrhages, frequently occurring in cancer and rarely in ulcer of the stomach, being discovered by a thorough examination of the gastric contents, require as a rule no treatment whatever, ceasing usually by themselves. Larger hæmorrhages of the stomach and duodenum are generally accompanied by hæmatemesis, often also by melæna. Frequently from a pint to a quart, occasionally a still larger quantity, of blood is vomited at once. In rare instances the hæmorrhage is so large and so sudden that the patient may die from exsanguination before there is time for the vomiting to appear. These larger hæmorrhages must be handled with the greatest of care and solicitude.

Absolute rest in bed, total abstinence from food and drink, and the administration of opiates (subcutaneously or *per rectum*), will serve to lessen the peristalsis of the stomach and small intestine and favor the healing process. Thus, during the first three to five days following the hæmorrhage rectal alimentation must be the only mode of nourishing the patient. Moderate amounts of saline solution *per rectum* or subcutaneously will supplement the amount of fluid required.

Measures of directly diminishing or checking the bleeding in the digestive tract have been used long ago. The oldest means is the application of ice (ice bag) over the upper part of the abdomen. This antiphlogistic remedy still holds its place, and is a rational therapeutic agent in the affections under consideration. Another old but useful remedy is ergot, which was first given internally, and lately hypodermically. Its action consists in contracting the blood vessels and is often of great service.

Among the newer remedies two stand most prominently and must be discussed more fully. The first is gelatin. It acts in facilitating coagulation, and thus helps in the formation of a blood clot which obturates the open vessel or vessels. Gelatin is employed *per os*, or more often subcutaneously. In the latter instance a 2 per cent. gelatin solution may be used, injecting about 100 cubic centimetres at a time, preferably in the gluteal region. In giving gelatin by the mouth, simple calf's foot jelly may be administered. I personally prefer the subcutaneous method, in order to avoid gastric peristalsis.

I have seen several cases of very severe gastric hæmorrhages improve under the subcutaneous gelatin treatment, and can warmly recommend it.

The other new remedy is adrenalin. This powerful drug, which has proved of so much benefit in the treatment in eye, nose, and throat affections, has been tried by some clinicians in a few diseases of the stomach also. Floersheim¹ has treated one case of hæmatemesis giving five grains of suprarenal gland every two hours by mouth, with good results. Benedict² has also described a case of gastric ulcer with hæmorrhage, in which adrenalin (1:1000) $\frac{1}{4}$ of a gramme, given three times daily by mouth, proved of great benefit in checking the hæmorrhage. Our knowledge in this respect is, however, owing to the brief time of its use, very limited.

I have made a few experiments on rabbits which indicate that the value of adrenalin in checking hæmorrhages (also gastric) is very great. I may be permitted to append these experiments:

Experiment 1.—A medium sized rabbit was narcotized (ether): laparotomy and gastrotomy were performed and a piece of stomach mucous membrane excised. A rather severe hæmorrhage occurred. Five drops of a solution of adrenalin (1:10,000) were injected subcutaneously; a minute later the hæmorrhage was somewhat less, but had not ceased. A cotton swab saturated with the same solution was then applied for several seconds to the lesion. The hæmorrhage stopped almost entirely.

Experiment 2.—A medium sized rabbit was treated as before. A large vessel was opened in the serous coat of the stomach; a severe hæmorrhage took place. Five drops of adrenalin (1:10,000) injected subcutaneously diminished the hæmorrhage but did not check it entirely. A cotton swab dipped into the same solution and held on the divided vessel stopped the hæmorrhage almost entirely.

Experiment 3.—Two medium sized rabbits were etherized and their stomachs laid open and emptied of their contents. Then a piece of mucosa (about 1 cm. $\times$ $\frac{1}{2}$ cm.) was excised in both. Hæmorrhage resulted in both. One rabbit was injected with 10 drops of a 1:10,000 adrenalin solution sub-

¹ Floersheim, *Medical News*, January 4, 1902.

² A. L. Benedict: Suprarenal Extract and Adrenalin in Internal Medicine. *Therapeutic Gazette*, October 15, 1901, p. 664.

cutaneously. Five minutes later the untreated animal was dead. Twenty minutes later both stomachs were removed entirely. They were not entirely empty, so that the amount of blood in both could not be compared. The cut surface looked cleaner and paler in the rabbit treated with adrenalin than in the other. The stomach of the adrenalized animal looked pale, whereas the mucosa of the other animal had a red brown color. The spleen of the adrenalized animal also showed a light red color, whereas that of the control animal looked deep red. Smears from the pulp of the spleen showed a preponderance of white blood cells in the adrenalized animal, whereas in the other only about one sixth the amount of white cells was present and many more red blood cells.

Experiment 4.—Two rabbits (large one, weighing two pounds fourteen ounces, and a small one, weighing eleven ounces) received a subcutaneous injection of adrenalin (1:10,000); the larger one ten drops, and the smaller five drops.

After three quarters of an hour the large adrenalized rabbit and another control animal (weight two pounds two ounces) were killed at the same time. An autopsy was at once performed. The stomach was cut open; the mucous membrane in the adrenalized animal appeared perhaps a trifle less red than that in the control rabbit, a marked difference, however, could not be noticed. The spleen in the adrenalized rabbit seemed somewhat light red, whereas in the control animal it looked dark reddish brown. Just the contrary was found in the liver; in the adrenalized animal this organ was dark brownish red; in the control animal, somewhat lighish red.

One hour and a quarter after the injection the small adrenalized rabbit was killed and cut open; the stomach did not seem to differ from that of the control animal; the spleen was paler; the liver, however, much deeper red than the corresponding organs in the control rabbit.

The relation of red to white elements in smears from the spleen was as follows:

1. In the control animal as 5:4.
2. In the large adrenalized animal as 3:4.
3. In the small adrenalized animal as 2:4.

The first two experiments show the action of adrenalin subcutaneously injected, and still more distinctly the value of a local application of this drug over the bleeding area. The third experiment at first sight appears to demonstrate the high power of a subcutaneous injection of adrenalin in making the digestive canal and surrounding glands anæmic. As stated above, the adrenalized rabbit presented a pale whitish-looking gastric mucosa, while the stomach mucosa of the control animal was brownish red. The adrenalized spleen looked pale red; its pulp showed on the smear the relation of white cells to red blood corpuscles as 2 to 1. The spleen of the control animal was dark brown-red and the smear of its pulp revealed the relation of white to red cells as 1 to 3. This organ contained six times as much blood as the spleen of the adrenalized rabbit. This experiment, however, is not free from

reproach. The anæmic condition of the stomach and spleen in the adrenalized rabbit may have been due to the more prolonged bleeding, for the control rabbit died sooner, and that may have been the reason for a check of the hæmorrhage and a retention of more blood in the visceral organs.

The fourth experiment is a repetition of the third, and serves merely to ascertain whether the adrenalin subcutaneously injected really produces anæmia of the stomach and spleen. From the protocol it can be easily seen that there was no decided difference in the appearance of gastric mucosa of the adrenalized rabbits and the control animal. The spleen, however, looked a trifle paler and contained more white cells and less red blood corpuscles in the adrenalized animals than in the control rabbit. The relation of the red blood cells of the smear of the spleen to the white cells was as follows:

Control rabbit as 5:4.

Large adrenalized rabbit as 3:4.

Small adrenalized rabbit as 2:4.

It is also worthy of mention that the liver of the adrenalized rabbits appeared of a much darker red-brown hue than that of the control rabbit.

Practically, I have used the adrenalin chloride (1:2,000), injecting one Pravaz syringeful subcutaneously twice daily in two cases of gastric hæmorrhages, with apparently good results. In two other cases of gastric hæmorrhage I have administered fifteen drops of the same solution, three times daily, by the mouth, also with benefit.

I have also tried spraying of the stomach with a 1:5,000 solution of adrenalin chloride, using about 8 cubic centimetres at a time in a case of old ulcer of the stomach accompanied by frequent recurring small hæmorrhages, the patient having been used to lavage, but without succeeding in checking the hæmorrhage. The adrenalin in this case produced slight nausea and headache. Further clinical tests with adrenalin will have to be made before definitely settling its value in gastric and intestinal hæmorrhages.

Frequent recurring hæmorrhages are more often met with in cancer of the stomach, but they occur also, although rarely, in old ulcers of the stomach. If these hæmorrhages are not very small, they form a great danger to life by gradually weakening the constitution. In these cases the treatment will consist in avoiding exertion, rationally feeding the patient with light but nutritious material, and administering iron, arsenic, and bone marrow. Gelatin and suprarenal gland or adrenalin internally will also be tentatively employed. Heart stimulants will frequently have to be employed in most cases of gastroduodenal hæmorrhages.

As a good associate of the outlined plan of

treatment, surgery has within recent years stepped into this branch of medicine and lent us a helping hand. Let me briefly review the surgical procedures in gastric and duodenal hæmorrhages, and the indications for their use. Practically two kinds of operations are available:

1. Finding the bleeding area (ulcer) and excising or cauterizing it.

2. Performing a gastroenterostomy.

The first method will be preferable if the existing ulcer is easily accessible; the second, if it cannot be localized without difficulty, or when we have to deal with capillary hæmorrhages or with duodenal ulcerations. The indications for surgical intervention in gastroduodenal hæmorrhages are the following:

1. Very profuse hæmorrhages recurring at comparatively short intervals (two to three days) demand immediate operation.

2. Profuse gastric, and especially duodenal hæmorrhages, occurring once or twice yearly with more or less regularity, and each time greatly endangering the life of the patient, require an interval, or so to say prophylactic operation, to avoid a return of the hæmorrhage.

3. Frequent small hæmorrhages of the stomach or duodenum which greatly debilitate the patient and cannot be stopped by rational therapeutics, often demand operative measures. Here, also, a gastroenterostomy will generally be employed.

THE USES OF SUPRARENAL EXTRACT IN NOSE AND THROAT DISEASES.

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Suprarenal extract in the treatment of nose and throat diseases does not present anything particularly new; still, the use of the remedy is in its infancy, and its possibilities have not been exhausted. This, taken in connection with the important fact that there is no remedy which we use on the nose, with the exception of cocaine, of such importance and general usefulness as suprarenal gland, is excuse enough for a short paper upon the subject.

I shall attempt in a very superficial manner to review all the uses of suprarenal extract in nose and throat diseases, and shall dwell particularly upon some of the newer points, at least those which are new to me. My experience with suprarenal gland dates back to 1895, when the drug was an uncertain quantity, and the only form in which it was obtainable was either in tablets or mixed with sugar. Now, these forms have been entirely discarded by me and the simple dried suprarenal gland alone is

used. The suprarenal gland of the pig seems to furnish more uniformly favorable results than that of the sheep or other animal.

Preparation.—It is a deplorable fact that all attempts at preserving solutions of suprarenal gland have met with failure, and, so far as I know, anything used as a preservative serves to diminish its activity so markedly as almost to render the solution useless. It is better, therefore, to make a solution of the gland fresh, and as this occupies but a few moments and can be conveniently done on an office table, it is really not a drawback to its use. The most convenient solution is a watery one, and it is made by adding thirty grammes of dried suprarenal gland to one ounce of water that has just been freshly boiled and allowed to cool until it is just warm. This makes about a 6 per cent. solution of the gland, but, as a large quantity of the extractive matter is removed, the resulting solution contains a very small percentage of the active principle of the gland. After a moment's stirring, the solution may be set aside for a couple of minutes and then it is ready for filtration. After this point all the vessels used should be sterilized. A piece of sterile cotton should be fitted into the small end of a funnel, the solution poured into this, and the filtrate allowed to drip into a sterile vessel, a bottle. It is not important that this bottle should be of a material to exclude light, since the elements which cause destruction of suprarenal activity seem to be oxygen and germs. The oxygen, as Dr. Bates has suggested, is eliminated almost entirely by using water which has been freshly boiled and by using distilled water, and also by using waters containing carbon dioxide in solution, such as the carbonated waters in siphons. However, freshly boiled hydrant water is the most convenient. The solution in the bottle may be sterilized by bringing it to a boil in a few minutes, and in this condition a sterile cork will exclude further contact from germs and the solution will be ready for use. It is better that this solution be boiled for each using if it is intended to keep more than a day's supply in the bottle. It is also better to have it divided into sterile test tubes, each tube holding enough for each day's work. When this solution is ready for use, properly prepared and filtered, it should be of a pale straw color, about the color of a pale urine. As has been stated, all attempts to put antiseptics into the solution for the purpose of keeping it have met with failure, these substances tending to diminish the activity of the suprarenal gland. I have also noticed that when antiseptics are added, even ordinary salt, the suprarenal extract activity is so diminished that after two or three days the solution is useless, while the unmixed solution will retain its activity for several weeks.

Attempts have been made to mix suprarenal extract with glycerin for the purpose of making a thicker solution; this has also failed, for physiological reasons, as the action of glycerin on the nasal and laryngeal tissues is exactly antagonistic to that of suprarenal gland, so that, while the extract of the gland may remain active in glycerin, the mixture is not applicable in nose and throat diseases.

The most reliable preparation of the suprarenal gland is that known as adrenalin chloride, which is dispensed to physicians as the alkaloid salt, which is the least desirable form, and used dissolved in the normal saline solution, 1:1,000. Thus the solution contains the blood pressure raising principle of the gland. This preparation is stable in a brown bottle, and is a convenient method of prescribing the drug. Generally, this solution is mixed at the time of using with a 4 per cent. solution of cocaine. It is good practice in clinical and hospital work to mix a fixed quantity each day and throw away what remains at the end of the work.

To each half ounce of a 4 per cent. solution of cocaine, about twenty minims of solution of adrenalin chloride 1:1,000 are added. For sæptal work, a 7 per cent. cocaine solution is used, and the suprarenal strength, doubled. With this solution it is possible to operate bloodlessly and without pain in the nasal interior.

Of the good effects of suprarenal, much has been written, but of the untoward effects but little has been said. Dr. William H. Bates, its discoverer, has been hailed as having given the greatest gift to rhinology since Köller discovered cocaine. I would not for an instant detract from the reputation of the remedy or the fame of its discoverer, but it always happens that, as we work with a tool and become familiar with all its advantages, we also become aware of its limitations. So it is with suprarenal. All of us undoubtedly after using it for some time have been struck with the fact that in some respects it is defective. Some of its actions are undesirable and its after effects frequently annihilate the good it has done. In the earlier cases many reports of serious hæmorrhage are found. In my own experience the two worst nasal hæmorrhages I ever saw, occurred after the use of suprarenal; and, in common with others, I was inclined to attribute this to the secondary effect of the drug. A more intimate knowledge of the drug and its constant use has more than offset this impression. I am of the opinion that those cases reported by others were not in any way due to the action of the suprarenal; at the same time it seems rational to believe that the after congestion which must result from the induced anæmia of the parts would favor capillary oozing, even if it is not conducive to hæmorrhage of the branches of the nasopharyngeal artery.

The solution may be used upon the nasal tissues by spraying, on pledgets of cotton, or by injection into the mucous membrane. The effect is almost instantaneous; the tissues blanch quickly under the effect of the drug, until the mucous membrane is almost entirely white. Under a fresh, active solution the mucous membrane is paler than the skin and remains bloodless, even under irritation for from half an hour to two hours. It is my habit to use a solution of suprarenal gland before using cocaine in the nostril, for the reason that it diminishes the constitutional symptoms which may otherwise arise from the cocaine. So much less of the cocaine is absorbed into the general circulation after the blood vessels are contracted by the suprarenal that patients who are peculiarly susceptible to small doses of cocaine may in this way be cocainized and operated on without the slightest effects of cocaine constitutionally. On the other hand, if the cocaine is used before the suprarenal, the contracting of the blood vessels by the suprarenal after the cocaine, drives the latter into the circulation more rapidly and cases of cocaine faintness occur, which would not otherwise happen. If pledgets of cotton are used, then the two drugs may be used at the same time in patients who are not susceptible to cocaine poisoning. The cotton is dipped into the solution of suprarenal gland and then into the cocaine, after which the pledgets are placed in the nostril and left for three or five minutes; the operation may then be proceeded with. In this way, in hospital work, less time is used than when the drugs are introduced separately.

When it is injected into the mucous membrane it should not be used alone, but the mucous membrane should be cocainized by a 4 per cent. or 6 per cent. solution, after which the suprarenal may be injected. I have found this sufficient for sæptum operations which, before the introduction of the infiltration method, necessitated the use of chloroform or ether narcosis. The formula I prefer is as follows:

R	Cocaine hydrochloride	5 grains;
	Sodium chloride	10 grains;
	Eucaïne	5 grains;
	Dried suprarenal gland	30 grains;
	Water	1 ounce.

In making this combination, the suprarenal is mixed with the water, the eucaïne and salt are added after filtration, and last of all, just before using, the necessary quantity of cocaine is added. This makes a 1 per cent. solution of the cocaine and eucaïne, which may be freely used in the mucous membrane without fear of poisoning. Ordinarily, six minims of this solution may be injected without any bad results.

In the larynx, suprarenal solution is best used by means of a spray, which method is also best adapted to the pharynx. Used in the nasopharynx it may be introduced through the nose by spray or on cotton, or through the mouth directly. I have found the infiltration method by hypodermic injection the best in operations upon the inferior turbinate body and upon the nasal septum. The methods of spraying or pledgets of cotton seem to be best adapted to other regions of the nose.

The reason for the use of the infiltration method upon the inferior turbinate is because this method empties the venous sinuses of the turbinate better than the others.

Indications for use.—Suprarenal gland is first of all indicated to diminish bleeding during operation. In fact, so far as my observations have extended, the benefits derived from the use of suprarenal result from the contraction of the blood vessels and the artificial anæmia, which may be prolonged indefinitely. It is of inestimable value in reducing hæmorrhage during nasal operations. In fact, I think the progress in our work which has resulted from the development of the use of suprarenal is not secondary to that following the introduction of cocaine. To suprarenal gland must be given the credit of making possible mechanically perfect operations. When the solution is active it will produce so much anæmia that an almost bloodless operation can be performed in the nose and nasopharynx.

After the operation has been performed it is never wise to leave the nose without packing, at least such has been my experience; for, where there has been so much contraction of the vessels and the production of so much irritation of the vasoconstrictor nerves, there must, of course, follow dilatation or relaxation, hence after the use of suprarenal there have been many reports of severe hæmorrhage. This tendency to hæmorrhage following the use of suprarenal in operations must, of course, be guarded against by proper support and pressure to the parts operated on. For the purpose of controlling such hæmorrhage I have found strips of iodoform gauze, introduced in such a way as to make pressure upon and fill the operation cavity, very useful, but the most convenient method is the use of Bernays's sponges, as suggested by Dr. W. K. Simpson. I would here record that the most serious hæmorrhages I have seen in nasal work have occurred in patients upon whom suprarenal had been used.

While there may be a doubt as to the effect of suprarenal in regard to hæmorrhage, there is no doubt that it produces certain bad effects which we cannot consider due to individual idiosyncrasy. Something must have been written on this subject, but the literature is so badly arranged that it has not been possible to collect much. Vincent has

noted that "it requires comparatively very large doses of suprarenal extract to cause death in any animal when injected subcutaneously." Oliven and Schäffer found that the active principle of suprarenal capsules was not destroyed by gastric digestion *in vitro*; it has been assumed pretty generally that administration by mouth is physiologically correct. (1) A medium-sized cat was fed upon thirty-two grammes of sheep suprarenal (cortex and medulla together). After three hours, vomiting occurred, and no other effects were observed. Several other experiments seem to indicate that, in rabbits and dogs, at all events, the active principle of the suprarenal capsule is not absorbed when taken into the stomach. On the general physiological effects of extracts of the suprarenal capsules (Vincent) Oliven and Schäffer injected subcutaneously comparatively large doses of the aqueous extract into the dog, guinea pig and cat, without obtaining any obvious effects. "The animals were usually unaffected by moderate doses, but, with larger doses in the guinea pig and dog, we have obtained a slight transitory disturbance of the rate of the heart beats of the respiration and of body temperature. The dose administered to the guinea pig was 1.20 grammes of the fresh gland."

SUMMARY.

After sufficiently large doses of suprarenal extract injected subcutaneously, we get slowed muscular movements, paresis, and finally paralysis of the limbs (hind limbs first), bleeding from the mouth and nostrils, hæmaturia (not in rabbits), breathing shallow and rapid at first, finally becoming deep and infrequent, with occasional convulsions like asphyxia preceding death, before which the temperature often falls very low. The paralysis is central. The effects are due to the medulla of the suprarenal capsule, the cortex containing no toxic substance. The effects are specific to suprarenals. The toxic material is easily eliminated, accounting for the large doses required and the rapid recovery. Idiosyncrasy plays a large part. An immunity can be set up by giving doses not sufficient to kill. For the average guinea pig, six grammes of the fresh gland were necessary to cause death. In another article (*Journal of Physiology*, London, 1897-98, vol. xxii, 270-272) Vincent says: "It appears probable that suprarenal gland (with the possible exception of the thyroid) is the only mammalian gland or tissue which produces toxic effects when a boiled and filtered extract is administered subcutaneously. I have ascertained that, in the cat, doses sufficient to kill, do not raise the blood pressure within half an hour of injection beneath the skin."

These experiments show its doubtful effects in the lower animals. The only reference which I

have seen to the bad effect of suprarenal in human beings is published by Dr. Bloch, in the *Medical Record* for July 6, 1901. In this article it is stated that the extract was used in the nose of a patient to extract a spur. On the following day the patient returned complaining of headache and pain in the throat. The tonsils and pharynx were congested and the uvula and soft palate were œdematous. Later, a small ulceration developed. It is not stated whether the observer believed this to be due to the physiological effects of the suprarenal.

In my own work I have noticed that, after the use of this drug, some patients exhibit an unusual dryness of the nose and throat, sometimes lasting for twenty-four hours. This is so marked in some cases that water has been snuffed into the nostril to relieve the sensation. I have noticed this when the suprarenal has been used freely, and also when only a small quantity has been applied. In other cases I have noticed a change in quantity of the nasal secretion. A coryzal discharge has been almost immediately checked, and some hours later, a small quantity of purulent, tenacious mucus has been secreted, causing persistent blocking of the inferior meatus. Another local effect of suprarenal has been a sensation of shrinking of the nasal mucous membrane so that it would seem as if the membrane were tightly drawn over the bone, and the patient has complained of the unpleasant feeling. Sometimes the coryzal discharge has been aggravated by the use of suprarenal solution. In certain patients the use of any preparation of suprarenal produces such a sensation of tickling in the nose, accompanied by sneezing, that they have requested discontinuance of this form of treatment. In no instance am I referring to hay fever cases, but to ordinary acute rhinitis and chronic catarrhal rhinitis. It remains as a fixed impression in my mind that, notwithstanding the introduction of more careful antisepsis together with greater familiarity with the work, the patients I have operated on for exostoses do not heal so readily as in the days when suprarenal was not in vogue. The only reason I can give for such an impression is, that there is a more lasting effect on the intranasal mucous membrane than is at first apparent, and that a certain amount of interference with nutrition accompanies the use of suprarenal; or it may be that the protoplasmic activity of the cells is in some way influenced. In some patients suffering from acute catarrhal inflammation of the accessory sinuses, particularly of the frontal sinus and ethmoid cells, I have noticed that the use of suprarenal to relieve the congestion has resulted in increased congestion of the ethmoid and frontal regions. It is a matter of regular notice that, in these cases, the symptoms are aggravated by suprarenal. Unpleasant constitutional symptoms have occurred in

a few cases. It is not infrequent that patients upon whom suprarenal has been used, suffer from an aching in the neck and a sensation in the pit of the stomach in the region of the solar plexus. A certain amount of headache and fulness in the head has been noticed. Another patient under my care regularly developed hiccough when suprarenal was used upon the nose. Finally, it may be said that suprarenal does not act well in all cases of hay fever. Since its introduction it has been extensively used in this disease, both in this country and in Europe, and it is still, in my opinion, one of the most valuable remedies for this condition. Nevertheless, the remedy is not of use in all cases, and the position taken by me in a paper entitled *Treatment of Hay Fever by Suprarenal Gland*, has been sustained by later experience. I have not found it necessary to change my views that, in those cases of hay fever in which the nasal symptoms are prominent, particularly when accompanied by much congestion, the benefit from the use of suprarenal is most marked. In nasal cases *not* accompanied by much congestion, the benefit is lessened, and in those with perennial nasal attacks there is less relief from the drug than in simple congested cases. Cases dependent on gouty or rheumatic diathesis are helped by the use of suprarenal, while, on the other hand, patients are not helped where there is loss of blood vessel elasticity, due to atheroma or to those conditions of the blood vessels resulting from cardiac disease. Cases with degeneration of the cardiac muscle are also hopeless of relief from suprarenal.

Another use of suprarenal is as an aid to diagnosis. In differentiating the localities within the nose which are purely congested from those where the tissue is hypertrophied, suprarenal, by reducing congestion, leaves a more perfect picture of the nose for the rhinologist, and with the use of the probe it also serves to indicate the merely congested tissue as distinct from the hypertrophic, and to differentiate hypertrophied mucous membrane from hypertrophied mucous membrane plus bony lesions. Simple hypertrophy is indicated by whitened, flabby tissue moving readily under the probe. By shrinking up the blood vessels of the nose more space is obtained, and a better view of the parts for operation.

In operations upon adenoid tissue and upon tonsil tissue I have found that suprarenal gland, either injected or applied as before stated, is not particularly serviceable. In operations upon the larynx in tuberculous cases it diminishes hæmorrhage, and not only facilitates operation, but allows the operator to continue the operation past the time usually employed in laryngeal work. In cases of hæmorrhage which are non-operative, such, for example, as sim-

ple hæmorrhage from the sæptum, a pledget of cotton dipped in suprarenal and pressed against the bleeding point acts favorably, both as a local astringent and as a means of pressure. It also has advantages over cauterants in not producing lesions of the mucous membrane.

In hæmorrhage after amygdalotomy and adenotomy, hydrogen peroxide solutions, in my experience, have worked better than the suprarenal. In non-operative hæmorrhage from the larynx suprarenal gland is of use.

Drainage through the accessory sinuses of the nose in antrum or frontal sinus disease, or ethmoiditis, is facilitated by the use of suprarenal gland applied in the regions of the anatomical openings of the accessory sinuses. In acute abscess of the frontal sinus, for instance, the cavity may be perfectly drained and the danger of threatened empyema obviated, by the free application to the region of the middle turbinate and the hiatus semilunaris of a strong solution of cocaine and suprarenal. Drainage may be further facilitated subsequently by irrigation of the nostril, the suction serving to drain completely the accessory sinuses.

In acute inflammatory conditions of the nose, pharynx, and larynx, suprarenal is one of our most brilliant remedies. In fresh colds, for instance, it may be applied, with the result of diminishing the secretion, reducing the congestion, and restoring the breathing space. It may also be given freely without danger of forming a habit, as the slight nauseating effects prevent its too frequent use. Therefore, in acute catarrhal conditions of the respiratory tract, where there is much congestion, soreness, and the general accompanying symptoms of this condition, suprarenal gland is of great use. Here, it should be used, not only locally, but also internally, either alone or in combination with other remedies, for the purpose of combating constitutional symptoms. It may be given with phenacetin, Dover's powder, quinine, and aconite, and should be taken each hour until the effect is produced, after which every two or three hours will maintain the condition which has been established. Used in this way, we find this is a most valuable addition to our pharmacopœia in the treatment of acute catarrhal laryngitis, hay fever, hay asthma, coryza, conditions of relaxation of the erectile tissue of the turbinates, chronic nasal congestion, and in some cases it seems to modify the quantity and quality of nasal discharge.

Amongst diseases of the pharynx it is useful in acute catarrhal pharyngitis, in inflammations of the soft and hard palates, circumtonsillar inflammation, rheumatic and follicular amygdalitis, and chronic congestion of the tonsil. In the larynx it is a most valuable remedy for singers and speakers, in conjunction with other remedies, for the relief of

hoarseness proceeding from incorrect use of the voice; for singers in chronic congestion of the larynx, and in forms of acute laryngitis in which hoarseness, croupy breathing, and a certain amount of dyspnœa are symptoms. It does not seem to be of any particular use in chronic laryngitis, or in tuberculous or syphilitic laryngitis. One very great use should be mentioned, and that is in new growths. Most malignant growths are abundantly supplied with blood vessels, and considerable diminution in the size of the growth may be obtained by the use of suprarenal, locally or by injection into the tumor. I have found this useful in one case of nasal sarcoma and in malignant growths, either sarcomatous or epitheliomatous, which produced obstruction to nasal or laryngeal respiration. In these cases the patients have obtained a considerable degree of comfort in respiration from the contractile effect of suprarenal upon the blood vessels of the growths. Of course this is only temporary and must be repeated. It remains only to state that the single contraindication to the use of suprarenal is in atrophic cases of the nose, larynx, or pharynx. A word of warning is needed as to the theoretical possibility of atrophy or atrophic conditions developing from the too frequent and prolonged use of this most admirable of remedies.

THE OPERATIVE TREATMENT OF STENOSIS OF THE LARYNX FOLLOWING INTUBATION AND TRACHEOTOMY. REPORT AND EXHIBITION OF CASES.*

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Probably no class of cases calls for more patience on the part of the surgeon than laryngeal or tracheal stenosis persisting after intubation or tracheotomy for acute stenosis. Fortunately, it is very rare. Perhaps it would be fair to say, from such statistics as can be gathered, that one per cent of cases intubated for acute stenosis, will be found to require continued intubation or tracheotomy thereafter. Intubation has so far superseded tracheotomy for the relief of acute laryngeal stenosis, except in special cases, that the latter need hardly be considered. It is a fact, however, that nearly every case of so called retained intubation tube, eventually is tracheotomized, owing to the fact that frequent auto-extubation in these cases is usually the rule after the third or fourth week, and, since it requires special skill to introduce the tube and it must be done quickly in order to be effective, it is safer in such cases to tracheotomize than to depend upon

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intubation.

Dr. John Rogers, of New York, in an exhaustive paper on the subject in the *Annals of Surgery*, for May, 1900, in which he reviews the cases of O'Dwyer, Ranke, Boulay, Gallatti, Baer, Kohl, Northrup, and Brown, together with several of his own, concludes that the impression which has so largely prevailed, that this persistent retention is due to a faulty intubation, granulations, or cicatricial contractions, is largely erroneous; that such conditions are exceptions, and that the true cause, in nearly every case, is hypertrophy of the subglottic tissues, accompanied by a chronic inflammation; that in cases in which tracheotomy has been performed subsequently on account of repeated autoextubations, cicatricial bands are almost certain to form above the tracheotomy wound; that these bands, however, should not be considered the primary cause of the laryngeal stenosis. The histories of the cases, reported by Dr. Rogers, bear out these conclusions very forcibly.

In all the cases I am about to record, cicatricial contractions had formed just above the tracheotomy wounds, which had been made owing to frequent autoextubation. In none of the cases, however, could these cicatricial contractions account for the original stenosis; since, in all cases, while the tube occasionally remained out long enough to exclude granulations as a cause (as they would close the larynx almost immediately on removal of the tube), it never remained out so long as one would expect it to do before cicatricial contraction would cause a stenosis. In all cases, in addition to the cicatricial contraction just above the tracheotomy wound, there was a general thickening of the intralaryngeal mucous membrane, which was sufficient to account for the original laryngeal stenosis.

CASE I.—The following history was given to me by Dr. John B. Rae, of New York:

"I was called in the early hours of the morning of Friday, February 9, 1900, and found J. A., three years of age, suffering from membranous croup. The breathing was already very labored and the lips dusky. Within an hour the child was intubated and antitoxine administered. Subsequent report from the health department proved the presence of the Klebs-Löffler bacillus. The case ran a course of a very benign type, so that within a few days the child was practically well, the tube being retained without any difficulty.

"The tube was removed on February 15th, and the patient discharged as cured. On the same evening I was called again and found the breathing to be as difficult as on the first visit on the morning of the 9th. Intubation had again to be practised, and as an additional security, antitoxine was again administered. This tube was retained only a few hours, and the history of the case from this date until February 27th, was one of repeated intuba-

tions. Late at night and early in the morning the tube was rejected and had to be replaced to prevent asphyxiation. Difficult respiration did not appear immediately on the rejection of the tube but came on at regular intervals and the attempt was made to keep the child a longer time without the tube each time it was rejected. On February 25th the child was without the tube for about five hours, when it had to be replaced. On the 26th about 8 o'clock p. m., the father called to say that the tube was out again; on finding that the breathing was all right I promised to call the last thing before bed time and replace it if necessary. In about fifteen minutes' time he returned in great haste, and told me that the child was very bad, and, on reaching the house, I found the child cyanotic, and as the father picked it up, respiration ceased completely. A tube was immediately introduced and after artificial respiration, spontaneous breathing was reestablished, and, in a few minutes, hypodermic injections of strychnine and brandy having been administered, the child was practically well. Not caring to run any more such chances, tracheotomy was performed next morning, February 27th. Later, on removing the tube for purpose of cleansing, the tracheal wound was repeatedly occluded by the finger tip, and breathing by the mouth found to be absolutely in abeyance. Attempts to pass intubation tube by mouth were unavailing even when considerable pressure was exerted and the opinion was then formed—subsequently found to be erroneous—that the cords were adherent. At no time could a view be obtained by means of laryngoscopic mirror. In May, Dr. C. H. Knight saw the patient in consultation, and, although he was unable to obtain a view of the larynx, was of the opinion that the obstruction was due to granulations, and advised the daily instillation of a solution of suprarenal extract, with a view of starving the granulations. This was practised for about six weeks, the solution being dropped into the larynx through a hard rubber Eustachian catheter fitted with a medicine dropper bulb, but with absolutely no benefit. Further home treatment being impossible the case was referred to the Manhattan Eye and Ear Hospital, and has since been under the care and treatment of Dr. Arthur B. Duel, of that institution."

The child was admitted to the Manhattan Eye and Ear Hospital, April 6, 1901. At that time it was impossible for her to get any air through the larynx when the tracheotomy tube was removed and the opening in the trachea closed with the finger.

April 11th. After five days' observation, chloroform was administered and the trachea and larynx split in the median line. About $\frac{3}{4}$ inch above the tracheal opening, at the first ring of the trachea, a cicatricial membrane had formed, which so thoroughly occluded the trachea that it was almost impossible to pass the finest probe. The interior of the larynx showed a uniformly hypertrophied mucous membrane with no evidence of previous ulcerations or granulations. The previous laryngeal stenosis was evidently due to this, the cicatricial band being the result of the tracheotomy, as so frequently happens in these cases. The cicatricial band was carefully dissected out and a very large intubation tube placed in position after which the wound was closed

by deep sutures extending down to the trachea and superficial sutures in the skin.

The child's temperature rose to 102° F. a few hours after the operation, and for the next week, as will be seen by the temperature chart, there was every indication of a sharp attack of pneumonia. The high temperature lasted about a week, but for two weeks following this there was a moderately high temperature. During this attack two or three of the deep stitches loosened and allowed the intubation tube to slip down, necessitating its speedy removal by opening the wound, and substitution of a tracheotomy tube.

Owing to the precarious condition of the patient, nothing was done for two months, when, on June 13th, the child having entirely recovered, the old wound was opened under chloroform, and a special tube, which I show you, put in position and held by the clamp. The patient rapidly learned to eat and drink perfectly well with this, and was soon up and about the ward. In a fortnight she was allowed to go out of doors with her nurse. She went on perfectly well with the exception of a slight cold lasting a few days, until September 21st (about fourteen weeks after the introduction of the tube) when the special tube was removed, and one with a larger head inserted in its place, no retaining clamp being used. This was done under chloroform. A week later this tube was removed and left out. As the child was apparently doing very well I left the hospital. At the end of an hour the nurse hastily summoned the house officer owing to extreme cyanosis of the patient. A tracheotomy tube was hastily jammed through the opening left after the removal of the retaining clamp, and the child's life was thus saved. During the next week the tracheotomy tube was removed daily and left out for increasing intervals of time. On the seventh day it was left out altogether; the breathing was a little labored at night but never sufficiently so to cause alarm.

Three weeks later the tracheotomy wound had practically closed; the child was breathing comfortably, and had done so through a slight bronchitis for a few days. Still a month later, on December 1st, after nearly nine months of most harrowing vicissitudes, she was discharged as cured. At that time she was only able to speak in a hoarse whisper. A few weeks later she began to develop speaking voice again, and now speaks as well as any

The second case, which I show you, is interesting from the fact that the original intubation was for acute laryngeal stenosis complicating smallpox.

CASE II.—Anthony H. was admitted to the Riverside Hospital May 3, 1901, suffering from a severe case of hæmorrhagic confluent smallpox. Practically no hope of recovery was entertained, and efforts were made to make him comfortable rather than with any expectation of curing him.

During the course of the disease, Dr. Ray, the resident physician, says that the patient suffered from dyspnoea most of the time, but particularly at night. Recovery from smallpox took place (perhaps the most remarkable thing, after all, in the

case) but the laryngeal stenosis persisted, and, on May 20th, when convalescence was fully established, a sudden attack of extreme dyspnoea made immediate intubation imperative. In a week's time, auto-extubation began, and was so often repeated that Dr. Ray was called upon frequently to reintubate. On this account a high tracheotomy was performed, on June 15th (about three weeks after intubation). No difficulty had been encountered in intubation previously to this, but ten days later, intubation was found impossible on account of an obstruction just above the tracheotomy wound. Three weeks later, under chloroform, Dr. Ray gradually dilated the stricture and finally left in a 10 to 12 tube, which was worn comfortably for one month, being removed at intervals of five days. On account of frequent autoextubation beginning at that time again, the tracheotomy tube was again replaced November 1st, and worn with comfort up to the time I first saw the patient.

He came under my care at the Manhattan Eye and Ear Hospital in January. On removal of the cannula and stoppage of the opening in the trachea, it was possible for him to breathe for a few minutes only, and to speak with a hoarse voice.

On February 12th, a special tube, larger than that for a boy of his size, with the constriction at the neck about $\frac{1}{32}$ of an inch smaller than the retaining swell, and with a retaining clamp, similar to the one I show you, having been prepared, an attempt was made under chloroform to crowd the intubation tube in, without opening the larynx and trachea.

By beginning with small tubes the largest was finally forced through, although there was a sense of resistance in the trachea just above the tracheotomy wound. It was found that this was useless, however, as the tube was not retained. The larynx and trachea were then split in the median line. A dense cicatricial band was found just above the tracheotomy. The interior of the larynx was lined with a much hypertrophied and very vascular mucous membrane. There was no evidence of granulation, or of previous ulceration, except at the point mentioned in the trachea. It seemed evident that the cicatricial band was not the cause of the original stenosis, but had come on as a result of the tracheotomy. The special tube was then put in place and fastened, and the wound closed as you see. The retaining clamp will be left for six or eight weeks and will then be removed. The intubation tube will not be disturbed for six weeks longer, when I hope to remove it and discharge the patient cured.

(Note. November 15, 1902. The tube was removed at the end of six weeks, and after two or three days of extreme nervousness on the part of the patient, breathing was quite easy. There is now no dyspnoea and the voice has steadily improved so that there is at present only slight hoarseness.)

CASE III.—January 1, 1903. P. K., three years and a half of age. Admitted to the Manhattan Eye and Ear Hospital, May 3, 1902. History of diphtheria with laryngeal croup one year ago. Intubation; recovery from diphtheria, with "retained intubation tube"; tracheotomy on account of frequent

autoextubation. Respiration labored. Patient transferred from Willard-Parker Hospital. Operation: under chloroform anæsthesia, thyreotomy was performed. Just above the tracheotomy wound a dense cicatricial band was found; below this, about the lips of the wound, were soft granulations. The interior of the larynx above the band was narrowed by a general submucous hypertrophy. The band was divided; granulations were curetted away, and a No. 16 tube was fastened in position by a retaining clamp, the soft tissues of the neck being brought together and sewed.

May 6th.—Patient is comfortable, breathes easily, eats without trouble. Temperature normal.

May 13th.—Patient up and about the ward.

July 15th.—On attempting to remove the clamp for the purpose of removing the tube, the tissues were found to be so flabby that it was decided to allow it to remain some weeks longer.

September 10th.—Tube removed. Child breathes comfortably. Edges of wound about retaining clamp refreshed and closed by purse string suture. The temperature has at no time been above 100° F.

October 10th.—Patient discharged to his home. Breathes comfortably, speaks only in a whisper. When last seen some time ago the parents said that the child ran and played with other children without discomfort. In great excitement he screamed with audible voice, but ordinarily he whispered.

The points brought out by these cases only emphasize those made by Dr. Rogers in his excellent paper. The important points to remember in the work are:

(1) About one per cent. of all patients intubated for acute laryngeal stenosis will "retain" the tube.

(2) The cause of the retention is due, in the majority of cases, to chronic inflammation of the intralaryngeal mucous membrane and hypertrophy of the subglottic tissues, and is not as has been generally supposed, the result of granulation, ulceration, or cicatricial bands.

(3) Autoextubation in these cases is the rule, and adds greatly to the danger where an experienced intubator is not at hand. As a result of this a large number of such cases are tracheotomized for safety.

(4) Where high tracheotomies are done, cicatricial bands are almost certain to form in the trachea or lower part of the larynx above the tracheotomy wounds.

The points in treatment which should be emphasized are:

(1) The largest sized tube possible should be inserted, under an anæsthetic. In case of contraction, rapid dilatation should be done by beginning with the small sizes and working up to the large special tube, which is to be left in place. This special tube should be as large as can be inserted, and the constriction below the neck only $\frac{1}{32}$ of an inch smaller than the retaining swell.

(2) This tube should be left in, undisturbed, for six weeks at least. It should then be removed, and, if a cure has not been accomplished, it should be replaced for six weeks longer.

The trouble in these cases is that autoextubation and frequent reintubation defeat the purpose of the tube by constantly irritating the larynx. I am therefore in favor of splitting the larynx and holding the tube in place by means of the retaining clamp early, in such cases, rather than of resorting to a tracheotomy, which, we have seen, almost invariably adds cicatricial bands to the already existing hypertrophy. In patients who have already been tracheotomized for a considerable time, so that bands have already formed, these constrictions should, if possible, be gradually dilated, and the special tube be then allowed to remain. Should it be impossible to dilate, however, or should autoextubation take place frequently after dilatation, a thyreotomy should be done and the tube be held in place as was necessary in the three cases reported.

254 MADISON AVENUE.

AN ANASTOMOSIS RING.

By WILLIAM L. KELLER,

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After repeated use of the Murphy button and other mechanical devices in intestinal and gastro-intestinal anastomosis, especially in gun-shot cases, in the Philippines, the writer is convinced that there is room for much improvement in this direction. The anastomosis ring herein described overcomes the chief objections to the Murphy button and possesses practically all its advantages. This ring is easily and quickly applied, is simple in construction, very light, collapsible, and has a lumen of extra large size in comparison to its diameter—all very valuable, if not almost essential, characteristics of a perfect device for intestinal anastomosis.

This ring is made of aluminum, and is divided into three segments and grooved externally to accommodate the ends of the divided intestine. In this groove is placed a spring, which holds the serous coats of the intestinal ends in apposition. The three segments are held together by catgut sutures, which, after intestinal union has taken place, absorb or disintegrate, allowing the ring to fall apart. As the segments become free from the bowel by pressure necrosis and sloughing they pass out in the intestinal stream.

The device is graphically presented herewith.

Fig. 1 shows the three segments of the ring. The rounded tongues and depressions on the ends are used to give firm and accurate apposition when the ring is closed.

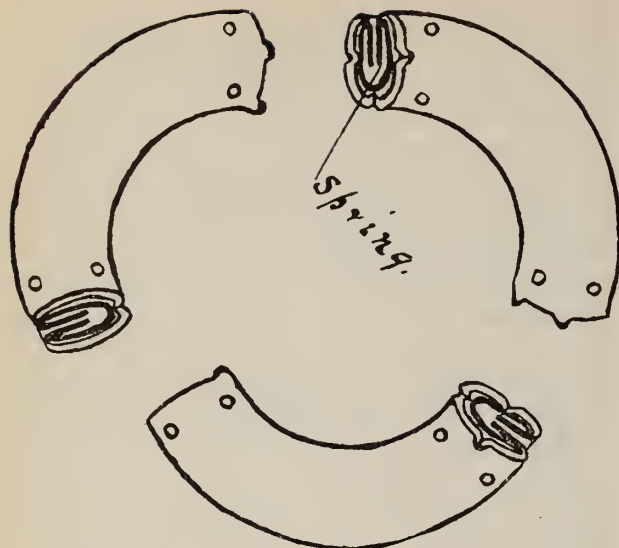


FIG. 1.—The ring shown in three segments.

In Fig. 2, the ring is held in apposition by the catgut sutures.

Fig. 3 shows the ring ready for introduction.

Fig. 4 presents a longitudinal section of bowel with a segment of ring in position.

Fig. 5 shows the ring in position.

The method of introduction is very simple. A catgut pursestring suture, similar to that used for the Murphy button, is placed in each end of the intestine. The ring is then placed in one end by the index and middle fingers, as shown in Fig. 3. The pursestring suture is then tied down firmly between the opposing surfaces of the spring. The other end is now introduced and tied down in a similar manner. Fig. 4 illustrates this procedure completed. This step completes the anastomosis. The ends of the intestines are held in the ring by the catgut pursestrings and the serous surfaces are held in close and accurate apposition by the spring.

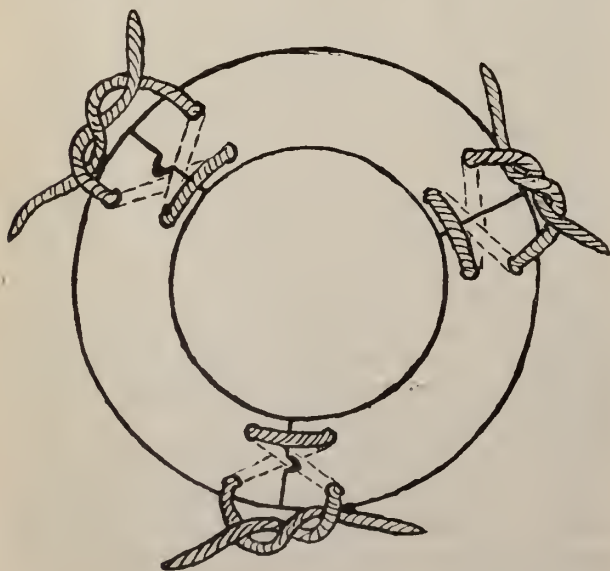


FIG. 2.—The ring held in apposition by catgut sutures.

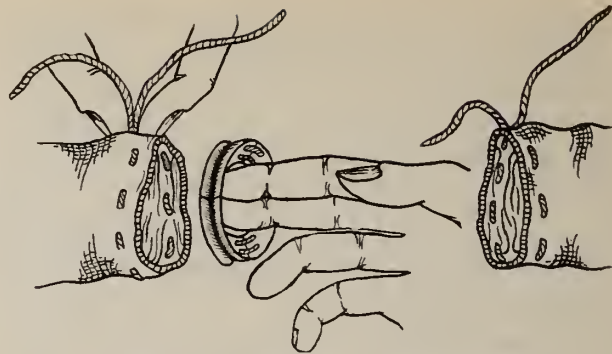


FIG. 3.—The ring ready for introduction.

No outside Lembert seroserosus sutures are required.

The ring falls away by sloughing of the tissue between the opposing surfaces of the spring and collapses from the disintegration of the catgut sutures which hold the segments in apposition. These small segments readily pass out with the intestinal contents.

The advantages of this ring are as follows:

There is no danger of retention of the ring in

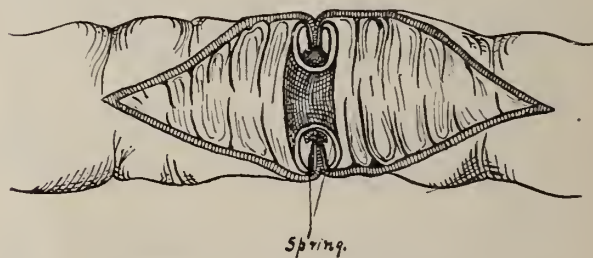


FIG. 4.—A longitudinal section of the bowel with the ring in position.

the intestinal canal, as the ring breaks up into segments that can pass through the smallest lumen. It is so light that there is no danger of sacculation and possible obstruction. It can be used with greater safety than the Murphy button in gastro-intestinal anastomosis. Almost the normal lumen of the bowel is maintained when the ring is in position. It can be introduced as rapidly as the Murphy button and is one third its weight. There

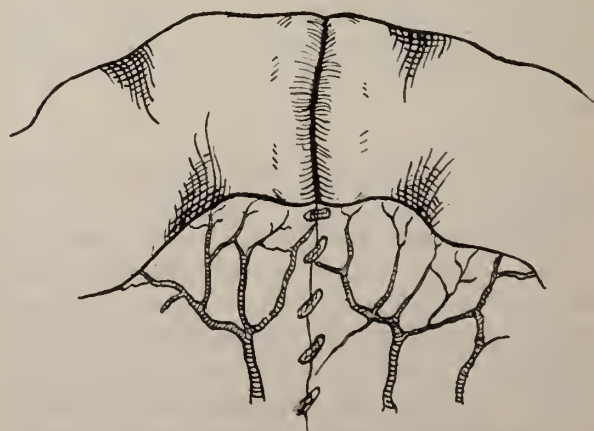


FIG. 5.—The bowel united with the ring in position.

are no sharp corners or edges on the ring which might injure the intestines in any way.

It is important that the pursestring sutures and the segment sutures be of catgut, in order that absorption or disintegration may free the ring at the proper time.

SUPRASCROTAL OPERATION FOR VARICOCELE, WITH LIGATURE OF THE SPERMATIC ARTERY.

By E. STYLES POTTER, M. D.,
NEW YORK.

Ætiology.—Varicocele, with the exception of some few severe cases, has not until recent years met with the usual operative interventions of other surgical diseases. This has been because it has been considered of minor importance, the annoyance small, and the prognosis and sequelæ not thoroughly understood. In fact, the symptoms of varicocele have in many cases been attributed to other causes, the patient presenting a line of nervous symptoms which have been treated symptomatically and the real underlying cause overlooked. In some few cases the patient was not even aware that he had any trouble of the kind existing.

The exciting causes are found in whatever determines an increased amount of blood to the testicles, as heavy lifting, straining during defecation or micturition, excessive sexual indulgence, or masturbation. It has been alleged that an absence of the exercise of the sexual function may be a cause; but in my opinion cases of this character are certainly most rare.

Varicocele in the line of peripheral irritants produces far greater disturbances than has usually been supposed; through impoverishment of nutrition of the parts, the testicle at times loses its physiological function.

Varicocele exerts a very extensive influence upon the virility of the individual, both functional and psychical. Fortunately, it rarely affects but one testis, usually the left. The other testicle being left unimpaired, virility still exists and the sexual function remains possible. The ætiology of the various nervous manifestations of these cases is rarely correctly deduced, their symptoms being attributed to masturbation or other venereal excesses, and the abuse of alcohol and tobacco, a tight foreskin, stricture, enlarged prostate, or muscular eye strain; the physician frequently overlooking the fact that the patient has varicocele, with its attendant dragging on the cord and nerves of the region, and not giving a just consideration to the causes of the disturbances present.

When the veins of both sides are involved, we soon have following a presenility with its accompanying decline of the virile, physical, and mental powers, manifested by a commencing decadence of the reproductive glands.

The organs of the female analogous to the testicle of the male have received the deepest and most careful study by many of our cleverest surgeons. The ovary is admitted to be the cause, when impaired, of manifold and obscure symptoms of the female, and many times doubtless has been removed when it exerted less contributory influence over the system than the smallest varicocele of the male.

Patients suffering from varicocele become at times despondent, even melancholic. A frequent symptom is a total inability to complete a normal sexual act, due in all probability to the neurotic condition, rather than to any pathological changes which may have taken place in the testicle itself.

There are no characteristic appearances present that can with certainty be considered a result of varicocele. Still, debility, anæmia, flabby muscles, a neurotic appearance generally, accompanied by a dull expression, have been observed in many cases of varicocele.

Is this condition produced by the presence of the varicocele or by masturbation, sexual excesses, and perversions, which enter very materially into the ætiology of this disease?

It is the belief of the author, that it becomes an equally important factor, whether considered as a result or a cause. In fact, the symptoms produced by varicocele are so uniformly connected with the ætiology, that it becomes difficult to decide where the one begins and the other ends. Such patients are frequently subjects of impotence, and once having failed in the performance of the sexual act, become sexual hypochondriacs.

Softening of the testicle is a very common symptom of varicocele, being followed after a time by atrophy. While it is perfectly true that if the varicocele is only slight, and if it has not seriously implicated the testis, the sexual powers may remain perfectly good, it is nevertheless equally true that, in many instances, this disease of the spermatic veins materially interferes with the sexual vigor. Two very interesting examples have been given by Jamin and Mugnai (from Sturgis's *Sexual Debility in Man*). In the first instance, the patient consulted Jamin for impotence due to *ejaculatio præcox*. The patient, like most of his sex, had masturbated, not, however to excess, between the ages of ten and nineteen years, at which latter period he attempted his first coitus. Neither then nor on subsequent occasions was entrance effected, owing to the cause above stated. Jamin first examined the

patient when on his back and the trouble was not apparent. On a subsequent examination, Jamin discovered the varicocele while the patient was standing.

One curious feature of the case was that, when in bed, lying on his back, erections were good, but if the patient turned over on his side and separated his thighs the varicocele which was absent when he was in the dorsal position returned and the erection vanished. Operation on the varicocele relieved this condition of affairs and subsequent coitus was all that could be desired. In the discussion which ensued on the case, at the Société de chirurgie de Paris, Segond cited a case of Vidal de Cassis, where sexual impotence and vox castrata were both remedied by an operation for varicocele.

Mugnai's case was similar to that of Jamin's.

Varicocele would, however, seem occasionally to produce the opposite effect, viz., to increase the sexual appetite rather than to diminish it. Welch gives the history of a case, in which the libido sexualis was markedly aggravated in a man affected with a varicocele, which might readily have passed into a condition of satyriasis but for the patient's self-control, and which was later relieved by an operation on the varicocele.

Nearly 50 per cent. of the subjects affected with varicocele are unaware of its existence until it is pointed out to them. About 20 per cent of the gross number of varicoceles give rise to noticeable symptoms. Of the cases known to the patients, about 25 per cent. seek treatment.

Varicocele becomes more often the cause than the result of sexual irritation. Nocturnal emissions, when a result of varicocele, always constitute a good reason for operation. Advanced hypochondriasis, monomania, melancholia, or other evidences of mental insufficiency render operation necessary.

Symptoms.—The scrotum is usually flabby and over-dependent. The size of the tumor increases with warmth, contracts with cold, and is usually larger after fatigue, exhaustion, or coitus. The condition may be described as a well defined rounded tumor close to the abdominal ring, extending about half way down to the testis. The testicle lies at the bottom of the scrotum and may or may not be surrounded by a cushion of small veins so closely connected with the organ as easily to escape notice or be mistaken for evidence of an unusually well developed testicle. The rounded variety may be mistaken for hernia.

Out of 120 cases examined by Bennett, with special reference to the condition of the testis, there was clear evidence of want of proper development in 81 cases. In 60 of these the gland was considerably smaller, softer, and more flabby than that on

the opposite side. In 16 it was distinctly smaller than the opposite. In the remaining 6 cases the testis was very small and hard, having very much the feeling of a fibroma. In one of them it was not larger than a hazelnut. Testicular sensation was entirely absent in six instances of very small testis, and diminished in the 60 cases in which the testicle presented varying degrees of softening.

The indications for operation are:

1. Very large varicocele causing perceptible deformity.
2. Pain in the tumor or obstinate reflex neuralgia.
3. Aberration of the sexual function.
4. Severe and obstinate dermic lesions of the scrotum.
5. Interference with the patient's occupation.
6. Atrophy of the affected testis.
7. Disease of the opposite testis.
8. Psychopathic symptoms.
9. Desire to enter public service, military, naval or civil.
10. Double varicocele, involving danger of serious impairment of the sexual function.
11. Varicocele complicating hernia or hydrocele.
12. Rapid increase in size.

The operations performed for varicocele are varied and numerous. Among some of the more common ones may be named the following:

1. Excision of the scrotum.
2. Compression of the veins by pins and wires.
3. Subcutaneous ligature.
4. Ricord's method of tying the veins.
5. Rigand's method of exposure.
6. Excision when the operation is performed through the scrotal tissue.

Of late years the principal operation performed has been the open operation, the incision being made through the scrotal tissues with excision of the veins, and the end to end ligature of the stumps. This operation has probably given more universal satisfaction than any of the others mentioned; still it has some disadvantages, mainly, however, in the point of election.

Captain A. E. Bradley, U. S. A., has of late been performing an operation for varicocele, which is known as the suprapubic. The incision is made over the external abdominal ring from the spine of the pubis, as for hernia, for about two inches and a half. The veins and cord with testicle, are then drawn through the incision, and the veins separated, ligated, and excised.

Before proceeding with the description of the technique of the operation which for the past year I have been performing for varicocele, I ask permission to call your attention to one point regarding the blood supply of the testicle.

The arteries of the cord are the spermatic from the aorta, the artery of the vas from the superior vesical, the cremasteric from the deep epigastric. The artery of the vas anastomoses with the spermatic artery near the testis.

Operation.—In the operation which I have found to give the most satisfactory results, the incision begins at the external abdominal ring and proceeds downward for about one inch and a half, directly over the course of the cord, ending just above the scrotal tissue. The tissues are divided down to the cord, then the cord, the vas, artery, nerves and pampiniform plexus are drawn through the incision, and the vas and nerve separated, the veins, artery, and connective tissue ligated above and below, and the intervening portion removed. The ligatures are left long, then a ligature is passed through the stumps and tied, which brings the two stumps in perfect apposition. Then the remaining long ends of the ligatures are tied, which brings the point of contact in perfect end to end apposition and acts as a natural suspensory for the previously dragging testis. The cord is then returned and the external wound closed.

The *advantages* of this operation over others thus far noted are:

First, the incision is made above the scrotal tissue, thereby permitting a far neater dissection and less manipulation of the parts, with the resultant dangers of oozing reduced to a minimum.

Second, the relations are more easily discerned, which renders the operation possible in about one-half the time of the open scrotal operation.

Third, a better application of the dressings is possible in this position than can possibly be obtained in the operation on the scrotum, thereby reducing to a minimum all danger of infection occurring through displacement of the dressings.

As the spermatic artery is deeply situated amid the varix, it seems likely that it is frequently accidentally included in the ligature in the various operations for varicocele. Especially is this true of the subcutaneous method. The spermatic artery being the main blood supply of the testicle, it would seem like rather a dangerous procedure, but the artery of the vas, the very vascular scrotal tissues, and the numerous anastomoses are quite sufficient to keep the testis completely nourished. The ligation of the artery, therefore, becomes the most beneficial step of any operation for varicocele, it being only reasonable to do this at a time when practically all the veins have been suddenly obliterated. In corroboration of this fact I will read the following from W. H. Bennett's monograph on *Varicocele*:

"1. The vas deferens having been displaced in the manner usually adopted in the operations for vari-

cocele, the spermatic artery does not accompany it, but remains with the spermatic veins.

"2. The division of the spermatic artery, together with the veins, if surgical cleanliness be observed, is not only harmless to the testicles, but probably aids in the ultimate relief of the affection by diminishing the pressure of blood going to the testis at a time when almost all the returning veins are suddenly obliterated.

"3. Division of the vas deferens, spermatic artery, and spermatic veins, entailing a section of apparently the whole cord is not necessarily followed by sloughing, or even wasting of the testicle, providing an aseptic condition of the wound is maintained."

Dangers.—The principal dangers to be encountered in the varicocele operation are scrotal hæmatocele, phlebitis, and septic infection. Thrombosis and embolism are remote possibilities.

Scrotal hæmatocele is a rather frequent complication with all operations for varicocele, no matter how carefully all hæmorrhage may have been checked before closing the wound. The parts in this region being so very vascular, oozing seems prone to occur as a secondary hæmorrhage after the wound has been closed. Hæmatocele following this operation is, to some extent, not an infrequent condition. This, however, (unless very extensive), becomes absorbed and only in exceptional cases is it necessary to puncture the wound. The danger is further diminished in the suprascrotal operation, above all others, as the scrotal tissues are not directly involved. The tendency still prevails, however, with all tissues in this region, and oozing is very likely to occur into the scrotum, and through pressure to start an extensive œdema of the scrotum with resulting fluid infiltration into the tunica vaginalis. Phlebitis would occur only as a result of sepsis; so when the proper precautions are taken and the technique is good, this possibility becomes most remote. On the whole, a neat, open operation presents less dangers than any other yet known to be performed. The dangers of atrophy I believe have been overrated. In a large number of cases that it has been my fortune to operate on, I have yet to note one where atrophy of the testis has occurred: though it is true, that as many of my patients are never seen after they leave the hospital, among some of them might be found such cases.

On the other hand, it is not uncommon to find a soft, flabby testis before operation, that seems to take on new vigor after operation, becoming firmer and well defined. The danger of atrophy occurring in cases that are not operated on is, I am positive, far greater than atrophy following operation.

Pain following varicocele operation is very slight, if any. Tetanoid symptoms are said to be a possible

result of including the vas deferens in the ligature.

True atrophy of the testicle following operation is a very rare condition. The testis is likely to diminish in size immediately following operation, but that is owing to the fact that a large part of the previous bulk was due to the enlarged veins. This apparent atrophy, however, is temporary and is followed by the return of the testis to normal size.

This operation I have thus far performed on eleven cases, the history of three of which I herewith append:

CASE I.—W. A. M., aged twenty-two years, single, born in New York, waiter (civil service applicant for patrolman). Has had varicocele for the past ten years, which became a constant annoyance during the summer months. On examination I found a very much elongated scrotum, with a number of enlarged veins. The largest part of the tumor was just above the uppermost part of the testis. Surrounding the lower part of the testis was a perfect cushion of veins, causing the testicle to seem nearly double the size of the opposite one. The testis proper was very soft and lacked the resisting firmness of its mate. Erections were good, there being no signs of declining virility.

April 23, 1902.—The suprascrotal operation was performed with ligature of the spermatic artery. Kangaroo tendon was used for ligatures and interrupted silkworm gut sutures to close the external wound. There was slight œdema of the scrotum, the day following the operation, which gradually diminished, having practically disappeared by the seventh day, when the dressings were changed.

May 5th, ten days after operation, the sutures were removed, and primary union had resulted. Patient was discharged cured.

I usually keep these patients in bed seven days after operation. Then, after carefully applying a suspensory bandage, they are allowed to go about, but cautiously. They are usually able to resume their accustomed duties on the fifteenth day. Following an operation for varicocele, there results at the point of apposition of the severed veins, an induration, which gradually becomes absorbed, completely disappearing in about three months.

August 4th.—Perfect result, induration has completely disappeared. No sign of atrophy appearing.

CASE II.—E. A. C., aged twenty-six years, born in the United States, single, motorman (applicant for patrolman). Patient has had varicocele for past six years. Since occupying his present position, it has become very troublesome, causing considerable pain from the constant dragging.

May 7, 1902.—The suprascrotal operation was performed, and the spermatic artery and veins ligated. Primary union did not result in this case, owing to oozing with subsequent infection of the clot. The wound, however, healed by granulation, and the patient was discharged cured on May 28th, twenty-one days after operation.

CASE III.—R. McG., aged twenty-seven years, born in Ireland, single, stone cutter (applicant for patrolman). Patient has had a varicocele for five

years, which has at all times been more or less troublesome, especially following coitus, when the parts became very much relaxed and the scrotum pendulous.

July 6, 1902.—The suprascrotal operation was performed with ligature of the spermatic artery and veins. July 20.—Patient successfully passed the medical and physical examinations at the civil service bureau for patrolman.

There are eight other cases upon which I have performed this same operation, but more recently. Their history is practically the same and the results in all cases thus far seem to be perfect. I have seen these patients from time to time, and have not as yet noted any signs of atrophy beginning.

ST. JAMES'S COURT.

BROADWAY AND NINETY-SECOND STREET.

Therapeutical Notes.

Formulæ for the Use of Sodium Chloride in Scrofula.—Liégeois (*Journal des praticiens*, March 14th) says that, when taken internally, sodium chloride stimulates, as well as the appetite, the salivary and gastric secretions, and possibly the pancreatic and biliary also; it is true that it augments the nitrogenous loss by increasing the combustion of albuminoids, but it compensates for this loss, and sometimes, according to Hayem, more than compensates, by increasing assimilation. According to Coze, it opposes the loss of phosphates from the organism; it increases endosmosis and exosmosis; augments the red blood cells and hæmoglobin and in general gives a fillip to hæmatosis.

Apart from alimentation, therefore, sodium chloride is indicated medicinally in diatheses of nutrition. Internally as well as externally it is indicated for persons of gross, lymphatic, scrofulous habit, sluggish, of delicate complexion; but is not suitable for those of dryer habit, with an impressionable nervous system.

The following formula is that of Coze:

- R Sodium chloride.....0.10 gramme (1½ grain);
- Calcium phosphate.....0.25 gramme (3¾ grains);
- Calcium carbonate.....0.01 gramme (⅓ grain).
- M. For one powder. Four to be taken daily at meals, for a fortnight.

Chomel gives the following formula for his "anti-scrofulous drink":

- R Sodium chloride.....2 grammes (30 grains);
- Barley water.....1,000 grammes (33 ounces);
- Syrup of acacia.....100 grammes (3½ ounces).
- M. To be taken in small glassfuls during the day.

Rabuteau gives sodium chloride in bouillon; Pietra Santa in syrup to which is added cherry-laurel water.

Liégeois prescribes:

- R Sodium chloride.)
- Infusion of walnut } of each 10 grammes (150 grains);
- leaves.)
- Confection of roses.....q. s.
- M. For 100 pills. From four to ten to be taken daily before meals.

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ARTISTS AND DOCTORS.

In the *International Studio* for April there appears a sympathetic article on The Affinity Between Artists and Medical Men, in which their temperamental kinship is interestingly considered. The writer declares: "If a book were compiled on the debts of gratitude that artists owe to medical men, the public would be surprised. I have rarely met a medical man who was not keenly interested either in some form of art or in some form of connoisseurship. Take the medical profession in every country, and I believe you will find among its members an appreciation of art more serious and more intelligent than you will meet with in any other profession or calling outside the actual practice of the arts themselves. Think for a moment of the history of English art. Was it not two physicians, Dr. Benjamin Hoadley and Dr. Morell, that aided Hogarth when he wrote the well known treatise *The Analysis of Beauty*? And in London at a later date, again, was not the good Dr. Monro a wise patron, critic, and teacher? Did he not gather together, in his house on the Adelphi Terrace, all the ablest young painters of his day, with Girtin and Turner at their head, and did he not teach them admirably in his evening class? He helped them also in other ways, for he gave them half a crown and a good oyster supper for their copies and sketches. Ruskin was not wrong when he said that Turner's true master was Dr. Monro. One might talk of those artists who, like Girtin and Cotman, had sons or grandsons that became doctors; and De Wint was not the only English painter of the nineteenth century whose father was a physician. George Mason, again, renounced medicine to

follow art, and Seymour Haden was a noted surgeon when he won for himself his high position among the masters of etching. What is it in the study and practice of medicine that makes a man sympathetic to the arts? A habit of observation counts for much, and there is also a form of artistic training in that education of the eye and of the nerves without which medical men could not be so light and deft of hand. Doctors are men of observation, like artists, and their first-hand knowledge of the human body cannot but bring them in touch with the great masters of painting and of sculpture. They look keenly at the anatomical knowledge displayed in works of art; and if they find the knowledge sound, they continue their study of the work before them, and by this means they penetrate to the subtle æsthetic qualities. In all kinds of specialistic surgery a man requires a singular union of gifts, for it is his business to be as sensitive as an artist and yet as firm and resolute as a man of action. I do not believe that anyone can be a great surgeon unless he is endowed with a touch of the æsthetic temperament."

The reciprocal relations of art and medicine may be also approached from another standpoint. If artists thus confess to a fellow feeling for their brethren of the scalpel, physicians will in turn gladly testify to the sympathetic appreciation of their science which has been shown, in all ages, by men of the brush and palette. At the time when Molière, in France, was holding the profession up to ridicule in the low caricatures of his *L'Amour médecin* and *Le Malade imaginaire*, Rembrandt was giving to the world different types of the seventeenth century physician in the admirable portraits of Professor Nicolaas Tulp and the surgeons in his famous school of anatomy. Tulp was the artist's friend and patron. In their refined and thoughtful faces the calumnies of Molière are forgotten. Philip Gilbert Hamerton has declared medicine to be the most intellectual of the professions, and many artists have shown a fondness for medical subjects and much feeling in their expression. This has been especially the case with the Flemish and Dutch and modern French schools. In the Ryks Museum in Amsterdam an entire gallery is required to contain the medical paintings and portraits. Of modern artists who have rendered medical subjects with

success, there may be mentioned, in France, Robert-Fleury, whose painting of Dr. Pinel removing the shackles from insane patients hangs in the amphitheatre of the Salpêtrière; André Brouillet, whose salon picture of Dr. Charcot's clinic is well known; and Dagnan-Bouveret, who has chosen vaccination for the subject of one of his masterpieces. The art student is a familiar figure at the Paris clinics, and medical men are welcome guests in the studios of the Latin Quarter. In England, Luke Fildes has painted a doctor at the bedside of a sick child in a manner which will appeal to the interest of every practitioner. Leonardo da Vinci and Michael Angelo each possessed a profound knowledge of anatomy, as much as would probably have been required for a medical degree at any of the universities of their day. St. Luke, "the beloved physician," is credited by tradition with having been also a painter, and he is frequently represented painting the Virgin. Among physicians in New York to-day, there are not wanting representatives who have cultivated the arts with success. In a modest corner of the reading room of the Academy of Medicine, there hangs a portrait etching of the distinguished Leipsic surgeon, Karl Thiersch, the graceful tribute of a former student and friend. The late Dr. Skene was a sculptor of no mean attainments. A well known specialist in diseases of children has also the reputation of being an excellent painter and etcher. The beautiful wax models executed by a young dermatologist of New York are works of art in their class, and are worthy to be ranked with the fine collection of *moulages* at the Hôpital St.-Louis in Paris. It may be that there are many other physicians who are also artists—potentially at least. It cannot be doubted that a knowledge of the rudiments of art, especially drawing, would be of greater value to the medical student and physician than are some other studies which are now considered more essential as preliminary to a medical course.

THE ADIRONDACK COTTAGE SANITARIUM.

Since it is only within the last few years that in our country widespread interest has been taken in the open air treatment of consumptives it is doubtful if most of us realize that it is now for eighteen years that Dr. Trudeau's beneficent work has been

going on here in our own State. But the eighteenth annual report of the institution whose title forms our heading emphasizes the fact. It is gratifying to be able to say that, as the report shows, the sanitarium has been an object of interest to so many benevolent persons that their contributions have sufficed, not only to meet its current expenses, but also to enable it to add materially to its acreage and to its resources for the treatment of pulmonary invalids.

More thankful yet should we be for the favorable results that the institution is able to show in the combat with tuberculous lung disease. We have not space to set forth in any close approach to detail the statistics for the year, but we are glad to indicate some of their salient points. Before doing so, it will be useful to cite Dr. Trudeau's definitions of the terms employed by him in the classification of the cases and in the statements as to results. By "incipient" cases he means those in which both the physical and rational signs point to but slight local and constitutional involvement. "Advanced" cases he defines as those in which the local disease process is either extensive or in an advanced stage, or in which, with a comparatively slight amount of pulmonary involvement, the rational signs point to grave constitutional impairment or to some complication. Cases classified as "far advanced" are those in which both the rational and physical signs warrant the term. The condition termed "apparently cured" is that in which the rational signs and bacilli in the expectoration have been absent for at least three months, or in which there is no expectoration at all, any abnormal signs remaining being interpreted as indicative of a healed lesion. The term "arrested" signifies that cough, expectoration, and bacilli are still present, but there has been no constitutional disturbance for several months, the physical signs being held to imply a retrogressive or arrested process.

The number of patients treated during the year was 271. Deducting the number remaining under treatment at the date of the report, there were 165 to be reported on. Of these, fifty were discharged as apparently cured, in sixty-seven the disease was arrested, thirty-two were improved, eleven were either unimproved or failed, three are classed as doubtful, and two died. Twenty-two of the pa-

tients remained in the institution for three months or less. In eleven of these the disease was incipient, in seven it was advanced, in two it was far advanced, and in two the evidence of its existence was doubtful. Eight of them were apparently cured, in four the disease was arrested, five were improved, two were unimproved or failed, and one died, the two doubtful cases remaining doubtful. One hundred and forty-three patients remained for periods varying from three to fifteen months, the average being seven months and seven days. In forty of them the disease was incipient, in ninety-nine it was advanced, in three it was far advanced, and in one its presence was doubtful. Forty-three of them were apparently cured, in sixty-three the disease was arrested, twenty-seven were improved, nine were unimproved or failed, and one died.

Surely this is a showing that is most cheering as to the feasibility of treating tuberculous lung disease successfully without sending the patients to distant resorts. Of the patients discharged during the year, seventy-eight lived in the State of New York, seventeen were from Massachusetts, ten from Pennsylvania, nine from Connecticut, eight from New Jersey, eight from Canada, seven from Rhode Island, five from Maryland, three from Vermont, three from Virginia, two from the District of Columbia, two from Ohio, two from Michigan, two from Indiana, one from Mississippi, one from Minnesota, one from Illinois, one from Montana, one from Maine, one from Puerto Rico, one from Kentucky, one from New Hampshire, and one from Louisiana. It appears therefore that the sanitarium ministers to the needs of people from a very wide range of country. With such an institution in our own State, to say nothing of the public hospital that we hope to see in operation soon, and with such other facilities for the cure or relief of consumption as exist in North Carolina, Georgia, and the Rocky Mountain regions, we have every cause for encouragement in the combat with the disease.

STATISTICS BASED ON MORTALITY RETURNS.

We are indebted to Mr. W. A. King, chief statistician of the Division of Vital Statistics of the Census Office, for copies of various publications of the office relating to legislative requirements for the registration of vital statistics, with a specimen

form of an adequate law; to practical registration methods; to the relation of physicians to mortality statistics; to medical education in vital statistics; and to the compilation of statistics in accordance with the international classification of causes of death.

We are all painfully aware of the frequency of shortcomings in physicians' returns of causes of death, but we are reminded in one of these documents that the statistician may be embarrassed rather than helped in his work by reports in which more than one cause of an individual death is set down without information specifying the real cause. In the *Manual of the International Classification of Causes of Death* we find this: "It is very common for a physician to certify to two or more causes of death in connection with a given case, which causes may perhaps sustain a certain relation to each other as primary and secondary, direct or indirect, chief or determining, and consecutive or contributory, or be wholly unrelated so far as the statement received at the compiling office may indicate." But the statistician has to enter the death under a single title. What is to guide him in selecting that one title?

The *Manual* gives a number of instances in which, as it indicates, something may be deduced to determine the compiler's proper course. Each of these instances is illustrative of a rule laid down, though only as a suggestion. Substantially, these rules are as follows:

- Rule 1.*—If one of the two diseases is an immediate and frequent complication of the other, the death should be classified under the head of the primary disease. *Rule 2.*—If it is not absolutely certain that one of the diseases is an immediate result of the other, we must see if there is a very great difference in the gravity of the two, and classify the death under the head of the more dangerous. *Rule 3.*—When among the two causes of death there is a transmissible disease, it is preferable to assign the death to it, for statistics of infectious diseases are particularly interesting to the sanitarian, and it is important that they be as complete as possible. *Rule 4.*—If a disease whose evolution is rapid is given in connection with another whose evolution is slow, it is preferable to charge the death to the first. *Rule 5.*—If none of the preceding rules is applicable, the diagnosis most characteristic of the case should

be selected.

It is admitted that Rule 1, "which is the most logical of all, is about the only one which will have frequent application"—that is to say, we presume, it is the only one that will generally be quite satisfactory. It would be difficult, however, to frame better ones to take the places of the others. As is well known, fallacy is apt to lurk in statistics, but statistics compiled on a very large scale contain within themselves what may be called a self-regulating property—errors in some of the sources from which they are drawn are tolerably sure to be corrected, or neutralized, by opposite errors in others of the sources. At all events, we cannot get along without statistics, and we must therefore endeavor to make them as precise as possible. We believe that a material aid in this effort may be derived from the Census Office's publications.

THE EFFECT OF MATERNAL EMOTION ON THE FŒTUS DURING PREGNANCY.

The believers in maternal impressions have recently received fresh support from some observations of so careful and scientific an observer as M. Charles Féré, in a communication made by him to the Société de biologie, on January 17th. A woman who, at the age of twenty-two years, had had one child and had menstruated through to the seventh month, was first apprised, in her thirty-fifth year, of a pregnancy, by the abdominal movements which she experienced, and recognized as those of a child, on incurring the shock of seeing a man precipitate himself from a fifth floor balcony into the street. She had menstruated as usual only a few days before, and had no symptom of pregnancy till she felt the movements of the child. Her abdominal enlargement had been regarded as part of a general increase in obesity. The subsequent course of events proved that at the time of the shock to her emotions she was six months pregnant, for three months later she was confined of a boy, who, although he showed nothing unusual at birth, began, in the third month, to have sudden attacks of pallor with rigidity of the limbs. At the age of eight months he had two severe convulsions. At eighteen months of age these symptoms became accentuated, and he had also tremors, general convulsions, loss of consciousness, and other symptoms of an epileptic character. Both parents were healthy and sober people, free from any neurotic tendency or other morbid taint. In Féré's opinion, this case seems to

indicate that violent emotions in the mother can in truth affect the child, probably through the medium of an alteration in the uterine pressure, and that other concomitant reactions may leave behind them impressions which can give rise to postnatal conditions. Considering the profound physical changes which can be brought about in the human organism by hypnotic and suggestive influences, it does not seem so entirely incredible that some of those effects should have some influence on the fœtus, whose circulatory mechanism is so closely bound up with that of the mother; but why should they take three months to develop?

SANATORIA FOR CONSUMPTIVES IN THE STATE OF NEW YORK.

We believe that the Charity Organization Society is amply warranted in appealing to the governor of the State of New York to withhold his approval from a bill that requires the consent of township and county authorities for the establishment of any sanatorium for consumptives which, under authority of Chapter 327 of the Laws of 1900, might be erected by a city of the first class outside the city limits. Such a requirement would make it well nigh impossible for the city of New York to provide for its consumptives in a salubrious region, for there is almost a certainty that the authorities mentioned would object. Local selfishness and ignorance would have full swing, and the poor consumptives might die in their stuffy tenements by the thousand without stirring the hearts of the town and county officials in the least. We earnestly hope that the governor will heed the society's appeal.

THE HAVOC WROUGHT BY A BLANK CARTRIDGE.

Probably few of us have forgotten the old story of firing a candle from a gun and causing it to penetrate a board. An occurrence only slightly more astonishing has lately been recorded by Bonnette (*Archives de médecine et de pharmacie militaires*, 1902, No. 10; *Zentralblatt für Chirurgie*, April 18th). A person was shot at a point about three inches below the nipple, the gun, loaded with a blank cartridge, being held at a distance of about three inches from the body. The wound at its superficial part was about two thirds of an inch in diameter. The patient died at the end of five hours, while preparations for laparotomy were going on. A hole as large as a five franc piece was found in the omentum and the transverse colon, and there was one as large as a two franc piece in the anterior wall of the sigmoid flexure.

News Items.

Society Meetings for the Coming Week:

MONDAY, May 4th.—New York Academy of Medicine (Section in Biology); German Medical Society of the City of New York; Morrisania Medical Society, New York (private); Corning, N. Y., Academy of Medicine; Brooklyn Anatomical and Surgical Society (private); Utica, N. Y., Medical Library Association; Boston Society for Medical Observation; St. Albans, Vt., Medical Association; Providence, R. I., Medical Association; Hartford, Conn., Medical Society; South Pittsburgh, Pa., Medical Society; Chicago Medical Society.

TUESDAY, May 5th.—New York Neurological Society; Buffalo Academy of Medicine (Section in Surgery); Elmira, N. Y., Academy of Medicine; Ogdensburg, N. Y., Medical Association; Syracuse, N. Y., Academy of Medicine; Hudson, N. J., County Medical Society, Jersey City (annual meeting); Androscoggin, Me., County Medical Association (Lewiston); Baltimore Academy of Medicine; Medical Society of the University of Maryland (Baltimore).

WEDNESDAY, May 6th.—New York Academy of Medicine (Section in Public Health); Society of Alumni of Bellevue Hospital; New York Genitourinary Society; Harlem Medical Association of the City of New York; Medical Microscopical Society of Brooklyn; Medical Society of the County of Richmond, N. Y. (New Brighton); Penobscot, Me., County Medical Society (Bangor); Bridgeport, Conn., Medical Association.

THURSDAY, May 7th.—New York Academy of Medicine; Brooklyn Surgical Society; Society of Physicians of the Village of Canandaigua, N. Y.; Boston Medicopsychological Association; Obstetrical Society of Philadelphia; United States Naval Medical Society (Washington); Medical Society of City Hospital Alumni, St. Louis; Atlanta Society of Medicine; Obstetrical Society of Philadelphia.

FRIDAY, May 8th.—Yorkville Medical Association, New York (private); Brooklyn Dermatological and Genitourinary Society (private); German Medical Society of Brooklyn; Medical Society of the Town of Saugerties, N. Y.

SATURDAY, May 9th.—Obstetrical Society of Boston (private).

Change of Address.—Dr. Hermann Goldenberg to "The Leonore," Madison Avenue and Sixty-third Street, New York.

The State Medical Society of California.—The State Medical Society of California met at Santa Barbara, on April 21st, for its thirty-third annual convention.

Typhoid Decreasing in Cleveland.—The report of the health officer of Cleveland, Ohio, shows that typhoid is steadily on the decrease, only 100 cases being reported as against 146 the previous week. It was supposed, owing to the prevalence of typhoid in apartment houses, that the water meters were at fault, but the waterworks superintendent has proved this opinion to be erroneous in this case.

The National Confederation of State Medical Examining and Licensing Boards will hold its thirteenth annual meeting in New Orleans, Monday, May 4, 1903. Members and ex-members of State medical examining boards, physicians and educators interested in the cause of higher medicine are cordially invited to attend. Correspondence with the secretary of the confederation upon pertinent topics is desired.

The Frankford Hospital, a newly organized institution, has acquired possession of a large house containing twenty rooms, at Penn and Sellers Streets, Frankford, Pa., which will be equipped to accommodate fifty patients.

The Anti-vaccination Bill Killed in the Minnesota Legislature.—The Gregory bill prohibiting compulsory vaccination as a condition precedent to the admission to public schools was defeated recently by a single vote in the Senate of the legislature of the State of Minnesota.

Dr. Willard Parker Injured.—While attempting to cross Fifth Avenue, on Friday evening, April 23rd, Dr. Willard Parker was knocked down by an automobile and sustained a fracture of the left leg. He was removed to Roosevelt Hospital at his own request.

Foreign Surgeons to Hold Clinics in Philadelphia.—Professor Mikulicz, of Breslau, Germany, will hold a clinic at Jefferson Hospital, Philadelphia, on May 16th, and Professor Hans Kehr, who will accompany him to this country, will hold a clinic at the Jefferson on May 9th, when he will operate upon several cases of gall stones.

Smallpox Routed.—For the first time in many years, the whole city of New York is free from smallpox. President Lederle, of the board of health, even considers it unnecessary to maintain the hospital at North Brother Island, as any sporadic cases may be sent to the Kingston Avenue Contagious Hospital, in Brooklyn.

One Coroner Gone.—The office of medical examiner created by an act of legislature in New Hampshire last session, to replace the office of coroner, which has been abolished, is now represented by Dr. H. L. Stickney, who has been formally appointed medical examiner for the county of Sullivan, N. H., by Governor Batchelder.

Cholera and Plague in the Philippines, was, according to press advices on April 27th again threatening the Island of Luzon. The outbreak has been bad in the Camarines, and appears to be spreading northward. The Cagayan Valley is infected. The bubonic plague, also is present, there having been 101 cases among the natives and Chinese in Manila, since January.

Guarding Against Yellow Fever.—Seven acting assistant surgeons have been assigned to the fruit ports of Central and South America by the supervising surgeon general of the Public Health and Marine-Hospital Service with instructions to guard particularly against the introduction of yellow fever from those ports. In the instructions issued the surgeon general says: "Your attention is called to the spread of yellow fever through the agency of the mosquito known as the *Stegomyia fasciata*, and special precautions should be taken to prevent their presence aboard vessels. Should yellow fever break out at your port you are requested immediately to cable to the bureau."

Reception to Professor Ewald of Berlin, Germany.—A reception for Professor Ewald, of Berlin, Germany, will be given on Thursday evening, May 7th, by Dr. Max Einhorn, of 20 East Sixty-third Street.

Decline of the Plague in San Francisco.—According to advices from Surgeon General Wyman, of the Marine Hospital Service, in San Francisco, no new cases of bubonic plague have occurred, and the outbreak seems to be well in hand.

Oklahoma Medical Society.—The Oklahoma Medical Society will hold its eleventh annual spring session at Guthrie, Okla., on May 12, 1903. Officers will be elected and amendments to the constitution and by-laws will be finally disposed of.

Stop-over Privileges on Tickets to New Orleans.—We are notified by Mr. Alex. S. Thweatt, Eastern passenger agent of the Southern Railway, that tickets issued to New Orleans for the American Medical Association will be good for a stop-over at Washington on the return trip, on deposit, for ten days not to exceed May 30th, in order to enable the holders of such tickets to attend the Congress of American Physicians and Surgeons at Washington.

New York Academy of Medicine.—A meeting will be held at Hosack Hall, on Thursday evening, May 7th, at 8 o'clock, under the auspices of the Section in Surgery. Dr. M. B. Carleton will read a paper on Leprosy, with exhibition of lantern slides. Dr. A. A. Berg will read a report of the operations for cholelithiasis in the service of Dr. Gerster, at Mt. Sinai Hospital, during the past five years. These will be followed by a discussion between Dr. Gerster, Dr. Kammerer, Dr. Lilienthal, Dr. E. Eliot, Jr., and Dr. G. E. Brewer.

The Denver Academy of Medicine, which has but recently been organized, met on April 13th, and elected the following officers: President, Dr. Henry Sewell; vice-president, Dr. G. B. Packard; secretary, Dr. C. K. Fleming; secretary of the board of trustees, Dr. A. H. McLauthlin; board of trustees, Dr. L. E. Lemen, Dr. Jayne, Dr. McLauthlin, Dr. W. W. Grant, Dr. I. B. Perkins and Dr. Thomas H. Hawkins. Plans were discussed for raising money for the clubhouse and library. It was suggested that the board of trustees consider an issue of bonds for the purpose.

The Proposed Tuberculosis Camp Barred.—A bill providing that before any hospital camp for consumptives can be established in any county the formal consent of both the county and the town authorities must be obtained was defeated in the assembly of the legislature of the State of New York, but this vote has been reconsidered and the measure has now passed both houses of the legislature. While ostensibly general in its character it is in reality designed to frustrate the plan of the health department of the city of New York for the establishment of a camp for the open air treatment of consumptives in Orange County.

Nurses' Bill Signed.—A bill was signed on April 27th by Governor Odell, which provides a system of registry for regularly trained nurses who shall have passed a satisfactory examination under a board of examiners appointed by the regents of the university. The examiners are to be selected from a list of ten members of the New York State Nurses' Association and nominated by the association. Nurses passed by the board will receive the degree of registered nurse, and may attach R. N. to their names. Nurses already qualified by long service have the same privilege.

Resignation of Professors at the College of Physicians and Surgeons.—Dr. George M. Peabody, professor of materia medica and therapeutics, and Dr. George M. Tuttle, professor of gynecology, have resigned from the faculty of the College of Physicians and Surgeons. It is stated that Dr. Robert F. Weir, professor of surgery, and Dr. John S. Curtis are also expected to resign. The reasons assigned are that the new curriculum will entail longer hours, owing to the increase in the number of lectures, and will make too great a demand on the time of the professors, and not that there is any breach among the faculty.

A Cheap Medical Attendance Scheme.—We have received the following from Dr. Robert H. M. Dawbarn: "I beg to say that, because of certain misunderstandings as to what is ethically right and proper in the management and the distribution of the cards of an intended worthy charity, now being organized by the Rev. Dr. Daniel D. Lorenz, of this city (which errors are not that gentleman's fault), I deem it best to withdraw the use of my name from this scheme for the betterment of certain poor employees of the larger shops of this city. I retain, however, the kindest of feelings toward that estimable gentleman, the Rev. Dr. Lorenz."

Regents' Examinations.—Dr. De Witt G. Wilcox, of Buffalo, in a recent address before the Mothers' Club of that city, dwelt on the evil effects of the regents' examinations on children, especially those between the ages of ten and seventeen years, a time when the developing nervous system should be more guarded than at any other period of life. Dr. Wilcox advocates abolishing all forms of term examinations until the age of eighteen years, when the student's health is fairly established. A circular letter sent by the doctor to physicians throughout the State elicited replies expressing their strong disapproval of these examinations.

Fourth Pan-American Medical Congress.—At a meeting of the International Executive Committee of the Pan-American Medical Congress, held at the beginning of April, 1903, it was decided to accept the proposal of the Argentine Republic to hold the Fourth Pan-American Medical Congress in Buenos Aires in 1905, instead of 1903 as had been announced in the invitation of February, 1901. This was done in order to secure a better representation of delegates, there being so many conventions in this country, this year, besides the International Medical Congress in Spain, which would prevent many physicians from attending.

University of Minnesota.—Professor Charles Lyman Greene, of the University of Minnesota, has been promoted from the chair of clinical medicine to be head of the chair of practice, under the title of Professor of the Theory and Practice of Medicine.

The Association of Military Surgeons.—The twelfth annual meeting of the Association of Military Surgeons will be held in Boston, Mass., on May 19th, 20th, and 21st. Major William C. Borden and Captain George D. Deshon will represent the medical department of the army.

Trachoma in New York City.—On January 1st the Gouverneur Hospital was opened as a special hospital for the treatment of trachoma, and during the three months ending on April 1st, 18,632 old cases and 5,565 new cases were treated, and 1,056 operations were performed. At the present time between three and four hundred cases are treated at the hospital, and thirty to forty operations performed.

Pure Water for Buffalo.—A bill has been passed by the legislature of the State of New York and approved by the mayor of the city of Buffalo granting to that city the privilege of issuing bonds to the value of \$500,000, for the improvement and extension of the water works system. While this would be a great aid it is estimated that at least \$2,000,000 would be required to perform the task in a really satisfactory manner.

Child Labor Bill Signed.—A bill forbidding the employment of any child under sixteen years of age for more than fifty-four hours a week, in any mercantile or business office, telegraph office, restaurant, or apartment house, has been signed by Governor Odell. The bill also provides that every such child employed in any mercantile establishment must be provided with an "employment certificate," issued by the commissioner of health or the executive officer of the board of department of health, of the city or town in which the child lives. Children over twelve years of age may be employed during vacation in villages and cities of the third class.

The National Association of United States Pension Examining Surgeons will hold its second annual meeting at Washington, D. C., on May 13th and 14th. The officials of the Pension Bureau have promised to do everything that lies in their power to make the meeting both agreeable and profitable to the members. Dr. Sam Houston, the medical referee of the bureau, will deliver an address to the members. Other speakers who will, by invitation, address the members are: Hon. E. F. Ware, commissioner of pensions; Dr. Ernest F. Robinson, surgeon U. S. Navy, who will speak on Insanity in Connection with the Service in the Philippine Islands; Dr. John C. Hemmeter, director of the Clinical Laboratory of the University of Maryland, whose subject will be the Diagnosis of Malaria and its Sequelæ, and Dr. A. B. Richardson, superintendent of the Government Hospital for the Insane.

The Boston Association for the Relief and Control of Tuberculosis has been organized in Boston, Mass., with the object of popularizing knowledge of the preventive measures necessary in the struggle with tuberculosis. The officers are as follows: Dr. Edward O. Otis, president; Dr. Arthur K. Stone, vice-president; Miss Alice L. Higgins, secretary; Mr. George S. Mumford, treasurer. The executive committee includes, in addition to lay members, Dr. James J. Minot and Dr. Charles P. Putnam.

Official News.

Infectious Diseases in New York:

We are indebted to the Sanitary Bureau of the Health Department for the following statement of cases and deaths reported for the two weeks ending April 25, 1903:

DISEASES.	Week end'g April 18		Week end'g April 25	
	Cases.	Deaths.	Cases.	Deaths.
Measles	298	1	283	7
Diphtheria and Croup.....	315	51	335	45
Scarlet fever.....	272	28	296	24
Small-pox	2	1	0	0
Chicken-pox.....	83	0	116	0
Tuberculosis	318	183	336	175
Typhoid fever	64	5	44	9
Cerebro-spinal meningitis....	0	0	0	0

Public Health and Marine-Hospital Service:

Official List of Changes of Station and Duties of Commissioned and Non-commissioned Officers of the Public Health and Marine-Hospital Service, for the Seven Days ending April 23, 1903:

- SMITH, A. C., Passed Assistant Surgeon. Leave of absence for fifteen days, from April 8, 1903, granted by bureau letter of March 25, 1903, amended so that it shall be for ten days only.
- NYDEGGER, J. A., Passed Assistant Surgeon. Relieved from duty at Baltimore, Maryland, and directed to proceed to Gulf quarantine and assume command of the service at that port.
- LUMSDEN, L. L., Passed Assistant Surgeon. To proceed to New Orleans, Louisiana, and report to medical officer in command for duty and assignment to quarters.
- ANDERSON, J. F., Passed Assistant Surgeon. To proceed to Great Falls, Montana, for special temporary duty.
- KERR, J. W., Assistant Surgeon. To proceed to Gallipolis, Ohio, and Point Pleasant, W. Va., for special temporary duty.
- RICHARDSON, T. F., Assistant Surgeon. To proceed to Bay St. Louis, Pascagoula, Pass Christian, Long Beach, Handsboro, Gulfport, Biloxi, Ocean Springs and Scranton, Mississippi, for special temporary duty.
- GOLDBERGER, JOS., Assistant Surgeon. Relieved from duty at Ponce, P. R., and directed to proceed to Vera Cruz, Mexico, for duty in office of the United States Consul.
- FRANCIS, EDWARD, Assistant Surgeon. To report to Director of Hygienic Laboratory for special instructions.
- FOSTER, A. D., Assistant Surgeon. Relieved from duty at Charleston, S. C., and temporary duty at Cape Fear quarantine, and directed to proceed to Baltimore, Maryland, and report to medical officer in command for duty and assignment to quarters.
- That portion of bureau order of April 22, 1903, directing Assistant Surgeon FOSTER to proceed to Baltimore, Maryland, is revoked, and he is directed to rejoin station at Charleston, S. C.
- ECHMEMDIA, D. M., Acting Assistant Surgeon. Granted leave of absence for seven days, from April 15, 1903, under provisions of paragraph 210 of the regulations.

FRICK, JOHN, Acting Assistant Surgeon. Relieved from duty at Havana, Cuba, and directed to proceed to Tampico, Mexico, for duty in office of United States Consul.

GOLDSBOROUGH, B. W., Acting Assistant Surgeon. Granted leave of absence for three days, from April 28, 1903.

MASON, W. C., Acting Assistant Surgeon. Granted leave of absence for three days, from May 5, 1903.

SAFFORD, M. V., Acting Assistant Surgeon. Granted leave of absence for two days, from April 10, 1903, under provisions of paragraph 210 of the regulations.

Naval Intelligence:

Official List of Changes in the Medical Corps of the United States Navy for the Week ending April 25, 1903:

GATEWOOD, J. D., Surgeon. Detached from the *Lancaster* and ordered to the *Yankee*.

HAAS, H. H., Passed Assistant Surgeon. Detached from the Naval Hospital, Portsmouth, N. H., and granted sick leave for four months.

HARMON, G. E. H., Medical Inspector. Ordered to the Naval Laboratory, New York.

PARKER, J. B., Medical Director. Detached from the Naval Hospital, Philadelphia, and ordered home to wait orders.

STEEP, J., Assistant Surgeon. Ordered to the Naval Hospital, Portsmouth, N. H.

STREETS, T. H., Medical Director. Detached from the Naval Laboratory, New York, and ordered to the Naval Hospital, Philadelphia, Pa., for duty.

Army Intelligence:

Official List of Changes in the Station and Duties of Officers serving in the Medical Department of the United States Army for the Week ending April 25, 1903:

DE WITT, WALLACE, First Lieutenant and Assistant Surgeon. Granted sick leave of absence for thirty days.

FIELD, PETER C., First Lieutenant and Assistant Surgeon. Granted leave of absence for thirty days.

FULLER, LEIGH A., Captain and Assistant Surgeon. Relieved from duty in the Division of the Philippines, and ordered to duty with troops en route to the United States via the Suez Canal.

ROBERTS, WILLIAM, First Lieutenant and Assistant Surgeon. Relieved from duty at Fort Brady, Mich., and will proceed to the United States Army and Navy General Hospital, Hot Springs, Ark., for treatment.

Public Health and Marine-Hospital Service Health Reports:

The following cases of smallpox, yellow fever, cholera, and plague, have been reported to the surgeon-general, Public Health and Marine-Hospital Service, during the week ending April 18, 1903:

Smallpox—United States.

Place.	Date.	Cases.	Deaths.
Alabama—Mobile	Apr. 4-11	2	
California—San Francisco	Mar. 29-Apr. 5 ..	10	
Colorado—Denver	Mar. 28-Apr. 4 ..	27	
Florida—De Soto County	Apr. 4-11	28	
Florida—Duval County, Jacksonville included	Apr. 4-11	6	
Georgia—Atlanta	Mar. 4-Apr. 15 ..	30	
Georgia—Lumpkin	Apr. 7	6	
Illinois—Belleville	Apr. 4-11	1	
Illinois—Chicago	Mar. 28-Apr. 11 ..	37	3
Illinois—Galesburg	Apr. 4-11	2	
Indiana—Evansville	Apr. 4-11	2	
Indiana—Indianapolis	Apr. 4-11	4	
Kansas—Wichita	Apr. 4-11	3	
Louisiana—New Orleans	Apr. 4-11	5	2, 2 imported.
Maine—Biddeford	Apr. 4-11	1	
Maryland—Baltimore	Apr. 4-11	1	
Massachusetts—Fall River	Apr. 4-11	1	
Massachusetts—Lowell	Apr. 4-11	3	
Massachusetts—Northampton	Apr. 4-11	1	
Michigan—Ann Arbor	Apr. 4-11	1	
Michigan—Detroit	Apr. 4-11	7	
Michigan—Grand Rapids	Apr. 4-11	4	
Michigan—Port Huron	Apr. 4-11	1	
Mississippi—Natchez	Apr. 4-11	1	
Missouri—Kansas City	Apr. 5-12	2	
Missouri—St. Louis	Apr. 5-12	5	
Nebraska—Omaha	Apr. 4-11	2	

New Hampshire—Manchester	Apr. 4-11	7	
New Hampshire—Nashua	Apr. 4-11	5	
New Jersey—Newark	Apr. 4-11	1	
New York—Binghamton	Mar. 28-Apr. 4 ..	1	imported.
New York—Buffalo	Apr. 4-11	2	
New York—Rochester	Mar. 31-Apr. 14 ..	16	1
Ohio—Dayton	Apr. 4-11	3	
Pennsylvania—Altoona	Mar. 28-Apr. 11 ..	5	
Pennsylvania—Butler	Apr. 4-11	1	
Pennsylvania—Carbondale	Mar. 31-Apr. 7 ..	1	
Pennsylvania—Johnstown	Apr. 4-11	1	
Pennsylvania—Philadelphia	Mar. 28-Apr. 11 ..	43	7
Pennsylvania—Pittsburg	Apr. 4-11	29	3, 2 imported.
Pennsylvania—Williamsport	Apr. 4-11	1	
Tennessee—Memphis	Mar. 28-Apr. 11 ..	13	
Tennessee—Nashville	Mar. 28-Apr. 4 ..	2	
Utah—Salt Lake City	Mar. 28-Apr. 11 ..	17	
Wisconsin—Milwaukee	Mar. 28-Apr. 11 ..	3	

Smallpox—Foreign.

Austria—Prague	Mar. 14-28	13	
Belgium—Antwerp	Mar. 14-21	2	1
Belgium—Brussels	Mar. 14-28		6
Brazil—Rio de Janeiro	Mar. 6-13		5
Canary Islands—Las Palmas	Mar. 7-21	44	
Colombia—Barranquilla	Mar. 15-22		2
France—Roubaix	Mar. 1-31		1
Great Britain—Dublin	Mar. 14-28	33	1
Great Britain—Hebburn-on-Tyne	Mar. 14-21	1	
Great Britain—Leeds	Mar. 14-28	26	
Great Britain—Liverpool	To Mar. 28	68	7
Great Britain—London	Mar. 21-28	5	
Great Britain—Manchester	Mar. 21-28	18	1
Great Britain—Newcastle-on-Tyne	Mar. 14-21	2	
Great Britain—Nottingham	Mar. 7-28	11	
Great Britain—Sheffield	Mar. 7-21	4	
Great Britain—Walker-on-Tyne	Mar. 14-21	2	
Great Britain—Wallsend-on-Tyne	Mar. 14-21	2	
India—Bombay	Mar. 3-17		157
India—Calcutta	Feb. 28-Mar. 14 ..		1
India—Madras	Feb. 28-Mar. 6 ..		1
Mexico—City of Mexico	Mar. 22-29	7	4
Netherlands—Flushing	Mar. 21-28	1	
Russia—Moscow	Mar. 14-21	4	1
Russia—Odessa	Mar. 14-21	6	1
Russia—St. Petersburg	Mar. 14-28	169	9
Russia—Warsaw	Mar. 14-21		3
Turkey—Alexandrette	Mar. 14-21	3	1
Turkey—Constantinople	Mar. 15-22		1
Turkey—Smyrna	Mar. 1-8		1

Yellow Fever.

Brazil—Rio de Janeiro	Mar. 6-13		38
Colombia—Panama	Mar. 26-Apr. 2 ..	4	1
Ecuador—Guayaquil	Mar. 14-21		4
Mexico—Vera Cruz	Mar. 28-Apr. 11 ..	12	2

Cholera—Insular.

Philippine Islands—Provinces	Feb. 14-21	172	117
Not previously reported		953	756

Cholera—Foreign.

India—Calcutta	Feb. 28-Mar. 14 ..		159
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Plague—Insular.

Philippine Islands—Manila	Feb. 14-21		2
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Plague—Foreign.

Brazil—Rio de Janeiro	Mar. 6-13		1
China—Hongkong	Feb. 14-28	15	15
India—Bombay	Mar. 3-17		2300
India—Calcutta	Feb. 28-Mar. 14 ..		1574
India—Karachi	Mar. 8-15	199	169
Mexico—Siqueros	Mar. 8-22	3	2
Mexico—Villa Union	Mar. 8-22	3	1

The following cases of smallpox, yellow fever, cholera, and plague, have been reported to the surgeon-general, Public Health and Marine-Hospital Service, during the week ending April 25, 1903:

Smallpox—United States.

Places.	Dates.	Cases.	Deaths.
Alabama—Mobile	Apr. 11-18	3	
California—San Francisco	Apr. 5-12	15	
Colorado—Denver	Apr. 4-11	28	
Florida—Jacksonville	Apr. 11-18	1	
Illinois—Belleville	Apr. 11-18	3	
Illinois—Chicago	Apr. 11-18	17	2
Illinois—Galesburg	Apr. 11-18	4	
Indiana—Evansville	Apr. 11-18	3	
Indiana—Indianapolis	Apr. 11-18	4	2
Kentucky—Covington	Jan. 10-Apr. 18 ..	98	
Louisiana—New Orleans	Apr. 11-18	8	imported.
Maryland—Baltimore	Apr. 11-18	2	
Massachusetts—Fall River	Apr. 11-18	1	
Massachusetts—Lowell	Apr. 11-18	2	
Michigan—Detroit	Apr. 11-18	11	
Michigan—Flint	Apr. 11-18	1	
Michigan—Grand Rapids	Apr. 11-18	7	
Michigan—Port Huron	Apr. 11-18	1	
Minnesota—Winona	Apr. 11-18	1	
Mississippi—Gulf Port	Apr. 16	16	
Missouri—St. Louis	Apr. 12-19	9	

Nebraska—Omaha	Apr. 11-18	2
New Hampshire—Manchester	Apr. 11-18	8
New Hampshire—Nashua	Apr. 11-18	5
New York—Buffalo	Apr. 11-18	2
New York—New York	Apr. 11-18	2
New York—Rochester	Apr. 14-21	4
Ohio—Cincinnati	Apr. 10-17	15
Ohio—Cleveland	Apr. 11-18	1
Ohio—Dayton	Apr. 11-18	2
Ohio—Toledo	Apr. 4-18	19
Pennsylvania—Altoona	Apr. 11-18	1
Pennsylvania—Johnstown	Apr. 11-18	1
Pennsylvania—Philadelphia	Apr. 11-18	10
Pennsylvania—Scranton	Apr. 11-18	8
South Carolina—Charleston	Apr. 11-18	5
South Carolina—Greenville	Apr. 4-11	1
Tennessee—Memphis	Apr. 11-18	1
Utah—Salt Lake City	Apr. 11-18	3
Washington—Tacoma	Apr. 6-13	2
Wisconsin—Milwaukee	Apr. 11-18	1

Smallpox—Insular.

Philippines—Manila	Mar. 4-11	1
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Smallpox—Foreign.

Austria—Prague	Mar. 28-Apr. 4	8
Belgium—Brussels	Mar. 28-Apr. 4	9
Brazil—Bahia	Mar. 21-28	1
Brazil—Rio de Janeiro	Mar. 20-29	13
China—Hong Kong	Feb. 28-Mar. 7	1
China—Shanghai	Mar. 9-16	12
Colombia—Barranquilla	Mar. 22-29	1
Colombia—Bocas del Toro	To Apr. 6	21
France—Paris	Mar. 28-Apr. 4	1
Germany—Hamburg	Mar. 28-Apr. 4	1
Great Britain—Birmingham	Mar. 22-Apr. 4	25
Great Britain—Dublin	Mar. 29-Apr. 4	12
Great Britain—Leeds	Mar. 29-Apr. 4	10
Great Britain—Leith	Mar. 29-Apr. 4	2
Great Britain—Liverpool	To Apr. 4	62
Great Britain—London	Mar. 29-Apr. 4	13
Great Britain—Manchester	Mar. 29-Apr. 4	24
Great Britain—Sheffield	Mar. 21-Apr. 4	4
India—Bombay	Mar. 17-24	85
India—Calcutta	Mar. 14-21	3
India—Karachi	Mar. 16-22	1
Italy—Milan	Feb. 1-28	4
Italy—Palermo	Mar. 28-Apr. 4	1
Japan—Yokohama	Mar. 14-21	1
Mexico—City of Mexico	Mar. 29-Apr. 5	6
Russia—Moscow	Mar. 21-28	3
Russia—Warsaw	Mar. 21-28	7
Straits Settlements—Singapore	Feb. 21-Mar. 7	2
Turkey—Alexandretta	Mar. 21-28	0

Yellow Fever.

Brazil—Rio de Janeiro	Mar. 13-29	81
Colombia—Panama	Apr. 6-13	1
Costa Rica—Limon	Apr. 10	2
Ecuador—Guayaquil	Mar. 21-Apr. 4	6

Plague—Insular.

Philippines—Manila	Mar. 4-11	10
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Plague—Foreign.

China—Hong Kong	Mar. 7-14	19
India—Bombay	Mar. 17-24	1270
India—Calcutta	Mar. 14-21	751
India—Karachi	Mar. 15-22	120

Cholera—Insular.

Philippines—Cebu	Feb. 21-28	2
Philippines—Manila	Feb. 21-28	2
Philippines—Opan, Is. of Cebu	Feb. 28	4
Philippines—Talisay, Is. of Cebu	Feb. 24	17
Provinces	Feb. 1-28	135
Not previously reported		532

Total	667	403
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Cholera—Foreign.

India—Bombay	Mar. 17-24	1
India—Calcutta	Mar. 14-21	215
Straits Settlements—Singapore	Feb. 21-Mar. 7	10
Turkey—Damascus	To Mar. 22	28

Births, Marriages, and Deaths.*Married.*

BALL—YOUNG.—In Kansas City, Missouri, on Tuesday, April 21st, Dr. Henry Pendleton Ball and Mrs. Lina E. Young.

BELL—CHENEY.—In Ashtabula, Ohio, on Monday, April 20th, Dr. C. H. Bell, of Cleveland, and Miss Pearl Cheney.

BRICKNER—ABRAHAMS.—In Savannah, Georgia, on Tuesday, April 28th, Dr. Walter M. Brickner, of New York, and Miss Perla Abrahams.

BROOKS—LESTER.—In Harrisburg, Pennsylvania, on Wednesday, April 22d, Dr. Macy Brooks and Miss Kitty Lester.

FOSTER—MORTON.—In San Francisco, California, on Wednesday, April 8th, Dr. Frederick Lawrence Foster and Miss May W. Morton.

HART—GAYLAND.—In Detroit, Michigan, on Wednesday, April 22d, Dr. T. M. Hart and Miss Katharine A. Gayland.

HEREFORD—STEWART.—In Denver, Colorado, on Monday, April 13th, Dr. John H. Hereford and Mrs. Maude A. Stewart.

HEYSEY—SCHULZE.—In Washington, D. C., on Tuesday, April 14th, Dr. William T. Heysey and Miss Adeline Schulze.

KOONCE—TOWNSEND.—In Washington, D. C., on Wednesday, April 22d, Dr. Frank D. Koonce and Miss Annie Whelen Townsend.

L'HOMMEDIEU—O'MEARA.—In New York City, on Wednesday, April 22d, Dr. John Berri L'Hommedieu and Miss May O'Meara.

LINDENMYER—BECK.—In New York City, on Thursday, April 23d, Mr. Ludwig Lindenmyer and Miss Ellen Gertrude Beck, daughter of Dr. Carl Beck.

NILES—HUNSICKER.—In Philadelphia, Pennsylvania, on Thursday, April 23d, Dr. John Niles, of Carbondale, and Miss Bertine Hunsicker.

PEEBLES—VAN TINE.—In Lutherville, Maryland, on Thursday, April 23d, Dr. Thomas C. Peebles and Miss Maud N. Van Tine.

SHIELDS—KINNEY.—In Cincinnati, Ohio, on Thursday, April 16th, Dr. Lawrence Shields and Miss Clara Kinney.

SIMMONS—JOHNSON.—In Baltimore, Maryland, on Wednesday, April 22d, Dr. Horace M. Simmons and Miss Carrie F. Johnson.

SKEEL—KERN.—In Erie, Pennsylvania, on Wednesday, April 15th, Dr. Arthur A. Skeel, of Cleveland, and Dr. Blondina Kern.

TRAHAN—LUSHER.—In New Orleans, Louisiana, on Wednesday, April 15th, Dr. Edward O. Trahan and Miss Roberta Mills Lusher.

WEHR—CAHILL.—In St. Louis, Missouri, on Thursday, April 16th, Dr. S. F. Wehr, of Belleville, and Mrs. Angelina Cahill.

WELLS—NETRE.—In Baltimore, Maryland, on Friday, April 24th, Dr. Alfred Hyatt Wells, of Hyattsville, and Miss Georgia W. Netre.

WEST—BULLOCK.—In Syracuse, N. Y., on Wednesday, April 22d, Mr. George Rutherford West and Miss Clara Josephine Bullock, daughter of Dr. E. H. Bullock.

WILLIAMSON—LOUNSBURY.—In New York City, on Friday, April 24th, Dr. Henry Christie Williamson and Miss Mary Belle Lounsbury.

Died.

ANDERSON.—In Salt Lake City, Utah, on Tuesday, April 21st, Dr. F. W. Anderson, in the eighty-first year of his age.

BRECKBILL.—In Columbus Grove, Ohio, on Wednesday, April 22d, Dr. H. T. Breckbill, in the sixtieth year of his age.

FISHER.—In Covington, Ohio, on Thursday, April 16th, Dr. George Fisher, in the seventy-third year of his age.

GARDNER.—In San Francisco, California, on Saturday, April 18th, Dr. Matthew Gardner.

HOLBROOK.—In Palmer, Massachusetts, on Monday, April 27th, Dr. William Holbrook, in the eightieth year of his age.

HOWARD.—In Indianapolis, Indiana, on Saturday, April 18th, Dr. Charles Howard, Jr., of St. Paul, in the thirty-third year of his age.

LINK.—In Burlington Flats, N. Y., on Sunday, April 19th, Dr. Charles A. Link, in the thirty-third year of his age.

STEGEMAN.—In Bridesburg, Philadelphia, on Friday, April 24th, Dr. Joseph A. Stegeman, in the fortieth year of his age.

TAUBER.—In Cincinnati, Ohio, on Wednesday, April 15th, Dr. Bernard Tauber, in the fifty-third year of his age.

TAYLOR.—In Columbus, Ohio, on Thursday, April 23d, Dr. A. A. E. Taylor, in the sixty-eighth year of his age.

WILLY.—In New Orleans, Louisiana, on Saturday, April 18th, Dr. J. C. Willy, in the fifty-first year of his age.

WOODCOCK.—In Coldwater, Michigan, on Tuesday, April 21st, Dr. C. H. Woodcock.

Pith of Current Literature.

PRACTICE OF MEDICINE.

Cases of Acute Acromegaly. By Dr. W. M. Stevens. (*British Medical Journal*, April 4th).—The author reports a case of so-called acute acromegaly, occurring in a married woman, aged twenty years. Death occurred three years after the onset of symptoms (enlargement of hands, feet, and lower jaw, failure of eyesight, etc.). At the autopsy there was found a large tumor of the pituitary body, sarcomatous in nature. In the acute cases of acromegaly, that is, in those lasting from three to four years, in these only, and in these always, there has been found a sarcoma of the pituitary body, and to this type belongs the case here reported. Such acute cases must, of necessity be fatal, as there is a malignant intracranial tumor. Two classes of symptoms are present—those of an intracranial tumor, and those properly termed “acromegalic.” The weight of evidence points to the conclusion that disease of the pituitary body, with consequent loss of its function, is the cause of acromegaly, and the development of the anterior lobe of this body from the oval diverticulum and its glandular structure, suggest that it, like the thyroid gland, has some secretory function influencing the metabolism of the body. Although only a certain proportion of giants are acromegalians, it is probable that all cases of acromegaly commencing in youth lead to gigantism.

Dr. C. H. Cattle (*British Medical Journal*, April 4th) also reports the case of an unmarried woman, aged thirty years, who for four years has suffered from gradually progressing acromegaly. Her hands, feet, and face are much enlarged, but there is no marked prognathism. She complains of excessive thirst and sweating. The thyroid gland is uniformly enlarged. Over the surface of the trunk are numerous soft, pigmented, and pedunculated little tumors. There is no evidence of compression of the optic chiasma. The enlarged thyroid, rapid pulse, and protuberant eyeballs, suggest Graves's disease. The patient is bright and cheerful. Three varieties of acromegaly are described: (1) The benign, which may run a course as long as fifty years; (2) the chronic, to which this case belongs; and (3) the acute, lasting from three to four hours. In the latter cases, sarcomatous tumors of the pituitary gland have been the cause of death.

The Influence of Altitude on the Mortality of Pneumonia. By Henry W. Hoagland, M. D. (*American Medicine*, April 4th).—There is a popular belief that a high altitude exerts an unfavorable influence upon pneumonia. Dr. Hoagland has collected a number of statistics bearing on this question, and they seem to show that the mortality in pneumonia is less at high altitudes than at sea level. The statistics are all practically based on hospital returns. The hospitals that furnish the figures for the sea level mortality are the following: St. Agnes, German, Episcopal, and Pennsylvania Hospitals, of Philadelphia; Montreal General Hospital; New Orleans Hospital; Massachusetts General Hospital; and Dr. Albutt's 434 cases.

A total of 6,116 cases, with 1,640 deaths, that is to say, a mortality of 25.5 per cent. The statistics for the high altitude mortality have been obtained from Pueblo, Colorado Springs, Denver, Cripple Creek, and Salida. A total of 709 cases of pneumonia has been collected, with 157 deaths, or a mortality of 22.1 per cent. The average altitude of the mountain district cases was 6,600 feet above the sea. In weighing these statistics certain things must be borne in mind: (1) There is too great a discrepancy between the total number of sea level cases and high altitude cases; (2) the high altitude districts are new countries, and, presumably, therefore, are peopled by more vigorous people, yet it must be remembered that they are also health resorts for people suffering from lung disease; (3) the data collected throw no light on the effect of acclimatization; (4) “I know full well there is a line of demarkation as we ascend in altitude where pneumonia is certainly more fatal than at sea level, but statistics must be obtained from other countries and at an altitude higher than 7,000 feet to reach any definite conclusions.”

Carcinoma and Diabetes.—Dr. J. Boas (*Berliner klinische Wochenschrift*, March 16th) has observed twelve cases of diabetes among 366 cases of intestinal carcinoma. In three cases an operation was performed, in one of them the patient succumbed quickly to coma; in the two others they died of cachexia within a few months. If the cancer appears at a time when the diabetes is retrograding, its development seemed to be delayed. The tendency of cancer to evoke diabetes is certainly minimal. In some instances, the diabetes disappeared as the cancer developed. The author believes that the simultaneous existence of the two diseases does not exclude the performance of a radical operation when this is possible. In cases operated on, the sudden appearance of coma appears to be most frequent when the diabetes has been apparently retrogressive or has entirely disappeared. The prognosis for any operation is grave when acetonaemia exists.

The Significance of Oxaluria. By J. Bergen Ogden, M. D. (*Medical News*, April 4th).—The term oxaluria should be confined to those cases in which the crystals are found present for a considerable period. A few large primary crystals may be of greater importance than a large number of small secondary ones. (1) *Causes of oxaluria.* (a) Excessive fermentation in the gastrointestinal tract. How this gives rise to oxaluria it is impossible to say. It seems certain that permanent diminution or absence of hydrochloric acid in the stomach favors, and is perhaps necessary to, the production of fermentative oxaluria. (b) Excess of food articles containing oxalic acid. Some of these substances are sorrel, rhubarb, tomatoes, asparagus, spinach, onions, cabbage, and some of the varieties of grapes and apples. Rhubarb and asparagus probably constitute the chief causes of oxaluria arising from the food. (c) Probably the greatest number of cases of oxaluria are produced by a combination of the two preceding causes. (2) *Indoxyl potassium sulphate and oxaluria.* Indoxyl, or as it

is generally called, indican, is in small quantity, a normal constituent of the urine. When it occurs in excess it usually indicates the presence of intestinal putrefaction. In well-marked oxaluria, indican is almost always present in excess showing that there is a more or less close relationship between the two conditions, or that they probably have the same origin. (3) *Character of the crystals of calcium oxalate.* There are two main types of crystals: the octahedral, and the dumb-bell crystals. From the clinical standpoint it is, however, important to distinguish between primary and secondary crystals. Primary crystals are those that have separated from the urine inside the body; these are usually the large octahedral crystals and most of the dumb-bell and oval forms. Secondary crystals are those that have separated after the urine has left the body; these are usually the very small octahedral forms and perhaps some of the very small oval, circular, and dumb-bell forms. They usually occur in urine that has been allowed to stand for some time. The primary crystals are of importance on account of the mechanical irritation they are capable of producing. The symptoms of such irritation will depend on the place where they are formed; in the kidney, in the pelvis or in the bladder. (4) *Oxaluria and diabetes mellitus.* There is a close relationship between these two conditions. Oxaluria is, however, seen most frequently in two classes of diabetic patients. (a) In those who are not on a diet and are ingesting an excessive quantity of sugars and starches; and (b) in those who are living on an almost exclusive meat diet. The author believes that in these cases the oxaluria is due to the intestinal fermentation produced by the diet. (5) Oxaluria may be present in nervous disorders with marked mental depression, in chronic prostatitis, and in diseases of the heart and lungs. A plausible explanation for this cannot be given.

The Existence of Organic Disease in the Absence of Obvious Symptoms. By Dr. J. R. Bradford. (*Lancet*, April 4th).—In this article the author considers the occurrence or presence of serious and generally chronic diseases where no marked symptoms are present, but yet where a careful examination will not fail to reveal the presence of the malady. In a large proportion of such cases the insidious malady present is a fatal one, and not uncommonly an immediately fatal one. In some instances the occurrence of acute symptoms in the course of chronic, and especially of latent, disease, may be due to an acute exacerbation in the morbid process. Perforating typhoid peritonitis is an example of this. The onset of acute symptoms in latent disease is, however, more often dependent on a progressive development of the underlying malady. The sudden occurrence of acute uræmia in chronic renal disease furnishes a good example. Again, the onset of acute symptoms in the course of latent disease may be dependent on the presence of a complication. Gangrene or coma may first call attention to the existence of diabetes.

Latent diseases may be divided into two great classes: A. Where latent diseases occur as complications of other and obvious maladies, and the com-

plication either produces no obvious symptoms or its symptoms are thought to be due to the original disease. B. Where the latent disease is not detected until complications have developed.

As examples of class A may be quoted: Renal sequelæ occurring in diseases of the bladder and other pelvic organs; latent cerebral abscess as a complication of ear disease; pericarditis as a complication of renal disease; latent pleural effusion in cases of valvular disease of the heart. Under class B are included many of the most serious mistakes in diagnosis. Typhoid fever has a marked tendency to run a latent course—perforating peritonitis is often due to an antecedent typhoid. Cases of extensive cardiac lesion, undoubtedly rheumatic, are met with where no history of joint involvement can be obtained. Diphtheritic paralysis occurs without a definite history of a throat illness. The morbid processes underlying angina pectoris are often far advanced before symptoms occur. Among pulmonary affections, latent maladies are not so frequent. The most severe and violent forms of peritonitis may be present without producing any marked symptoms, but phthisis rarely runs a latent course. Gastric ulcer, malignant disease of the stomach and intestines, many hepatic diseases, and cerebral affections (tumor cerebri, meningitis) all afford instances of the occurrence of grave organic lesions without the necessary presence of obvious symptoms. The great lesson to be learnt is that most of these conditions can be detected, or at least suspected, as the result of a complete physical examination. It is the symptoms that are absent—not the physical signs.

Observations on the Plague in the Philippines and India. By Major Charles B. Ewing, U. S. A. (*Medical Record*, April 4th).—The author has undertaken some investigations, to test the accuracy of the statement put forth in a circular of the Manila Board of Health to the effect that "in Manila the organism (of plague) had been found in 90 per cent. of the bloods examined." He finds that the statement is misleading. Major Ewing was able to detect the *Bacillus pestis* when the blood was examined early in the disease, in only 3 per cent. of the cases. If, however, blood cultures were taken and incubated, the number of positive results was much greater. In blood examinations made just before death the bacillus was demonstrated in about 90 per cent. of the cases. After death all the examinations gave positive results. The author arrives at the following conclusion with regard to the blood in cases of plague. There are at least two diagnostic features that can be brought out, the leucocytosis and the increase in the number of blood plaques. This serves to distinguish the disease from malaria and typhoid fever. Early in the disease the blood is free from organisms; this is especially true of the peripheral blood. The author discusses the bacteriology of plague with considerable fulness and inquires into the various methods by which infection is spread and ultimately enters the organism. Haffkine's method of producing his prophylactic is given in detail, as is also the method of producing the Yersin-Roux serum. The author believes that the former is simply a preventive remedy and has no

curative value, while the latter is a strictly antitoxic and curative serum. The value of Lustig's vaccine and serum is not considered to be very great. The author finally considers the plague in relation to race characteristics and concludes that it is the Eastern races alone that are, from the point of view of plague propagation, a menace to the rest of the world.

The Prognostic Value of the Diazo Reaction in Pulmonary Tuberculosis. By Francis Carter Wood, M. D. (*Medical News*, April 4th).—The conclusions announced by the author are based on the study of 363 cases of pulmonary tuberculosis. Of these cases 117 died. In 69 per cent. of the fatal cases the diazo reaction was continuously positive before death; in 18 per cent. of the cases it was positive during a large portion of the time. That is, about 90 per cent. of the fatal cases showed a positive reaction during the last few months of life. The author draws the following conclusions: "(1) If the urine of a case of pulmonary tuberculosis shows no diazo reaction, and a kidney lesion can be excluded, the prognosis is favorable. Only 10 per cent. of the moderately severe cases here recorded gave a reaction and in a number of these the reaction disappeared on treatment. Early cases not ill enough to apply for hospital treatment do not give the reaction. (2) If the urine of a case of pulmonary tuberculosis shows an occasional diazo reaction, the prognosis is not necessarily grave, as only some 66 per cent. of the patients showing a positive reaction die. (3) If the urine of a case of pulmonary tuberculosis shows a continuous strong diazo reaction the prognosis is very grave, since a large proportion of such die within six months. (4) The presence of the diazo reaction on the first examination of a patient should not debar the case from a thorough trial of climatic treatment in a proper sanatorium."

SURGERY AND ANATOMY.

Surgical Intervention in Appendicitis.—M. E. Bureau (*Gazette médicale de Nantes*, January 24th) concludes his considerations by affirming that urgent operation may be undertaken in from thirty-six to forty-eight hours from the beginning of an attack, if the conditions permit of surgical intervention. During the period of acute onset, in the absence of symptoms of intoxication, the patient is to be carefully watched, and is to be operated on at the least sign of danger. During the decline of the attack, the iliac abscess, if formed, is to be opened and drained, and if no abscess has formed, the appendix should be removed in the interval to prevent possible or probable recurrent attacks. In cases of perforating appendicitis with peritonitis, or of gangrene of the appendix, immediate operation is to be performed.

Tetanus. By Isaac R. Trimble, M. D. (*American Medicine*, April 4th).—The bacteriology of tetanus is briefly reviewed. Stress is laid on the fact that the bacillus grows only at the site of inoculation and does not enter the blood current. Its growth is most rapid, and but few bacilli are

needed to produce a most powerful toxine. This is illustrated by recording a number of experiments by various observers. One of Kitasato's experiments was as follows: A mouse was inoculated in the tail, and an hour later, tail, skin, and subcutaneous tissue about the tail were cut away. The mouse died of tetanus. An antitetanus serum can be easily produced. It is of much greater value for animals than for man. With regard to the disease in man, Dr. Trimble holds these views: (1) The prognosis depends on the length of the period of incubation. If the disease develops within five days of the time of infection the patient will almost certainly die. (2) The treatment should consist (a) in cleaning out the infected wound if any is found; (b) in injecting a sufficient quantity of antitoxine as soon as possible, and repeating the injections as needed; (c) in, possibly, using venesection and replacing the lost blood with normal salt solution; (d) in controlling the spasms with chloroform and morphine. Seven cases that have come under the author's observation are reported with some fulness. The author believes that tetanus antitoxine is of considerable value in the treatment of tetanus, especially in the treatment of delayed cases.

An Operation for Paronychia, or "Run-Round." By Sinclair Tousey, A. M., M. D. (*Medical News*, April 11th).—It is only in some cases of long standing that it will be found necessary to remove the nail, either in whole or in part. In all fairly recent cases no cutting is required. The author's method of dealing with paronychia follows. The attachment of the cuticle to the dorsal surface of the nail is separated by means of a knife so as to allow the pus to escape. The sulcus is then disinfected with a nitrate of silver stick. The advantages of this method of operating over the ones usually employed are three. (1) The method is absolutely painless. (2) There is not the loss of a single drop of blood. (3) There is no disfigurement from the operation, since there is no cutting.

Clinical Lecture on the Importance of Early Removal of Doubtful Tumors of the Breast. By Dr. J. C. Renton. (*British Medical Journal*, April 11th).—The author reports five cases of cancer of the breast, in each of which operation was performed at the first evidence of tumor formation. The time elapsed since operation varied from eighteen to four years; all the patients are perfectly well. The diagnosis of cancer was made by the microscope in each case. The author holds that, in every patient over thirty years of age, where a lump appears in the breast, the sooner that lump, together with the breast and glands, is removed, the better for the patient. A cyst may be dissected out; if the microscope shows malignancy the whole breast may be removed. It is a very serious matter when a hard swelling in the breast has been discovered to recommend delay in intervention while its progress is observed. In the majority of cases it is better to advise operation than delay.

A Fragmentary Contribution to the Operative Treatment of Chronic Suppuration Within the Temporal Bone. By C. A. Ballance, F. R. C. S.

(*Lancet*, April 11th).—The scheme which the author adopts for dealing with chronic suppuration in the temporal bone, stated briefly, is: (1) The removal of the disease and the fashioning of the meatal flap; (2) one week later the epithelial grafting operation; (3) a few days (from the sixth to the ninth day) after this, and the earlier the better after the graft has taken, the removal of the dead portion of the graft as a deliberate measure; and (4) dry gauze tamponing through the meatus until the gauze comes away unstained. In three weeks the inner bony boundary is dry and any moisture which appears on the plugs later is from the inner surface of the mastoid flap. The critical part of the healing process is thus completed early. In from five to six weeks from the first operation, in the majority of cases, the operation cavity is soundly healed.

Ethyl Chloride as a General Anæsthetic. By Dr. W. J. McCardie. (*Lancet*, April 4th).—Ethyl chloride is very well suited for many short operations lasting for from fifteen to twenty minutes. It is of special advantage in short throat operations by skilled operators, and in certain dental cases. As compared with ethyl bromide, which is used much abroad instead of "gas," ethyl chloride is safer, because the bromine compounds have a much more toxic and lasting effect upon the tissues than the chlorine compounds. Certainly, the death rate is much less with ethyl chloride than with ethyl bromide. The author has given ethyl chloride 450 times, and has never had any trouble ascribable to the drug itself. Its stimulating properties furnish the one contraindication; in marked narrowing about the larynx chloroform is better, as being less stimulating. It is a perfect anæsthetic for small operations in children, being safe, rapid, and without after effects. The author uses Ormsby's mask; care must be taken to prevent too great dilution with air. Anæsthesia should be induced in less than two minutes.

Severe Operation for Goitre under Local Anæsthesia.—Dr. Riedel (*Berliner klinische Wochenschrift*, March 16th) employs a large quantity of eucaine solution in the extirpation of thyroid growths, having operated on 115 patients out of 580 without general narcosis. The incision extends from one ear to the other forming a flap; in this manner a good view of the field is obtained and the mobility of the tumor, especially if it is substernal or intrathoracic, is secured. The long muscles of the neck are divided inferiorly and dissected out toward their superior portions. The goitre is not removed until all the thyroid vessels are ligated, in order to prevent a possible attack of dyspnoea. The author describes in minute detail the other steps of the operation.

Immunity and Narcosis.—Dr. J. J. Snel (*Berliner klinische Wochenschrift*, March 9th) finds experimentally that immunized animals which are narcotized after being again bacterially infected, succumb to the infection. His practical deductions are that immunity to bacterial invasion is reduced by the effects of anæsthetics, that operations on human be-

ings should be preceded by nasal and pharyngeal asepsis, as far as possible, and that especial care should be taken to provide pure atmosphere in operating rooms, especially when tracheal breathing is to be employed, as then the inspired air does not have the benefit of the disinfecting qualities of the mouth, nose, and pharynx.

OBSTETRICS AND DISEASES OF WOMEN.

The Diagnosis of Pregnancy. By Dr. W. S. A. Griffith. (*British Medical Journal*, April 11th).—The diagnosis of pregnancy may be made absolutely and easily by feeling the foetus and its movements, and in the earlier months, from the history of amenorrhœa, the recognition of the marked activity of the breasts, by finding the uterus enlarged and reaching to a definite height above the pubes, allowing one inch and a half for each completed month of pregnancy.

Simultaneous Intrauterine and Extrauterine Pregnancy.—Dr. K. Reifferscheid (*Centralblatt für Gynäkologie*, March 21st) records the case of a twenty-six year old multipara, who in the third month of her pregnancy complained of severe pain and had attacks of syncope. A laparotomy was performed in the belief of the existence of a tubal pregnancy, and a left tubal abortion and an intrauterine pregnancy were found. Recovery followed and the intrauterine gravidity progressed normally to its termination.

Menstruation and the Corpus Luteum.—Dr. O. Th. Lindenthal (*Wiener klinische Wochenschrift*, March 12th) noticed during an ovariectomy, bleeding from a fresh follicle which had been ruptured by the examination preceding the operation. The patient, who had heretofore always menstruated regularly, then had an atypical menstruation. The author suggests that the amenorrhœa frequently following a unilateral ovariectomy may be due to the fact that the extirpated ovary contained the follicle which would have given the impulse to the menstrual flow. The ovaries appear to possess an alternating function, and the removal of one ovary is not always followed by the assumption of a vicarious function by the remaining one. The author suggests that possibly the bursting of a follicle starts some chemical process through which ovulation and menstruation are evoked.

On Recurrent Abortion, with Special Reference to that Form Due to Deficient Vitality of the Mother, or Both Parents, and Often Associated with Some History of Tuberculosis. By J. W. Taylor, F. R. C. S. (*British Medical Journal*, April 11th).—The author includes under the title of recurrent abortion only those cases where from the beginning, or from some definite epoch, the patient has aborted with every (succeeding) pregnancy; and with one exception only, he restricts it to cases of initial or primary recurrent abortion; that is, to patients who, from the beginning of their married life until the date of coming under observa-

tion, have never been able to bear a living child at term. Syphilis is the chief cause of recurrent abortion. Then, a number of cases belong to the exceptions or individual instances, which are too rarely met with to form any well-marked class or group; among them may be mentioned cases due to intraperitoneal adhesions, chronic nephritis, deep lacerations of the cervix, etc. But there remains still a definite group of cases of recurrent abortion of very nearly equal importance to that belonging to syphilis. The most distinguishing features which bind these latter cases together are: 1. Indications of low vitality on the part of father or mother, or both parents. 2. A strumous (*tuberculous*) family history. 3. The remarkable result of an essentially antituberculous treatment when carried on for a long period of time or throughout the whole of the pregnancy.

The general tendency is for each abortion to occur at an earlier period during pregnancy. The abortions themselves take place without difficulty, the ovum is often apoplectic, and there is a hæmorrhagic mole with little or no trace of a fœtus. In late abortions there are no distinguishing features characterizing the fœtus or placenta.

Bossi's Dilator.—Dr. A. Ostreil (*Centralblatt für Gynäkologie*, March 14th) reports four cases in which he used Bossi's or Frommer's dilators, three times for eclampsia, once for tetanus of the uterus. Ostreil employs the rapid dilators only for eclampsia, preferring the metreurynter for cases of placenta prævia. The four patients recovered. Dr. Leopold Meyer (*loc. cit.*) also refuses to use Bossi's instrument in placenta prævia or for the induction of premature labor, although he thinks the fear of hæmorrhage from laceration of the cervix has been exaggerated. Meyer has used the instrument fifteen times, six times in eclampsia, twice in cases of infection, twice in placenta prævia, twice in heart disease, twice in pyelitis, and once for accidental separation of the placenta. Two of these patients died, the rest recovered. Meyer saw, in no instances, hæmorrhage from cervical tears. Dr. G. Beck, Dr. A. Calmann, and Dr. E. Preiss discuss rapid dilatation of the cervix in the same number, the last-named describing a modification of Bossi's dilator.

DISEASES OF CHILDREN.

The Radical Cure of Inguinal Hernia in Early Infancy. By B. H. Nicholson, M. B. (*British Medical Journal*, April 11th).—The difficulty in the above-mentioned operation is to keep the wound aseptic. The author's method is as follows: Bassini's operation is performed, the two points of chief importance being that the scrotum is not opened, and that the aponeurosis of the external oblique is cut through, thus exposing the whole length of the inguinal canal, and making it easy to ligature the sac flush with the general peritoneal cavity. In order to prevent the wound and dressing from getting soaked with urine, the penis is inserted into a wide rubber tube. The tubing is attached around the skin of the base of the penis with four interrupted stitches, and the tube passes into a receptacle in the cot. The sooner the operation is performed the better the chance of a perfect cure.

Case of Infantile Scurvy. By H. S. Beadles, M. R. C. S. (*British Medical Journal*, April 11th).—The author reports a case of infantile scurvy occurring in a child aged twenty months, who had been fed, since weaning, on patent foods. The gums were swollen, spongy, and purple, and there were beading of the ribs and enlargement of the ends of the radius and ulna, and of the ankles. The left thigh was more than twice the size of the right, extremely tender, and the skin tight and brawny. The left shoulder was also swollen. The patent foods were stopped and the patient put on plain unboiled cow's milk (slightly diluted with barley water), meat juice, eggs, and orange juice. Improvement was immediate and continuous, and in two weeks' time the child was practically well.

Dyspepsia Intestinalis Acida Lactorum.—Dr. Jan Raczynski (*Wiener klinische Wochenschrift*, March 16th) describes this disease of nurslings fed entirely on breast milk, as consisting of restlessness, vomiting, meteorism and diarrhœa. The stools contain whitish clumps, as well as green and grass-green lumps. The condition may last for weeks or months and may disappear without treatment. It may interfere with the child's nutrition or with its development. The author goes into detail as to the ætiology, laying especial stress upon the chemical changes taking place in the ingested milk. The stools are much more acid than normally and this is due, not to chemical change, but to the excessive growth of the normal intestinal bacteria which is sometimes seen in diseased conditions. Occasional feeding with cow's milk is the most efficient form of treatment.

MATERIA MEDICA, PHARMACY, AND THERAPEUTICS.

Specific Treatment of Diphtheria. By George B. Philhower, M. D. (*Medical Record*, March 28th).—The author urges the use of antitoxine and deplores the want of faith in its specific action that still lingers in the mind of certain members of the profession. The points on which he lays the greatest stress are the following: (1) Antitoxine will keep for a considerable time. Bovaird and Northrup, in Sajous's *Annual*, say it can be kept one year in a fresh condition. The author has used it eight months old with excellent results. (2) The action of antitoxine is specific. While there are many theories as to its mode of action, for practical purposes, it is best to use it as one would use an antidote to a chemical poison. That is, the amount of antitoxine used should be made to correspond with the amount and severity of the diphtheritic infection. This, of course, can only be approximately determined. (3) Diphtheria antitoxine has reduced the diphtheria mortality of from 30 to 50 per cent. to as little as from 1 to 5 per cent., in the practice of many physicians. This reduction in mortality has not been accidental or due to the prevalence of mild epidemics. It has been due wholly to the specific action of the serum. (4) The amount of serum used is often insufficient. The author recommends the following doses: "Tonsillar cases do well invariably with 2,000 units, 10 cubic centimetres in

quantity. Nasal cases require from 4,000 to 6,000 units; laryngeal cases should receive from 6,000 to 10,000 units. Diphtheria characterized by a great amount of glandular swelling should be given very large doses, from 4,000 to 6,000 units, for the swelling indicates an extensive poisoning." In Boston, as high as 30,000 to 40,000 units have been used with alleged good results in desperate cases. The frequency and size of the doses must be made to depend on the results one seeks to bring about. The aim of the physician should be: (a) to arrest the growth in the first twenty-four hours; (b) to cause its edges to loosen and turn up in the second twenty-four hours; and (c) to cause the membrane to crumble and come away in the third twenty-four hours. (5) The earlier the serum is given, the better will be the results obtained, but it should not be withheld in any case, no matter how late in the disease the patient is seen.

Maragliano's Antituberculous Serum in the Treatment of Subacute and Chronic Tuberculous Affections of the Serous Membranes.—Dr. Imerio Monteverdi (*Gazzetta degli ospedali e delle cliniche*, February 22nd) reports good results obtained with the use of Maragliano's serum in the treatment of tuberculosis of the serous membranes, particularly the pleura and the peritonæum. He cites the case of a girl aged fourteen, who had the history and symptoms of generalized tuberculosis, including effusions in both pleura and peritonæum. Injections of Maragliano's serum, in doses of one cubic centimetre, given on alternate days until 14 cubic centimetres had been taken, were employed. After the third injection there was a considerable improvement in the general symptoms; after the third, the effusion in the pleura was almost gone, and after the fifth, the fever had disappeared, and the circumference of the abdomen had diminished considerably. This steady improvement continued until the fourteenth injection, when the patient was discharged cured. She had gained in weight, and her general condition had markedly improved. The effusions had disappeared. The author remarks, in commenting upon this case, that the results which he obtained with Maragliano's serum in the treatment of serous tuberculosis were superior to those which he got in treating pulmonary tuberculosis. He believes that this was due in those cases in which serous tuberculosis was primary, to the superior powers of defense possessed by the serous membranes—a superiority which has been pointed out by Dieulafoy.

Further Observations on the Treatment of Smallpox by the Serum of Immunized Heifers. By Dr. R. S. Thomson and Dr. J. Brownlee. (*Lancet*, April 4th).—The authors publish an account of thirteen cases of smallpox treated by the subcutaneous injection of large doses of serum obtained from heifers immune to vaccinia. All the cases were severe; three were hæmorrhagic, four presented a confluent eruption on the face, while in five the eruption was very abundant but discrete. Five of the patients died. The average amount of serum given was thirty ounces, sixteen ounces being administered on admission, and sixteen more some hours

later. The injections were usually given in the subcutaneous tissues of the axillary region.

No action of any kind was observed in the hæmorrhagic cases treated with serum. In two cases the patients died within twenty-four hours, but in the third case the patient lived a week after the injection. In four cases where the serum was administered from eight to eighteen days before death or commencing dessication, no influence whatever seemed to be exercised upon the course of the disease. In six cases the serum was used from four to seven days before dessication, and in all the course of the disease was modified.* But four of these patients had been undoubtedly, and the other two probably, vaccinated. Though the results of these observations are inconclusive, indeed almost negative, yet the authors think that further experiments should be carried out. The serum injections apparently had no effect, beneficial or otherwise, upon the pulse, temperature, respiration, urine, or nervous condition. Cutaneous eruptions due to the serum were infrequent.

NERVOUS AND MENTAL DISEASES.

A Lecture on the Prognosis and Treatment of Syphilitic Disease of the Nervous System. By Sir W. R. Gowers. (*British Medical Journal*, April 4th).—Syphilitic disease of the nerve centres, developing in what may be termed the "adventitial" elements, produces symptoms for the most part through the changes it causes in the nerve elements themselves. But these are simple, not specific. They are secondary to the syphilitic disease, but they are the same as would be caused by any other disease of the same character, whatever its nature. The significance of this fact is far reaching. Specific treatment acts only on the specific process. Two elements, the inflammatory and the neoplastic, can be traced in all syphilitic processes. In proportion as they are acute, the inflammatory element preponderates. The prospect of improvement and recovery depends on the extent to which, after the removal of the specific disease, the simple processes on which the symptoms depend, can pass away. For instance, in syphilitic arterial obstruction, there is thrombosis and a speedy, permanent destruction of tissue, and function can only be regained in so far as it is capable of compensation by the other hemisphere. But in the case of slow compression from a gumma, the possibility of recovery depends partly upon its degree, and still more upon its duration. Pressure paraplegia may be complete for a month, and yet recovery be perfect. If complete for three months, recovery is likely to be slightly imperfect; if for six months, only partial recovery can be expected; and after a year the return of function will be very slight. The cause of the symptoms of the various syphilitic diseases which damage the nervous system is a secondary result of the specific process. Remove the latter by treatment as completely as possible; the secondary effects may pass away, may only lessen, or may persist with only slight diminution. A gummatous cicatrix in the liver may be unimportant; in the nerve centres it may cause paralysis or epilepsy. The more rapid the development of the symptoms,

the less is their course affected by specific treatment. Those which are the most deliberate are chiefly the result of a gumma; over these, treatment exerts its greatest influence, and in them the prognosis is the best. Rapidly developing symptoms, as in acute transverse myelitis, lead to a gloomy prognosis. In treatment we must rely on mercury and the iodides. Mercury is best given by inunction in the form of the oleate, a drachm of the 10 per cent. oleate being used once or twice a day—the same piece of flannel being used throughout. Iodide need rarely be given in more than ten-grain doses. Iodide and mercury should not be given together in full doses, except in urgent cases, for the reason that the iodides favor the excretion of the mercury, and the full effect of the latter cannot be obtained. And mercury should always be pushed until effect upon the gums has been attained. Specific treatment should be energetic, brief, renewed, but not continuous. It should stop at the end of eight weeks or so, and be renewed after two, four, or six months. The patient should have three or four weeks' treatment with iodide every four months during the first year, and every six months for the next three years. Treatment may lose its power if continuously maintained. Iodides and mercury are useless in the postsyphilitic and parasyphilitic degenerative diseases—locomotor ataxia and general paralysis of the insane. The Argyll Robertson pupil is a most useful criterion of postsyphilitic degeneration; it often occurs as an isolated symptom.

The Meaning of the Term "Neurasthenia" and the Ætiology of the Disease. By P. C. Smith, L. R. C. P. (*British Medical Journal*, April 4th).—The author classifies cases of neurasthenia into "major" and "minor," as in hysteria, and calls attention to the frequent occurrence of "neurasthenia minor." It is hereditary and also congenital, and consists apparently of an inborn feebleness of nervous impulses, both centripetal and centrifugal. Such children are bright and lively, but tire easily. Their sensory acuteness is below the normal: they are very slow, and coordination is below normal. Their instinctive dislike for exertion brings bad habits—masturbation at puberty, etc. Neurasthenia minor and adenoids are frequently associated. Neurasthenia major can be classified as follows: (1) Cases arising from shock, traumatic or mental. (2) Cases due to the exacerbation of neurasthenia minor by depressing or toxic influences, such as worry or anxiety, a relaxing climate, certain illnesses, prolonged drug intoxications, self-intoxication, malnutrition, and exhaustion. Children suffering from neurasthenia minor should be most carefully brought up, and educated with a view to bettering the sequence of sensation and motion. All dawdling or day dreaming should be discounted, and relaxing climates avoided.

HYGIENE AND SANITARY SCIENCE.

Examination of Milk by the General Practitioner. By Henry Larned Keith Shaw, M. D. (*Medical Record*, April 4th).—The author believes that, by the method he suggests, both mother's milk and cow's milk can be carefully examined in about as much time as it takes to make a complete chemical urine analysis. The method he suggests re-

quires no special skill. The various steps of the proposed method are given in detail with a list of the apparatus needed for each step. The apparatus is simple and inexpensive. The general scheme of carrying out the analysis is as follows: (1) Acidity. The determination of the acidity is important, as it is an index of the bacterial contamination. This is done by using an alcoholic solution of phenolphthalein as the indicator, and titrating the milk to be tested, either with a decinormal solution of sodic hydrate, or with a saturated solution of lime water. (2) Specific gravity. Quevenne lactometers are recommended for this purpose. Those on the market, however, require too great a quantity of milk. The author has had special ones made. (3) The percentage of fat. For this the Babcock test is the simplest and the best. The ordinary centrifuge sold for making this test is unwieldy, and the author has had a special machine made for the use of physicians. (4) The percentage of sugar. The quantity of sugar is always nearly constant, and therefore need not be tested for. It can, if needed, be easily determined by the well known Fehling quantitative test. (5) Total solids. These may be determined from the specific gravity and fat percentage. The Babcock formula is the best to use for this purpose. It is simple and easy of application. (6) The percentage of proteids. This is obtained by subtracting the fat, sugar, and salt percentages from the total. (7) Preservatives. The one most commonly used is formaldehyde. The most reliable test for this substance is phloroglucine. One gramme of phloroglucine is dissolved in 100 cubic centimetres of distilled water. Ten cubic centimetres of the suspected milk are put in a test tube and to it are added 5 cubic centimetres of the phloroglucine solution. One cubic centimetre of liquor potassæ (U. S. P.) is then added, and a pink color develops at once if formaldehyde is present. The determination of other preservatives takes time and requires special skill. Their presence, however, should be strongly suspected if the milk remains sweet to the taste and smell while its acidity is as high as three tenths of 1 per cent.

OPHTHALMOLOGY.

Experimental Contribution to the Study of the Medical Treatment of Cataract.—L. Verderaue (*Revista de Ciencias Médicas de Barcelona*, January) describes a series of experiments upon rabbits, consisting in the artificial production of cataract by traumatism: and their subsequent treatment by injection of a few drops of a 5 per cent. solution of potassium iodide into the crystalline lens, and also by subconjunctival injections of the same solution. While the success of this method of treatment lacks clinical confirmation, the results obtained in animals were sufficiently favorable to suggest the possibility of its future therapeutic value in man. Under the influence of these injections the opacities diminished and in many instances disappeared entirely. The author draws the following conclusions from his work: (1) Potassium iodide has a marked effect upon opacities of the crystalline lens, in that it stays their progress. (2) It also promotes retrogression of traumatic lenticular cataract. (3) Its influence is very slight in traumatic opacities of the capsule.

PHYSIOLOGY AND PATHOLOGY.

The Significance of Biliary Pigments in the Fæces.—Dr. Raffaele Supino (*Gazzetta degli ospedali e delle cliniche*, February 15th) speaks of the value of testing fæcal discharges for the presence of certain biliary pigments. The color of normal fæces is not due to the presence of the unaltered coloring matter of bile. Bilirubin, as is well known, is transformed in the intestines into urobilin, and a part of it is reabsorbed to be used in the formation of bile and of the coloring matter of the urine. The presence of bilirubin in the intestine is, therefore, not a normal phenomenon, but is an evidence of some disturbance in digestion and absorption. Schmidt, in 1895, reported the fact that the presence of bilirubin and biliverdin could be determined in the fæces as follows: A small amount of fæces is triturated in an agate or glass mortar, and a concentrated solution of corrosive sublimate is added, mixing thoroughly, so that the reagent may penetrate every particle of fæces. The mixture is then allowed to stand covered in a porcelain capsule for twenty-four hours. A green or red color is observed then, according to the pigment present, bilirubin or biliverdin, or both colors if both pigments are contained in the specimen.

Since Schmidt's, but few experiments have been published with this test. A recent publication of Schorlemmer, of Bonn, proves that this test is the simplest and most efficient method of determining the presence of bile pigments in the fæces. Gallo found that in pathological stools in infants this test gave positive results, while in normal fæces it remained negative except that there were a few particles of fæces colored red. The present author studied the reaction in a series of normal stools, using a freshly prepared saturated solution of corrosive sublimate. He found that the stools in all cases were colored red, and when there was a great deal of putrefaction their color became almost black. Aside from this, the most pronounced pathological processes in the intestines did not alter the color obtained with Schmidt's test. He studied in this manner a number of cases, including three patients who were neurasthenics and suffered from habitual constipation, as well as five who had acute intestinal indigestion and gastroenteritis. In the latter, the black color spoken of was observed, but disappeared the moment the intestines had resumed their normal functions after having been cleared mechanically by an enema and a cathartic. The author suggests that this black color may be of value in the diagnosis of intestinal lesions. He records 29 cases observed with reference to Schmidt's test for bilirubin, including 8 cases of simple gastroenteritis, 5 of chronic enteritis, 7 of choleric form enteritis in children below nine years of age, 7 of dysentery, and 2 of mucomembranous enterocolitis. In addition to the changes in color above spoken of, he noted a whitish turbidity in the mixture of fæces and bichloride solution in all the cases except in those of simple gastroenteritis and enterocolitis, in which it was but very slightly marked. This turbidity was found to vary directly with the amount of mucin present in the intestinal contents, and therefore this test is of value in determining the presence of a catarrhal process. The researches of Gallo were

made with fæces of infants fed exclusively on milk, and the author found that a color reaction could not be obtained with the normal fæces of such infants. Urobilin is formed from bilirubin under the influence of bacteria of putrefaction, and so long as such bacteria are absent in a normal yellow stool of an infant, so long will the reaction for urobilin be absent. The author concludes that while further study is needed to elucidate some points in this connection, Schmidt's test is destined to become a valuable and practical aid in the diagnosis of intestinal affections.

Degeneration of the Erythrocyte. By John C. DaCosta, Jr., M. D. (*American Medicine*, April 11th).—From an analysis of his own work and of the literature of the subject, the author draws the following conclusions as being those most suitable for clinical application: (1) The viscosity of the erythrocytes is influenced by cellular and plasma alterations, the nature of which is obscure. (2) Simple decoloration illustrates the earliest retrograde change affecting the erythrocytes, and its intensity generally corresponds to the severity of the anæmic process by which it is excited. The change may exist alone, as in the milder forms of anæmia, or it may be combined with graver necrotic degeneration of the cells in anæmias of great severity. (3) Deformities of shape and size are common to all pathological blood, the degree to which such changes develop being related to the intensity of the blood impoverishment. Megalocytosis is a more serious sign than microcytosis. (4) Atypical staining of the erythrocytes betrays an impairment of function, and, as a rule, is found most commonly in corpuscles whose hæmoglobin content is subnormal. It is most striking in anæmias of the primary type. (5) The prevalence of megaloblasts indicates a foetal reversion of the bone marrow, and stamps the blood changes as pernicious, except in the anæmias symptomatic of *Bothriocephalus latus* infection and of nitrobenzol poisoning. The presence of megaloblasts indicates a severe anæmia, but not necessarily one of fatal outcome. (6) Granular basophilia, whatever may be its exact origin, should be interpreted as a sign of degeneration. It is a constant blood finding in but a single condition, lead poisoning, but is associated with many diseases involving a variable degree of blood deterioration. The experimental basophilia excited by the administration of preparations of hæmoglobin warrants a doubt as to the wisdom of using such medicaments as substitutes for iron in the treatment of anæmias.

Physiological Closing of the Umbilical Arteries and Perpendicular Muscles in the Arteries of the Female Genitals.—Dr. J. Bucura (*Centralblatt für Gynäkologie*, March 21st) condenses an article printed elsewhere. While the paper is not adapted to abstracting, the author's conclusions are that the umbilical vessels close physiologically by a combined action of the circular and longitudinal muscle fibres in the arteries. The author has found similar vascular muscles in the uterus, the cervix, the ovaries, the tubes, the round ligament, the vagina, and in the erectile tissue of the vulva and clitoris.

Letters to the Editor.

A CASE OF XIPHOPAGOUS TWINS.

ALFONSO XIII, ISLAND OF PARAGUA.

PHILIPPINE ISLANDS.

January 25, 1903.

To the Editor of the NEW YORK MEDICAL JOURNAL:

Sir: I send herewith an account of a case of twins connected at the sternum, as it may be well to note the frequency of such cases, although the birth happened over a year ago.

The true history was difficult to obtain. The parents were peons (laborers), the mother a robust, well-built woman, thirty years of age and a multipara, but giving no history of having previously had twins. The father was a medium-sized man about thirty-five years of age.

Pregnancy took place at an elevation of 8,000 feet and in a rather mountainous country. The birth of these twins, connected by a sternal band, occurred at Ramos, State of San Luis Potosi, Mexico, in November, 1901, on the dirt floor of a dark, dirty, ill-ventilated adobe hut, and, as is customary with that class of people, was attended by a midwife, with numerous spectators in the room, often as many as fifteen or twenty men, women and children being present at labor cases. A physician is seldom called in unless the case is urgent. I was not called to see this case until ten hours after the birth of the head of the first child, which was then dead, evidently from pressure on the umbilical cord; the second child, when it was born was also dead. The first presentation was cranial, and the second converted to a podalic. Each child was well formed and of average size (both were females), and there was only one cord and one placenta. The connecting band, which was fleshy and cartilaginous, was three inches long and one inch broad and situated in both of them at the centre of the sternum.

I took them to the company's office (I was then mine manager to the Mexican Copper Company) and showed them to the general manager, Mr. R. B. Watson, and others present.

The mother afterward had no rise of temperature or hæmorrhage and got along very well, except that she had to be catheterized for six days. At that time I was taken sick and confined to my bed for a few days and did not see the case again. As I heard nothing more of the case, I took it for granted that she had recovered the use of her bladder, and I thought I would not call again unless sent for. I was told afterward that she had died. My informant did not know when she had died or what of. If this was true (and I am not sure that it was, though I heard nothing more of her, as the natives come and go at frequent intervals, working at first one mine, then another), then she must have died of the results of retention of urine. No doubt I could have saved these twins had I been called in in time, nor was there any excuse for the mother's death.

Will you kindly inform me in what proportion of births these cases occur?

EDWARD B. BAILEY, M. D.,
Contract Surgeon, U. S. Army.

ASTIGMATISM, GLAUCOMA, AND MUSCULAR DEFECTS.

608 AUDITORIUM HOTEL,
CHICAGO, April 15, 1903.

To the Editor of the NEW YORK MEDICAL JOURNAL:

Sir: My interest has been aroused by an article in your issue of February 7, 1903, contributed by Dr. George J. Bull, of Paris, entitled *An Astigmatism Cured by Operation*. This article implies that corneal astigmatism is sometimes caused by irregular strain in the ocular muscles, which distort the natural spherical contour of the cornea, and that by relieving this strain by proper tenotomies the astigmatism may be cured. In the onward march of science, first in importance stands a discovery and next, in the interest of the scientific world, is the question of priority. So far as my present information enlightens me, yours was the first medical journal that published the cure of astigmatism by cutting the ocular muscles. It is to be found in your issue of July 24, 1897, in an article contributed by me, entitled *Strabismus Theories*. On page 119 it says: "Case 4. Man, aged forty years, vision of right eye $20/20$. With the correction of a three fourths dioptré cylinder, axis vertical, vision in the left eye was $20/40$. Mydriatic revealed one dioptré and a half of hypermetropia in the right eye; three fourths of a dioptré in the left, with three fourths of a dioptré of astigmatism as noted without the mydriatic. I now made a tenotomy of the left external rectus. Vision was now normal in each eye with plus 1.75 D., no astigmatism being present."

Page 120: "Some of the conclusions that might arise from the above cases are": "That corneal astigmatism may be due to extrinsic muscle strain: etc."

My book *The Eye in its Relation to Health*, published in 1895 by John Wright & Son, of Bristol, England, also sets forth the same theory as to the cause and cure of astigmatism. On page 152 it says: "Astigmatism is generally due to an irregularity of the spherical contour of the cornea, its curvatures being different in various meridians. Corneal astigmatism is almost always due to the fact that some of the muscles of the eyeball are exerting greater tension in one meridian than another. After correction of muscular defects it is quite common for large amounts of astigmatism to disappear and leave the eye in perfect spherical shape."

In Dr. Bull's article of February 7th, besides attributing astigmatism to strain in the ocular muscles, he also implies that it may be the cause of glaucoma. In 1895, in the book above referred to, I advanced a similar theory as to the cause of glaucoma. On pages 43 and 44 it says: "In that dreaded and generally incurable disease of the eye, glaucoma, one of the most popular treatments is iridectomy, also division of the ciliary muscle, called cyclotomy. Occasionally these operations have been known to arrest the disease, which, in my opinion, they do only when the glaucoma has been dependent on latent hyperopia or strain in the ciliary muscle. The iridectomy as well as the division of the ciliary

muscle would have a tendency to suspend the tonic spasm or contraction of latent hyperopia, and thus in a measure restore equilibrium in the distribution of nerve force to various parts of the eye; but, where these operations fail to produce any effect whatever, my opinion is that there may be an excessive strain in some one of the long muscles that is giving rise to the disturbance; and if this is carefully sought out and operative measures resorted to, the improvement will be as certain as in those cases that are relieved by operations affecting the ciliary muscle."

Since the publication of my theories in your journal and my book above referred to, my experience has frequently verified them. Truly the world moves on; no matter how slowly, it is always gratifying to watch the budding into life of a newly discovered truth.

CHALMERS PRENTICE, M. D.

* * Reference to Dr. Bull's very modestly written article will show that he did not set up a claim to priority in these matters.—EDITOR.

BOOKS, ETC., RECEIVED.

Diseases of the Stomach. By Franz Riegel, Professor of Clinical Medicine in the University of Giessen. Edited, with Additions, by Charles G. Stockton, M. D., Professor of Medicine in the University of Buffalo. Authorized Translation from the German, under the Editorial Supervision of Alfred Stengel, M. D., Professor of Clinical Medicine in the University of Pennsylvania. Illustrated. Philadelphia, New York and London: W. B. Saunders & Company, 1903. Pp. 9 to 835. (Price, \$5.00.) (*American Edition of Nothnagel's Practice.*)

Diseases of the Liver, Pancreas and Suprarenal Capsules. By Leopold Oser, M. D., Professor of Internal Medicine, University of Vienna; Edmund Neusser, M. D., Professor of Internal Medicine, University of Vienna; Heinrich Quincke, M. D., Professor of the Practice of Medicine, University of Kiel, and G. Hoppe-Seyler, M. D., Professor of Internal Medicine, University of Kiel. Edited, with Additions, by Reginald H. Fitz, M. D., Hersey Professor of the Theory and Practice of Physics, Harvard University, and Frederick A. Packard, M. D., Late Physician to the Pennsylvania, etc. Authorized Translation from the German, under the Editorial Supervision of Alfred Stengel, M. D., Professor of Clinical Medicine in the University of Pennsylvania. Illustrated. Philadelphia, New York, and London: W. B. Saunders & Company, 1903. Pp. 5 to 918. (Price, \$5.) (*American Edition of Nothnagel's Practice.*)

A System of Physiologic Therapeutics. Edited by Solomon Solis-Cohen, A. M., M. D., Senior Assistant Professor of Clinical Medicine in Jefferson Medical College, etc. Volume V. Prophylaxis—Personal Hygiene—Civic Hygiene Care of the Sick. Illustrated. Philadelphia: P. Blakiston's Son & Company, 1903. Pp. xvii-539.

Diseases of the Heart and Arterial System. Designed to be a Practical Presentation of the Subject for the Use of Students and Practitioners of Medicine. By Robert H. Babcock, A. M., M. D., Professor of Clinical Medicine and Diseases of the Chest, College of Physicians and Surgeons, Chicago, etc. With Three Colored Plates and One Hundred and Thirty-nine Illustrations. New York and London: D. Appleton & Company, 1903. Pp. xxi-853.

Handbook of Climatology. By Dr. Julius Hann, Professor of Cosmical Physics in the University of Vienna, etc. Part I. General Climatology. Translated with the Author's Permission from the Second Revised and Enlarged German Edition, with Additional References and Notes, by Robert De Courcy Ward, Assistant Professor of Climatology in Harvard University. New York: The Macmillan Company, 1903. Pp. xv-437. (Price, \$3.00.)

The Surgery of the Head. By Bayard Holmes, B. S., M. D., Professor of Surgery in the University of Illinois, etc. New York: D. Appleton & Company, 1903. Pp. xv-569.

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Miscellany.

Paralysis Agitans.—In a general discussion of this subject at a meeting of the New York Neurological Society, held on April 7th, Dr. B. Sachs said that he was of the opinion that this was distinctly a disease of the senile period. In this period the two most important factors were emotional excitement and some prolonged and exhausting disease. The point of diagnosis to which Charcot had attached so much importance, the non-involvement of the head in paralysis agitans and its involvement in multiple sclerosis, seemed to him a point not well taken, for he was sure he had seen involvement of the head in quite 75 per cent. of cases of paralysis agitans. Charcot's attempt to distinguish sharply between these two affections seemed to him to have been carried beyond a justifiable limit. He had seen cases giving the symptoms of multiple sclerosis, and yet later on showing a distinct picture of paralysis agitans. There was a young man at the Montefiore Home whom he had first seen when he was only about eighteen years old, and who was attacked with the typical carriage, tremor, and speech of paralysis agitans. As the years went on he had nystagmus and a marked exaggeration of all the reflexes, and his speech was now as much that of multiple sclerosis as of paralysis agitans. He also recalled the case of a young woman, first seen by Professor Mendel, in Berlin, who made the diagnosis of hysterical tremor. When seen by the speaker, a few months later, she presented what appeared to be the first symptoms of multiple sclerosis.

At the present time, she presented the typical picture of paralysis agitans. This experience led him to think that there must be some relationship between these two diseases, and a case presented at the meeting by Dr. Hunt gave color to this view.

With regard to the treatment of paralysis agitans, he was accustomed to make use of hyoscine and the ordinary sedatives, and probably all present believed that no drug did much good. The only treatment that was fairly satisfactory was the use of some form of vibratory therapeutics.

Dr. Stuart Hart said, with regard to the records of Dr. Starr's clinic at the Vanderbilt Clinic, that out of 219 cases of paralysis agitans there recorded, 139 were in males and 80 in females. In persons under thirty years of age there developed two cases, both in men. The disease began in 88 cases between fifty and sixty years of age. Among heavy workers there were 45 males; among those particularly exposed to cold there were 24 cases; among the lighter trades there were 24 cases; among those working in factories there were 14 cases. In 6 cases it was stated that the mother had paralysis agitans, and in 3 the father was said to be so affected, while in several other cases brothers or sisters were said to be similarly affected. Forty patients believed that the disease arose from anxiety or worry, and half of these attributed it directly to fright. In quite a number of instances the history stated that the tremor had developed very shortly after some injury of the part first exhibiting the tremor.

Dr. Joseph Collins presented an analysis of 50 cases of paralysis agitans. Of this number, 34, or 68 per cent., were in males, and 16, or 32 per cent., in females. The average age at which the disease developed was 51½ years, the youngest patient being 32 and the oldest 72 years old. They were divided according to occupation as follows: Merchants, 7; workmen, 8; laborers, 5; tailors, 4; clerks, 1; clergymen, 1; drivers, 1; carpenters, 1; plasterers, 1; engineers, 2; gardeners, 1; houseworkers, 9; captains, 1; no occupation, 7. The nationalities were: United States, 8; England, 1; Ireland, 16; Germany, 7; Holland, 1; Russia, 6; Austria, 1; not given, 10. The attributed cause was: Worry in 7 cases; alcohol in 1; excesses in 1; excitement in 1; shock in 1; refrigeration in 1; hard work in 1; pneumonia in 1; grief in 1; bite of a cat in 1; unknown, 34. In 7 cases there was a history of injury; in 1 of operation; in 1 of hard work; in 1 of syphilis; while in 40 cases there was no special history of this kind. There was a history of neuropathic heredity in 13 of the cases, or 26 per cent., and a history of paralysis agitans in the parents or uncle in 6 instances. The average duration when first seen was four years, the longest being 20 years, and the shortest 5 months. The part to first show trembling was: The left upper extremity in 11 cases; the left lower extremity in 8; the right upper extremity in 15; the right lower extremity in 1. The initial symptom was trembling in 24 cases, pain in 11, unsteadiness in 3, numbness in 2, nervousness in 1, stiffness in 1, inactivity of fingers in 1, weakness in 1, loss of power of right hand in 1, headache in 1, and not given in 4. The relation of curvature of the spine was investigated specifically in only the last 20 cases, and was noted in 7 cases. He was con-

vinced that paralysis agitans was a disease of early senility occurring as the reward of virtue.

Dr. M. Allen Starr said that he had had a fairly large experience with paralysis agitans, yet it did not bear out Dr. Collins's statement about the frequency of the disease among the Celts and its comparative rarity among the Hebrews. He could recall quite a large number of patients among the Jews and a number among the Germans. In hospital and clinic work one was apt to get a one-sided view of such matters because of the large proportion of persons of certain nationalities at such places. Nor did his observations bear out what the last speaker had said about heredity; probably 4 or 5 per cent. would represent the proportion showing hereditary influence. Anxiety and injury appeared to him to bear a distinct relationship. He had never seen a patient absolutely cured of paralysis agitans, but he had observed a very marked improvement in one, and a great variability of symptoms in a number of other cases. The disease did not appear to be a steadily progressive one. He had found that the Swedish massage, skilfully administered, after a prolonged hot bath, gave these patients so much relief that they were willing to keep up such treatment for years. The great majority of his patients had found benefit from hyoscine in doses of $\frac{1}{100}$ of a grain, given from two to five times a day.

Dr. Leszynsky said that dispensary and hospital patients were not benefited, but with private patients it was quite different. Four times within the past ten years he had had the opportunity of making the diagnosis very early in the disease. The disease certainly presented remissions at times, and traumatism certainly exerted a distinct influence. Most of these patients were very amenable to suggestion, and in this way could be benefited by treatment. He had not observed good effects from hyoscine except for a very short time, because most of the patients complained of the action of this drug. As systematic exercise had been recommended, he had tried the Swaboda system of exercises, which call for voluntary effort entirely, and the patients appeared to be benefited thereby.

Dr. Joseph Fraenkel said that in the past ten years he had seen many cases of paralysis agitans and had witnessed 10 autopsies. It was rare to find a person suffering from paralysis agitans who was gray-haired or old-looking, and the autopsies showed a remarkable freedom from arteriosclerosis. These persons were rarely addicted to the use of alcohol or exhibited evidence of syphilitic infection, and to this extent he would indorse Dr. Collins's statement that this disease was "the reward of virtue." He saw nothing to support the theory that this was a disease of senility. It was common to observe a marked hypertrophy of the skin in these patients. A characteristic feature was the difficulty of stopping the patient when on any one line of thought and changing him to another. Pseudonystagmus was often observed. Although the tremor ceased at night, the paralysis agitans' patient presented the same attitude in sleep as when awake. He agreed with Dr. Collins that very little could be done for these patients by treatment of any kind.

Dr. Harlow Brooks said that he had studied only four cases of paralysis agitans *post mortem*, and the findings were so conflicting that he was very skepti-

cal about any lesions alleged to be characteristic of the disease. He was of the opinion that deformity of the spinal column was very common in persons who were not very well developed, basing this opinion upon many observations made in the dead house as well as in examining during 1898 the recruits for service in the regular army. He thought that fully 7 out of 50 such recruits would show as much spinal deformity as Dr. Collins's patients, even though these persons were of sufficiently good physique to be accepted in the army.

Dr. Collins said that his statistics with regard to the Celts might be refuted, but to do so the actual figures must be presented and not cases recalled from memory. He believed also that the more paralysis agitans was treated the worse it became.

Dr. Hunt said he understood that the premature senility referred to the nervous system, and not to the arterial tree, when used in connection with paralysis agitans.

Dr. Pearce Bailey was of the opinion that two thirds of the cases of paralysis agitans began after the age of sixty. A disease which could become fairly well developed in the course of a few weeks could hardly be regarded as an organic disease of the nervous system, and he was inclined to think that the evidence was rather in favor of its being a disease of the muscular system, resulting possibly from the action of certain toxins. He believed it was distinctly induced by trauma, either psychic or physical, for there were too many definite and striking clinical records of this kind. The disease usually first appeared in the hands, and yet in cases of injury to the legs the disease was more apt to begin in the legs. A large proportion of the persons coming to Dr. Starr's clinic suffering from paralysis agitans were apparently right-handed workers.

Electrothermic Hæmostasis.—At a meeting of the New York Obstetrical Society held on March 11th, Dr. Andrew J. Downes, of Philadelphia (a guest), presented his instruments and explained their method of use by means of drawings.

Dr. Clement Cleveland, having had a large experience with Skene's clamps, and later with the angeiotribe, had given up the use of both, except in the performance of vaginal hysterectomy, because of the improvement in the preparation of catgut. He thought that Dr. Downes's instruments were an improvement over the older ones, and that his method of resecting intestine was a superior method, but he doubted if his instruments would find general application.

Dr. Joseph E. Janvrin had had no experience with the use of these instruments, but expressed his great satisfaction with his experience with the angeiotribe.

Dr. J. Riddle Goffe expressed his appreciation of the mechanism of Dr. Downes's instruments, but, because of the necessity of always having a current or a battery, he doubted if they would be universally used. He himself would prefer the angeiotribe or ligatures.

Dr. Herman J. Boldt thought such a method to be desirable in removing malignant disease, particularly by the method adopted by Dr. Byrne, be-

cause from the heat deeper effect upon the tissues was obtained.

Dr. Charles Jewett's own experience with Skene's clamps had been unsatisfactory, and he would like to ask if Dr. Downes was able to save time with these instruments, and how much pressure they exerted.

Dr. LeRoy Broun thought that sufficient credit had not been given to Dr. Skene. He had not found the life of the Skene clamps to be so short, and he thought, arranged as they were with the pole at the end, and requiring less ampèrage, they were easier to handle. He still preferred Skene's clamps in hysterectomy, in cancer cases, and in all abdominal cases if there was a pyosalpinx near the uterus.

Dr. Downes related his own experience with the use of these clamps since 1892 in all forms of abdominal work. He had had no deaths from hæmorrhage, and thought that to one experienced with their use much time could be saved. His chief contention as to their superiority over ligatures was that adhesions were less apt to form and there was less pain, because no nerves were constricted.

A Greek Municipal Physician of Two Thousand Years Ago.—We quote the following highly interesting historical note from the *Lancet* for March 7th: "An ancient inscription more than 2,000 years old has recently been discovered at Amphissa in Greece which is particularly interesting to all members of the medical profession. It is a decree of thanks to a doctor honoring him for his good works, and being practically complete is probably one of the oldest documents containing an eulogium of a medical man in existence. We give the text complete as it speaks for itself, adding only a few words of commentary further to elucidate its meaning. The text itself and most of the supplementary remarks are derived from an essay upon the inscription by M. Wilhelm Vollgraff (*Bulletin de correspondance Hellénique*, 1901, pp. 234-240).

To propitious fortune.

The Archons and the city of the Amphissians to the Archons and to the city of the Scarphians greeting. We have forwarded to your town a copy of the decree engrossed by our city in honor of the doctor Menophantos, son of Artemidorus, a Macedonian of Hyrcania, as Menophantos has requested us to do.

In the month of Amon the ...day. Proposition of the nonarchs. Take notice that Menophantos, son of Artemidorus, Macedonian of Hyrcania, doctor, having been invited by our city, has established himself therein and has on his sole account accepted the responsibility of the medical duties. Behold when most serious diseases manifested themselves he ably cared for us and next to the gods it is to him, thanks to his exertions and personal energy, that our attacked citizens were rescued.

Take notice, he has been attested as irreproachable for having lavished his cares upon all without distinction, with constant honesty and perfect equality, and for having watched over all things (or cases) with benevolence.

Take notice that he has conducted himself during all the period of his sojourn among us with modesty and wisdom and has manifested a deportment of perfect dignity worthy of the city and his profession. Also and moreover, notwithstanding [his advanced] age and [accidents] which have

befallen him, he has acted in departing from our city
* * * * *

curing all the assembled sick and giving public consultations? [this rendering is doubtful]. We grant Menophantos the Proxenia and give him permission... We present to him... because of his great attention and for his benevolence. In order that there shall exist a visible monument of this Proxenia accorded to Menophantos we have forwarded a copy of this decree to the city of the Scarprians, and we make the following proclamation. The Amphissians have presented to Menophantos, son of Artemidorus, to him and to his descendants, the Proxenia, the right to acquire property, the rights of pasturage, protection in war time as in times of peace, and all the other privileges which the laws grant equally to the other proxenies.

"It is not necessary here to set forth M. Vollgraff's reasons for dating the inscription in the second century B. C., but they are sufficient. Scarphia, the city which for some reason the Amphissians and Menophantos desired should also exhibit a copy of this decree in honor of their medical resident, was close to Thermopylæ. It was but a short distance from Amphissa, which latter was close to Delphi. The medical man was evidently a descendant of some Macedonian who was a colonist of Hyrcania in Lydia, and who possibly emigrated there under Alexander or his successors; but as we are told that one of the Seleucid princes settled Macedonians in the Hyrcanian plain, which was in the Hermus Valley in the neighborhood of Magnesia, his ancestors may be considered as coming from Macedonia at that time. The name of Menophantos is not a Macedonian one, but evidently commences with the title of the deity Men, who was a god of healing. Many Greek medical men assumed names formed of compounds with the name Men, such as Menodotus, Menodoros, and Menophilos. Moreover, close to the Hyrcania from which Menophantos came, Strabo tells us there was a temple of the god Men and at this sanctuary there was a school of medicine. It is quite possible this school existed in the youth of Menophantos and that he studied there. There are some 20 honorary decrees, or notices, of medical men in the various collections of ancient inscriptions, showing that the members of the profession were in many cases worthy citizens and virtuous and kindly men and, further, that their efforts for the amelioration of the bodily ailments of their fellow creatures were fully appreciated. Two of these texts may be found in Newton's "Greek Inscriptions in the British Museum," vol. ii, pp. 143 and 258, and others in Messrs. Paton and Hicks's 'Inscriptions of Cos,' Nos. 5 and 344."

Lung Surgery: Historical and Experimental.
By Benjamin Merrill Ricketts, Ph. B., M. D. (*Continued from page 772*).

PARASITIC FUNGI.

Actinomyces is a vegetable parasite found in animals and men, and is supposed to be inhaled after having colonized in the mouth, probably in decayed teeth. Direct infection of the lung is very much questioned.

Sebert (1848) was the first to publish anything upon the subject.

Belfield (1879) was the first to discover this disease in America.

Ponfick (1882) was the first to recognize this disease in man.

Murphy (1884) was the first to discover this disease in man in the United States.

It is said that the first case diagnosticated in living man was reported on February 12, 1889, by Powell and Goodlee.

Heuser (1895) reported a case of primary actinomycosis of the lung.

Benter reported one which recovered.

When found in the lung the patients do badly. Twenty per cent. of the cases reported have been of the lungs.

Aspergillus.—Virchow first mentioned this vegetable parasite in 1856. The most dangerous of the species is the *Aspergillus fumigatus*. Wheaton mentions a case in a child two and a half years old. There is no general infection and the examination of the sputum reveals nothing, and is said to be always secondary.

Furbinger (1886) collected eleven cases.

Pneumonomycosis has been known for half a century to be a causative factor in lung diseases.

Bristowe (1853) reported a vegetable fungus growing in the cavity of the lung. But its identity is uncertain.

Some think pneumonosis to be due to an aspergillus.

Echinococcus is the tapeworm in the dog, and its larva enters the human body with food or water. The embryo passes through the wall of the stomach and develops in a tissue in which it becomes lodged.

Todd (1852) reported a case of hydatids of the right lung with recovery after expulsion of the cyst. Since then there have been fifty contributions to this disease of the lung.

Man is not infected by eating meat containing the hydatids, because it is only the embryo of the echinococcus that is the cause of disease in man. If taken into the body in the mature state the hydatid will become encysted without injury to its host. Here it forms its eggs and thus is prepared to infect any animal into which it gains entrance. If the hydatid does not become encysted in the body it is either digested or passed out through the alimentary tract.

Paragonimus Wastermani is a trematode indigenous to Asia and Formosa, and especially to Formosa. It is commonly known as a lung fluke, found in both animal and man. Manson was the first to describe this parasite.

It is not found in the very young or the very old; is usually found in those of strong constitutions, of middle life, and various stations of life.

Yamagiwa thinks that surgery might be tried if the exact locations of the more superficial cysts could be determined.

It is becoming quite common in the United States.

There have been twenty-five contributions to this subject.

It is characterized by hæmoptysis.

Cysticercosis is caused by the presence of entozoa. It is the larva of various species of tænia (tapeworm). It is taken into the body with uncooked meat; sometimes by working or handling dirt, etc.,

in which fæces of these animals or fowls may have been deposited. It is comparatively rare in the lung.

Trichina Spiralis is a nematode rarely found in the lung, and then only by the microscope in the muscular tissue.

The cyst is ovoid in shape, at first transparent, becoming opaque and ultimately calcifying. It is coiled and the female is larger and more numerous than the male.

[Dr. Ricketts's Personal Conclusions will complete this article.]

Bargain Sales as Incitements to Kleptomania.—

James G. Kiernan (*Alienist and Neurologist*, November, 1902) in an article on Kleptomania and Collectivism (*sic*) says that Lacassagne (*Journal de médecine de Paris*, October 25, 1896) divides the "bargain" sale thieves into four types: Pure thieves, "collectors," mental instabilities, and the insane. The "collectors" closely approximate to ordinary thieves. Men occur much more frequently among them. They are often in easy circumstances or even rich. They steal without need and almost the same things for the pleasure of possessing them. Bibliomaniacs and other faddists can not leave a bookshop or other collection without buying. These "collectors" have the same pleasure in stealing desired objects. These people may be feeble-minded and insane, but, as a rule, merit the severity of law as much for their own sake as that of society.

The mentally unstable are those in whom the desire to take, quickly occurs and who yield without conflict. They are usually rich or in very easy circumstances. Their will weakens rapidly in the seductive surroundings of the "bargain" sale and yields readily to a motive more or less bizarre, but determining and obvious, such as vanity or coquettishness, or even to good sentiments. Others are seized by a vertiginous state caused by the noise and the crowd and become victims of morbid impulse. After several yieldings to temptation they become inveterate thieves, cannot master their impulse; systematically, weekly even, they return to steal, in order to experience the same fright and intense distress in which they have a morbid delight. The desire becomes irresistible. On analyzing it, horrified at themselves, they experience the need of confession to a friend. Despite the most bizarre precautions against their penchant they succumb.

Lacassagne, like Benjamin Franklin (*Essay, Poor Richard's Almanac*), thinks the "bargain" store a serious social danger to the body politic. Women who never have stolen and who would never steal elsewhere find themselves bewitched, excited and take; a true diabolic possession. In the midst of a hurrying crowd in the odorous, overheated wealth-suggesting atmosphere, the woman finds herself with clothing aptly adapted to hide stolen objects. At certain hours there are too few employees to serve the enormous crowd which waits its turn, touching and taking goods whose splendor and variety bewilder. Certainty of detection would undoubtedly serve as a deterrent in many cases; as Lacassagne remarks, it would be better, especially for the mentally unstable women, to catch the thief rather than merely to prevent theft.

The "collector" type is as a rule perfectly responsible. "Book snatching" is a besetting vice of bibliomaniacs, just as coin and stamp purloining attacks numismatists and philatelists.

While kleptomania in the United States is legally a defense for crime, it remains to be determined in each case whether kleptomania exists, and whether it merely extenuates or completely absolves. Where states predisposing to mental instability exist, the burden of proof of sanity is on the State. In the "collectors" the burden would be on the accused. Stealing of relatively worthless articles is by itself no evidence of insanity. Parisians think it "smart" to steal sugar and matches from restaurants. Not a few sane Americans think it is equally "smart" to steal rides on railroads.

Tuberculous Peritonitis.—Professor Veit (*Gazette de gynécologie*, January 1st) in a paper presented to the last International Congress of Obstetrics and Gynecology, at Rome, formulates the following conclusions: (1) Tuberculous peritonitis is always secondary; an ascitic and an adhesive form may be distinguished. (2) Affection of the genitalia may be primary, and, indeed, may consist in tuberculosis of the peritoneal covering of the genital organs alone. (3) Peritonitis with extensive nodular formation, not attributable to ovarian tumors or to carcinoma, may usually be ascribed to tuberculosis. (4) Tuberculous peritonitis may result in spontaneous cure, but this is rare. (5) Tuberculous peritonitis is curable by laparotomy, although failures have been noted, caused most frequently by advanced tuberculosis of other organs. (6) There is, at present, no unanimity of opinion as to the explanation of these cures. The influence of normal serum or its acquisition of antitoxic properties is a probable cause. (7) In recent cases operation should be done if the peritonitis causes exhaustion; a repetition of the operation may become necessary if the operation has been done too soon. (8) Chronic cases ought to be watched awhile first; if spontaneous cure is tardy in making an appearance, intervention will be necessary. (9) The operation consists in simple laparotomy in the linea alba, the complete evacuation of the fluid, and the suture of the operation wound; radical abdominal operation should only be added if at the same time completely isolated genital tuberculosis is discovered.

Chlorine as a Factor in Cancer.—According to a press cable dispatch from Simla, India, Captain Rost, of the Indian Medical Service, who has been investigating malignant cancers bacteriologically at the Rangoon Hospital for three years, announces what is believed to be an important discovery. He has found in both carcinomatous and sarcomatous growths distinct germs of saccharomyces, which can only develop when the natural chlorine in the tissues falls below the normal quantity. Following this clue Capt. Rost has devised a treatment to reinforce the chlorine by special diet, enabling large quantities of common salt, which carries chlorine, to be absorbed. He has experimented with eight patients. One was completely cured, and the condition of the others was improved.

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Lectures and Addresses.

AMERICAN MEDICAL ASSOCIATION.

MEDICAL EDUCATION IN THE UNITED STATES;

BEING THE
PRESIDENTIAL ADDRESS.*

By FRANK BILLINGS, M. S., M. D.,
CHICAGO.

One of the chief objects of the organization of the American Medical Association was the elevation of the standard of medical education in the United States. In the president's address, the father of the association, Dr. N. S. Davis, stated that "the purpose of the organization was the improvement of our system of medical education and the direct advancement of medical science and practice."¹ That medical education in that day was defective, as recognized by the founders of the association, is shown by the report of the committee on medical education in the year 1850. The committee said, in part, as follows: "Medical education is defective because there are too many medical schools; the teachers are too few. There are too many students. The quantity of medicine taught is too limited; the quality too superficial, and the mode of bestowal of the honors of medicine too profuse and too unrestricted." For many years the association showed its inter-

est in and attempted to influence the elevation of the standard of medical education through a committee on medical education. The *Transactions* of the association of the earlier years show many reports of this committee, which display much thought and effort on the part of the association to improve the status of medical education at that period of time. James R. Wood, as chairman of the committee, in the year 1858, recommended that the various medical colleges of America be requested to send delegates to a convention of medical colleges, to consider the matter of medical education. This movement finally resulted in the formation of the Association of American Medical Colleges, which thereafter represented, to a degree at least, the American Medical Association in its efforts to improve medical education. Later, the Southern

Medical College Association was formed. Together these associations represent about 80 per cent. of the regular medical schools of the country, and these colleges have, in a general way at least, fulfilled the minimum requirements prescribed by the rules of the association in regard to the preliminary education of students, the length of the college course, and the character of the curriculum.

About twenty-five years ago the Illinois State Board of Health, through the splendid efforts of Dr. J. H. Rauch, its secretary, made a report on the number and character of the medical schools of the country. This board adopted a minimum of requirements of medical schools as a necessary step

toward the recognition of their diplomas by the State Board of Health of Illinois. This minimum requirement of the State Board of Health was gradually increased from time to time, with the result that many of the medical schools were obliged to



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* Delivered at the Fifty-Fourth annual session of the American Medical Association, in New Orleans, May 5, 6, 7, and 8, 1903.

¹ *Transactions of the American Medical Association*, vol. xvi., 1865.

raise the standard of medical education to enable their graduates to obtain licenses to practise in Illinois. Other States followed Illinois in requirements for better methods of medical education, with the result that the standard of education in the country was very much improved.

MEDICAL SCHOOLS OF THE COUNTRY.

In the earlier days of our country, the need of physicians was met by the organization of medical schools which were, as a rule, proprietary in character. These schools attempted the education of physicians on the then existing conditions of medicine by teaching in a didactic way the principles and theories of medicine and surgery. The branches usually taught at that time consisted of anatomy, physiology, chemistry, materia medica, obstetrics, the practice of medicine and of surgery. But little opportunity was offered in the great majority of the schools for extensive, practical teaching in anatomy or chemistry, and but a moderate amount of clinical work in the so called practical chairs. The course of medicine in the college consisted of two annual sessions of four or five months. The course was not graded. The student attended all the lectures and clinics taught during his first year, and the second year was a repetition of the first. This class of schools was rapidly increased in the course of time. The chief reasons therefor were the fact that it was recognized that a connection with a medical school was profitable, directly and indirectly. The prestige which the teacher enjoyed among the graduates and the laity brought him a remunerative consultation and private practice. In most of the States it was easy to incorporate and obtain a charter for a medical college. It cost comparatively little to conduct and maintain the institution. Lecture rooms were obtained at trifling cost. The dissecting room was not worthy of the name of a laboratory, and the chief expense in maintaining it was the cost of dissecting material, which was usually deficient in quantity and poor in quality. Medical schools were organized all over the country, without reference to the needs of the people. Medical education was prostituted. To obtain a sufficient number of students many institutions showed a most degraded disregard of the moral and mental qualifications of the matriculates. The income of the school was wholly derived from the tuition of students, and no applicant was turned away who had the cash with which to pay his way. To add to the facility of obtaining a medical college course, there were organized in some cities evening schools, the hours of college attendance occurring from 7 to 9 or 10 o'clock at night. These sundown

institutions enabled the clerk, the street car conductor, the janitor, and others employed during the day to obtain a medical degree.

In spite of the general tendency to increase the facility by which a medical degree could be obtained, there was a force at work to improve the methods of medical education. A few older medical colleges and an occasional new one set the standard high in relation to the existing status of medicine. There were earnest, forceful medical men in some of the schools who fought for a higher standard for matriculation and graduation.

The medical college associations exerted a splendid moral influence for good, and the State boards in all the more advanced States have, by mandatory legislation, compelled the colleges to raise the requirements in reference to the preliminary education, the length of the annual session, the time of medical college study, the character of the curriculum, etc. As a result, the status of medical college education has been very much improved in the last twenty, and chiefly in the last ten years. But, improved as it is, there are evils which menace us, the chief of which still are too many medical schools, too many students, and inadequate facilities for the proper teaching of medicine.

The improvement in medical college requirements has increased the cost of the maintenance of the medical college to a degree that it is no longer a profitable financial venture. There can be no dividends. Indeed, the proprietors of the private institution must often make up a deficiency in the annual budget. In spite of this fact, medical colleges have continued to increase steadily.

In 1877 there were sixty-five medical schools in the United States. In 1882 this number had increased to eighty-nine, and 1901-'02 to one hundred and fifty-six. The enrolment of students and the number of graduates have also increased, in spite of the fact that the requirements for matriculation and graduation have been increased. In 1882 there were² 14,934 matriculates, and this number was increased in 1901 to 26,417, and in 1902 to 27,501, an increase of about 100 per cent. in twenty years.

The number of graduates in 1882 was 4,115; in 1901, 5,444; in 1902, 5,002, an increase of about 25 per cent. in twenty years. If in 1850 there were too many medical schools, and too many students, what can we say of the condition to-day?

It has been estimated that there is an average of one physician to 600 of the population of the United States at the present time. The natural increase in the population of the country and the deaths in the

² *Journal of the American Medical Association*, vol. xxxix, No. 10, p. 574.

ranks of the profession make room each year for about 3,000 physicians, based on the proportion of one physician to 600 of the population. With 5,000 or more graduates each year, a surplus of 2,000 physicians is thrown on the profession, overcrowding it and steadily reducing the opportunities of those already in the profession to acquire a livelihood. The evil of an overcrowded profession is a sufficient cause of complaint, but the cause thereof is the important point for us to consider, and, if possible, remove. To correct the evil, the ease and facility with which a medical degree may be secured in this country must be diminished. As before stated, there are now 156 medical schools in this country. Of these, 30 are sectarian, and 136 are so called regular schools. Fifty-eight are medical departments of universities, of which 24 are State institutions. The relation of the medical school to the university in most instances is a nominal one only. In but few of them is the control of the faculty or the finances of the medical department vested in the university proper. In a very few of them the sciences fundamental to medicine are taught in the university. In the majority of these schools these departments are duplicated in the medical department, and are taught by members of the medical faculty. In most instances, too, the teachers of the fundamental branches are physicians who devote but a part of their time to teaching. They teach without salary or for a nominal one only. Their remuneration is obtained by private practice, to which they must devote their best energies, to the detriment of their value as teachers. The clinical department of these schools is, in most instances, wholly inadequate. The majority of such schools depend on the general hospitals situated near them for the privilege of the use of clinical material. Necessarily, these clinical advantages have great limitations, inasmuch as they cannot be fully controlled for the purpose of proper bedside teaching or for scientific investigation. Some of the medical schools which are connected with State universities are situated in small cities where it is impossible to command an adequate amount or variety of clinical material. The connection with a university which many of the schools enjoy is, therefore, almost valueless in a pedagogic sense. The majority do not differ materially from the private, or proprietary, schools in their value as teaching institutions. Ninety-eight of the medical schools in the country are private corporations, organized, maintained and, as a rule, owned by the faculty. If, in earlier years, these institutions were sources of direct financial profit to the owners, they have ceased to be so now—at least most of them. The evolution of medicine has made it necessary to extend the laboratory method of teaching. As these schools attempt to

teach the whole curriculum, the erection, equipment, and maintenance of the necessary laboratories have so increased the cost of conducting the schools that they are usually no longer self-supporting. The temptation is in such schools to conduct them on a plane which shall just comply with the minimum requirements of the various State bodies, which regulate medical practice in the several States. They are maintained ostensibly to teach medicine, but in reality for the prestige which a professorship affords the teacher in his private and consultation practice. Proprietary schools depend on general hospitals and dispensaries for clinical material. What was said of the status of clinical teaching of the medical departments of the universities is true also of the proprietary college. These schools cannot hope to improve their present standards. The majority attempt to maintain laboratories and other expensive means of teaching which a modern medical education demands. But in how many are the laboratories worthy of the name? What kind and variety of instruments and apparatus do they afford? Are their teachers of the sciences of the fundamentals of medicine capable? They cannot hope for better conditions, because the time when a student's tuition will pay the school for his instruction, if he is properly taught, will never return. Medical education of the future must be based on the status of medical science. That basis is recognized now, but is attempted in the great majority of our medical institutions in a very superficial way.

SCIENTIFIC MEDICINE.

The great and important discoveries of Pasteur and the practical methods devised by Koch in bacteriology marked a new era in medicine. Before the facts made clear by these discoveries, the hypotheses and theories of other days have disappeared. Our knowledge of man and the lower animals and of the diseases and evils which afflict them has been revolutionized within the last twenty years. The advance in medical knowledge has been greater in that period than in all preceding time. Medicine now embraces many more subjects, chiefly fundamental ones, than were known twenty years ago. Formerly a very superficial knowledge of a few isolated facts in general chemistry and human physiology and a memorized knowledge of human anatomy and of *materia medica* enabled the student to learn the practice of the art of medicine and surgery. Now the problems which confront the clinician and investigator in medicine and surgery compel him to have a good and working knowledge of general, physical, and physiological chemistry, of general biology, bacteriology, pathology, physiology, embryology, pharmacology, histology, and anatomy. The

physician who has not a practical knowledge of these fundamental subjects cannot clearly understand the methods of others engaged in scientific investigation, nor can he rationally utilize the discoveries of others in his work. Medicine to-day is applied science. If we utilize the knowledge of to-day in an attempt to cure and prevent disease, it must also be an experimental science. No one can practically apply or rationally experiment with what he does not know. The fundamental studies of medicine must, therefore, be acquired by all who desire to successfully apply them as sciences. The successful experimental application of these sciences has given us within ten years a knowledge of the method by which the invading bacteria affect the host, and has likewise developed a principle of wide application as a preventive and cure of certain diseases by the use of antitoxic sera. It has confirmed the principle of preventive inoculation, accidentally discovered by Jenner, and has enabled us to apply the principle in other diseases than smallpox. It has enabled us to know the methods of transmission of certain infectious diseases, and to know how to stamp out scourges like yellow fever, the plague, and malaria.

Through the evolution of Listerism, it has enabled the surgeon to invade every region of the animal body and to save scores of lives formerly doomed to death. The freedom with which the surgeon may now operate has not only saved lives, but, indirectly, the knowledge of disease processes so studied during life has taught us many new facts in symptomatology and has cleared away many fallacies concerning pathological processes. It has given us many new methods of clinical study and furnished data from the blood, the spinal fluid, the exudates, the sputa, the sweat, the feces, and urine which enable us to recognize disease much more readily than before.

Much as has been accomplished by experimental medicine in a comparatively brief period of time, there are vast fields to which the method has not been applied. With most of us, our present methods of clinical observation enable us to do little more than name the disease. In the vast majority of the infectious diseases we are helpless to apply a specific cure. Drugs, with the exception of quinine in malaria and mercury in syphilis, are valueless as cures. The prevention and cure of most of the infectious diseases is a problem which scientific medicine must solve. What is true of the infectious diseases is also true of the affliction of mankind due to chemical influences within the body. We know but little of diabetes, of the primary blood diseases, or of the various degenerative processes of age and disease. We hopefully look to chemistry to reveal to us the cause of these and other condi-

tions. Experimental medicine must be the means of removing the ignorance which still embraces so many of the maladies which afflict mankind. Not every student or every physician can become an experimenter in applied medicine. Nevertheless, every physician must be so educated that he may intelligently apply the knowledge furnished him by experimental medicine in the cure of such diseases as can be cured. He will no longer juggle with the life of his patient by an attempt to cure with drugs or otherwise, where no help is possible.

METHODS OF MEDICAL EDUCATION.

The phenomenal evolution of medicine has multiplied the subjects of medical study. The character of these sciences requires that they shall be taught by the laboratory method. The laboratory method, too, has been adopted as the chief method of instruction in anatomy, pharmacology, and chemistry, formerly almost wholly taught in medical schools by didactic lectures. The laboratory method, while necessary to the proper and practical instruction of the student, involves an expense which is appalling when compared with the methods of teaching formerly practised in all schools, and still adhered to in many medical schools. The method is expensive, inasmuch as it involves more extensive buildings, much expensive apparatus and an increase of the teaching force. The instruction must be individual or to small groups of laboratory workers, and this involves also an extension of the time of instruction. A physician engaged in private practice cannot possess and retain the general and technical knowledge necessary to enable him to teach one of the fundamental sciences properly, nor can he devote an adequate amount of time to it. The teachers of these fundamentals must be investigators in the province of their respective sciences. They must give their whole time to the instruction of students and to original investigation. The thoroughness and accuracy of the training of the special senses and in experimenting, which a student will receive from such teachers in properly equipped laboratories will make him keen in intellect and sound in judgment. His desire for knowledge will be stimulated by the atmosphere of his surroundings, and will awaken in him a consciousness that through him and his work the knowledge of the world will be increased and humanity benefited thereby. But teachers of this character must be paid salaries quite as large as the remuneration of professors in the departments of arts, literature, and science. The salaries of such professors and of the corps of assistants which the laboratory method implies make the cost of the university or college far beyond the income which could be derived from the tuition of students. I

believe it has been estimated that the laboratory method of instruction, now followed by all first class institutions of learning, costs annually from \$400 to \$500 per student. But, great as the cost seems, it must be conceded that the present status of medicine demands the thorough instruction of students in these fundamental studies. It matters not whether his future may be that of a teacher or a practitioner of medicine. In either event, he must apply his knowledge of the fundamental sciences to his work, and the result will depend on the thoroughness of his education.

APPLIED MEDICINE AND SURGERY.

To enable the student to utilize the knowledge of a thorough training in anatomy, physiology, chemistry, pharmacology, physiological and physical chemistry, embryology, neurology, and pathology, he should be afforded facilities of equal rank in clinical medicine and surgery. To supply the student with proper clinical facilities involves several important features. Special hospitals, which would be absolutely under the control of the medical school, would be necessary. The hospital should be constructed with a definite idea of teaching students and of making researches into the nature, causes, and treatment of disease, as well as to care for a definite number of patients. Hospitals for general medicine, surgery, and obstetrics would be essential. Such hospitals, with laboratories and equipped with instruments, apparatus, and library, would cost for their building and maintenance a very large sum of money. With such hospitals it would be necessary to choose the professors of medicine, of surgery, and of obstetrics, with competent assistants, of the same type as the teacher of the fundamental sciences. They should give their whole time to the work of teaching and to original research in the hospital. They should be men who have proved their scientific fitness for the important positions by the contributions they have made to medical knowledge. They should rank with and receive the pay given to professors of important departments in arts, philosophy, and science. When so paid, they would be free to expend all their energy in teaching, and in experimental medicine—a career which would enable one to be of the greatest possible service to mankind. No life's work could be fuller or of greater self-satisfaction, and surely none would be more honorable. From these teachers and investigators the student would obtain instruction of the same systematic methods of accurate observation and investigation which were employed in the fundamental branches. He would receive thorough, conscientious drill in the fundamental methods of examination of patients, and his knowledge of the fundamental sciences would be con-

stantly applied in this work. The trained clinical teachers would direct the student in thorough, careful observation in the wards and at the operating table, would collect data to be submitted to experimental tests, and would conscientiously carry out the experiments in the laboratories of the hospital.

The brilliant discoveries which have made our knowledge of the cause and means of transmission of many of the infectious diseases have been chiefly due to the introduction of the experimental method of investigation. Teachers and investigators of the type mentioned will have the opportunity to make equally important discoveries in the broad field of the unknown in medicine. They will train students in the methods of research work and constantly increase the number of investigators in the domain of medicine. And there is need of such men. We may give the great practitioners who have taught clinical medicine their due meed of credit for their excellent, painstaking, unselfish efforts as teachers. They have added to the sum total of our clinical data, have utilized the knowledge of the pathologist and the physiologist in diagnosis, and have tested and judged the worth of therapeutic aids in the treatment of disease. But as teachers they have not made students investigators or experimenters. Not one of the recent great discoveries in medicine has been made by such a man. He has used as clinical material hundreds of cases of pneumonia, rheumatic fever, and tuberculosis and chronic diseases by the score; his experience has taught him to recognize these diseases, even when the clinical manifestations are obscure, but he is no more successful than when he began to practise, in saving the life of the patient with pneumonia, in preventing endocarditis in rheumatism, in curing tuberculosis, or in checking the advance of a chronic hepatitis. It is time, therefore, that the clinical teacher should have the knowledge necessary to carry on experimental investigation, with hospital facilities for the work, that the profession may become purged of the shame of helplessness in curing so many of the common diseases of mankind.

The patients who will be received in these hospitals will be fortunate. They will receive the most painstaking examination and study, and the experiments made on animals in the laboratory will benefit the patients directly, inasmuch as more rational therapeutic measures will be applied in cases so investigated. In addition to the clinical teachers who will devote all their time to teaching and research work in the special hospitals, there will be quite as much need for the clinical teacher who is in private practice, in the general hospitals. Under his direction the student may himself investigate a hospital or ambulatory case, and undertake the care of the patient. His rich and varied experience in hos-

pital and private practice will enable him to round out the student's college education. He will impart to the student a better idea of medicine as a whole. He will coordinate and arrange the isolated facts of clinical and laboratory investigation, and give them their true and relative value. He will teach the student the art of medicine; he will teach him that human sympathy and encouragement of the sick and dying are a part of his duty as a physician.

It would be most practical to make the clinical work of the third year a clinical drill and experimental course, given in the special hospitals, and assign the students of the fourth year to the general hospitals and to the clinical teachers who are in private practice. All the general hospitals and dispensaries controlled by the medical schools could be utilized in the fourth year for this purpose, and afford the student an abundance of clinical material and the benefit of the experience of many clinical teachers. Many of the assistants in the special hospitals, of the third year course, would doubtless engage ultimately in private practice, and would, because of their scientific attainments, make excellent clinical teachers in the fourth year. A medical school conducted on the high plane advocated must necessarily be under the control of a university. Such a medical school would cost an enormous amount of money, and this can be commanded only by the trustees of a university of the highest order. That the money for the purpose of establishing and maintaining university medical schools with research hospitals and university extension clinical courses will be forthcoming cannot be doubted. The world is awake to the great discoveries recently made in medicine. The wealthy men of this country have had their interest aroused as never before in reference to the possibilities and benefits which medical investigation will give to mankind. They now recognize that they and all posterity will be benefited by every new fact discovered in medicine, and that physicians thoroughly and scientifically trained are necessary to conserve the health of the people.

Three years ago, Professor W. W. Keen, in his address as president, deplored the fact that medical schools received relatively little aid in the form of endowments as compared with universities and colleges of philosophy, art, and theology. Since that time several millions of dollars have been given for medical education and scientific research. The signs of the times point to a brighter future of medicine in America.

EDUCATION PRELIMINARY TO MEDICAL STUDY.

The subject of the educational requirements for matriculation in medical schools has been discussed

at many meetings of this association in its earlier years, and later by the college associations, by the American Academy of Medicine, and by the various State boards of health.

The requirements were at first lamentably low, and the efforts of the committee on education of the American Medical Association and of the college associations had but little effect, because they possessed no legal power to control the schools.

The influence of the various boards of health of several States, notably Illinois, was more marked, inasmuch as these State boards possessed a mandatory power. The colleges were forced to adopt the minimum educational requirements of the State boards of health if their diplomas were to be recognized by the respective State boards.

These moral and legal influences to improve the preliminary requirements were almost nullified by the practice of a majority of the medical schools in admitting students whose educational status was examined into and judged by a committee of the college faculty.

This practice is still followed by a majority of the medical schools, and results in the admission of many students who are unable to fulfil the prescribed requirements. As a subterfuge, students are often matriculated, conditioned in one or even several subjects. Then the student and the faculty committee forget all about the subject, and the student completes his course, goes into practice, and dies with the conditions still undischarged.

The present requirements of the college associations and of the various State medical examining boards and State boards of health amount, on the average, to a high school education. The curricula and length of course of the high schools of the different States, and even in the same State, differ very substantially. However, if the medical schools now in existence would honestly require as a minimum education the diploma of a high school, without regard to the rank, it would be a marked advance over the present requirements as practised by most schools.

We must admit, too, that there are medical schools of such a low educational grade that they have no right to demand of their matriculates as much even as a common-school education. This fact that low grade medical colleges exist is one of the most satisfactory explanations of the difficulty encountered in elevating the standard of preliminary requirements.

To get at the root of the matter the medical college must be brought up to the proper educational standard, and then, and then only, can be made a proper preliminary educational requirement.

UNIVERSITY MEDICAL COLLEGE.

The present status of medical science requires and demands a university medical college course. By university medical college is meant a medical school which is directly connected with and a part of a university, the university fixing the requirements and controlling the admission of students to the medical department. The method of teaching both the fundamental and the clinical branches is on the principles outlined above. To properly prepare for such a course the student should have, as a minimum preparation, at least two years of study in a good college or university. The requirements to enter a good college or university would insure a sufficient knowledge of the ordinary school branches and also Latin or Greek. During the two years' course in college his time would be well spent in the study of English, French, German, mathematics, history, philosophy, physics, chemistry, general and organic, and qualitative analysis, comparative anatomy, and general biology. The amount of time to be devoted to each of these subjects would be the same as that of students of general science, as arranged in all college curricula, with the exception of a much more thorough course in chemistry, biology, physics, and comparative anatomy.

So prepared, the medical matriculate would be able to grasp all the intricacies of the subjects of the fundamental branches of medicine. With the addition of the full medical college course, as outlined above, his education would be equal in culture to that of the graduate in arts and philosophy. At the same time, it would be practical and especially fit him for his work as a scientific investigator or practitioner, or for both.

With the medical profession so educated a physician would be, in truth, a member of a learned profession. From an educational point of view he would rank as an equal with the scholar in philosophy, law, and theology. As a man he would be recognized as the greatest benefactor of mankind.

With the establishment of university medical schools the first two years of work in the medical school will consist of courses in pure science. Then, doubtless, all universities will adopt the plan which two or three universities have already put in practice. That is, that the student who completes the first two years of the science course of a university, or at a college of good standing, may enter the sophomore year of the university and take the first two years work in medicine, as the sophomore's and senior years of the bachelor's course, when he would receive the degree of S. B. The student who completes the three years of the arts or philosophy course at a university, during which he should take a large amount of work in physics, chemistry, and

biology, could then enter the medical college and after two years receive the degree of A. B. or Ph. B. After two years spent in the clinical school he would receive the degree of M. D.

This telescoping of the literary and medical courses affords the advantage of an economy of time, while it does not in any way lessen the value of the result to the student. In the one case the student secures the degrees of S. B. and M. D. after about six years of study, and in the other the degrees of A. B., or Ph. B., and the degree of M. D. at the end of seven years' study.

THE OUTLOOK OF MEDICAL EDUCATION IN THE UNITED STATES.

Medical education must advance to its proper level if it complies with the present status of the medical sciences and the demands which continued evolution in medicine promise.

What does this imply? It means that the private—the proprietary medical school which is conducted for commercial reasons must go. Acknowledge, as we must, the great value of which the best of these schools have been to the profession and to the country, all such schools have lived past the time when they can be of value. The continuation of these institutions henceforth will be harmful. They cannot command the money to build, equip, and maintain the laboratories and hospitals which a proper and adequate medical education demands. In the past their graduates have furnished the many great and influential medical and surgical clinicians of this country. In former days a graduate poorly prepared was able, by indefatigable labor and post-graduate work, to place himself in the front rank as a clinical physician and surgeon.

To-day medical science demands primary instruction to fit a man as an investigator and scientific physician. If not properly educated, he cannot grasp the great problems which medicine presents to-day as he did the more simple clinical facts which comprised the art of medicine and surgery a few years ago. In the future, medicine must be taught in the large universities of the country and in the State universities which are situated in or near large cities, where an abundance of clinical material may be commanded.

The State university and the college which desires to teach medicine, and is so situated that it cannot command clinical material, should confine itself to teaching the sciences fundamental to medicine. These should be taught as pure sciences, and should be included in the course for the degree of S. B. A college or State university ambitious to teach the medical sciences can do so without great cost. To attempt to teach applied medicine without proper and adequate hospitals, and with an in-

sufficient number of patients would be irrational, nor can they command the necessary funds with which to do it. From such colleges and State universities the students could go to the larger institutions which are able to furnish the proper facilities for teaching applied medicine and surgery.

The general hospitals of many of the cities, now used by proprietary schools, could be utilized as clinical schools for both undergraduate and post-graduate teaching, conducted by the clinical teachers in the existing proprietary schools. Indeed, these hospitals could be utilized as university extension clinical courses. Necessarily they would have to be under the control and direction of a university medical school.

How many schools may be necessary to educate the number of doctors of medicine required annually in the United States? This question one cannot answer, but it is safe to say that 2,500 graduates annually will fully supply the demand. This would imply about 10,000 to 12,000 matriculates. A minimum number of twenty-five and a maximum number of thirty-five medical schools should offer sufficient facilities to educate 10,000 students. The various State universities and the colleges which offer adequate science courses would educate a great number of students in the fundamental branches or in the first two years of the medical course.

MEDICAL RECIPROCITY BETWEEN THE STATES OF THE UNION.

The low requirements of some medical colleges, and the want of uniformity in the requirements for a license to practise in the different States, has resulted in a condition which entails much hardship on a physician who desires to remove from one and to engage in practice in another State. The rules of most State boards of medical examination and of health are so stringent that a physician or surgeon of years of experience and of acknowledged skill and education, and the specialist who may be renowned in his field of work, are obliged, like the recent graduate, to take an examination in all of the branches of medicine and surgery in order to secure a license to practise in the State of their adoption.

To correct this evil it has been suggested by a member of the American Medical Association, and concurred in by others, that a national board of medical examiners be organized; that the board hold examinations at different seasons of the year in the various large cities; and that the diploma so obtained shall be recognized as a license to practise in any one or all of the States and Territories. The measure suggested seems to be practical and feasible.

In addition to this plan, it remains to be said that the degree granted by the future university medical school will be undoubtedly recognized as

an evidence of fitness to practice in any State in the Union. When we shall have a less number of schools and annual graduates the various States may safely and rationally become more liberal and discriminating in the conduct of their office.

THE INFLUENCE OF THE AMERICAN MEDICAL ASSOCIATION.

The American Medical Association should maintain its interest in the elevation of the standard of medical education, one of the chief reasons of its organization. Its influence in former years was principally moral. This was of considerable value, for the reason chiefly of the high ideals of the founders and first members of the association, who advocated and fought for a high standard of medical education. In the future its influence should be many fold that of the past, for with the reorganization of the profession, the better methods of conducting its affairs, the increased and probably very large membership, and its great medical journal should wield a great influence for good.

As the direct agent by which the American Medical Association may exert its influence in the elevation and control of medical education, the Committee on Medical Colleges and Medical Education should be made permanent and should be given adequate power and sufficient annual appropriation to make its work effective.

This association should therefore, stand for, and should use its whole power to improve, medical education in this country. It is said that we never exceed our ideals in practice, and that if we lower our ideals our conduct sinks to a lower level.

The American Medical Association should take as its ideal and standard of medical education the university medical college, with all the name implies in regard to the fundamental medical sciences and to the clinical branches. It should use its influence to drive out of existence those proprietary medical schools which are conducted solely as money-making institutions. These measures cannot be accomplished at once; but medical science demands it, the profession demands it, the people demand it, and they look to the American Medical Association as the chief influence which shall accomplish this end.

The Missouri State Medical Association held its annual meeting at Excelsior Springs, Mo., on April 21st, 22nd, and 23rd. The programme for the meeting embraced symposia on Kidney Affections Amenable to Surgical Treatment, Puerperal Eclampsia, Inflammation of the Uterine Appendages, State Medicine, The Blood in Relation to Disease, Personal Experiences in the Treatment of Typhoid Fever, Personal Experiences in Appendicitis, and X Rays in Medicine and Surgery. Besides these symposia some forty papers were read covering a wide variety of topics.

SOCIAL CONDITIONS IN AMERICA IN THEIR RELATION TO MEDICAL PROGRESS AND DISEASE;

BEING EXTRACTS FROM
THE ORATION IN MEDICINE.

By J. M. ANDERS, M. D., LL. D.,
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[Lack of space compels us to omit the introductory portion of Dr. Anders's oration, also to exclude the tabular matter presented.]

The relation of social conditions to disease is a topic that is becoming more and more insistent with the reflections that are the natural accompaniment of advancing knowledge.

A backward look reveals an embryo nation steeped in an arduous task, the subjugation of a continent, at the expense of unceasing physical toil. This necessitated an open air existence, which resulted in a vigorous, hardy race. Then followed the integration of frontier villages, of larger and smaller towns, and life meanwhile became brighter and more piquant. For long generations the abandonment of rural life, the changed habits of living, the enforced pursuit of new and less healthful callings, too often from motives of personal comfort and even social expediency, and the universal tendency to overcrowding in town populations, resulted in a modification of the character and incidence of all leading diseases. It goes without saying that respecting the effects of our social conditions and climate on disease, the particular standpoint of our fathers was radically different from that of their children. Floyd M. Crandall has recently directed forcible attention to the fact "that never have such radical changes been witnessed in the habits of life and in human diseases as those in this country, during the last half century."

Fortunately, agencies are at work looking to the

socialization of the American agriculturist and the amelioration of the ills due to overcrowding in large municipalities. This is a movement which in the entirety of its scope embraces numerous potent forces whose federation promises to effect in time rural social regeneration. An organized effort has in several States been already initiated, and in the conferences held and in contemplation looking to the betterment of rural life, the cooperation of the medical profession is invited. Modern agencies such as improved highways, the introduction of the telephone, trolley lines, and rural mail delivery, are socializers no less than economic facilities. In addition to these physical influences, marked improve-

tunities, farm organization and the various functions of the church.

These socializing influences and forces tend to counteract the current of bygone days from the farm to the city; they likewise bid fair to become a factor of first importance in minimizing, if not actually counteracting in due season, the ill effects of overdense urban populations. It may, however, be remarked that the impoverished classes, especially the great immigrant contingent will be far less likely to return to a rural environment than the well-to-do, and yet it will shortly affect the social and economic conditions as well as the vital statistics of the wage-earning classes.

We may confidently ex-

pect a greater physical efficiency, a higher bodily standard, though municipal sanitation will be always required, and remain the principal factor in strengthening the powers of resistance to hostile environment. One point of common agreement is that as a result of the rapid advances in sanitation and improved methods of treatment, there has been a notable decrease in the prevalence and fatality of most infective diseases, particularly those more or less fostered by overcrowding (*e. g.*, phthisis, diphtheria, diarrhoeal diseases, etc.). Three well defined classes, however, have, according to the census for the decade ending May 30, 1900, distinctly increased; they are cancer, affections of the kidneys, and the degenerations, fatty and fibroid. Thus, dur-



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ing an increase in the population of 50 per cent. in the United States myocardial degenerations have increased 150 per cent. and certain types of chronic nephritis have also risen in frequency to nearly 200 per cent. The determination of the causes of this rapidly increasing frequency of these morbid states is clearly the task of the medical profession.

Respecting the degenerations—myocarditis, arteriosclerotic changes, and kidney diseases—Crandall says: "The power of alcohol in the form of malt liquors to produce degenerate changes is so well known to pathologists that the conclusion is irresistible that the radical increase in these diseases comes largely from changed drinking habits."

The notable increase in these morbid conditions, however, is not due to a single cause, and substantial progress cannot result from too much emphasis on any one agency whose undoubted potency remains undemonstrated.

It is probable that a more universal application of refined methods of diagnosis accounts in a measure at least for the apparent disparity in the number of cases of nephritis and myocardial degeneration in recent times as compared with the showing of older statistics.

The census between 1890 and 1900 indicates an increasing prevalence of two additional diseases, in respect to both of which progress in our knowledge has been slow and never encouraging; I refer to diabetes mellitus and lobar pneumonia. The census previously referred to indicates that chronic diabetes mellitus has nearly doubled in point of frequency in a single decade.

While we shall continue to look to the bacteriological laboratory for the discovery of the definitive cause of this metabolic ailment, and to the pathologist for a mind's eye picture of the morbid state of the tissues, the data obtainable from an investigation of the manner and habits of life, which exert more or less ætiological influence, are of intrinsic medical importance and would serve as accessory factors in diagnosis as well as straws for the application of measures for treatment.

Although it is impossible to recognize a boundary line between the "variables of health" and disease in chronic diabetes mellitus, it cannot be doubted that abnormalities of the glycolytic functions of the liver and pancreas, associated with inappreciable structural changes (more especially in the cells forming the islands of Langerhans) which interfere with proteid metabolism and the metabolic disturbances, are dependent in large measure on the overuse of the mind, intemperance and irregular habits of body; in a word, on improper modes of living.

Physiology has contributed much to the intricate processes involved in the nutritional diseases. Morbid physiology (general pathology) is most inti-

mately bound up with the modes and predilections of American life, particularly of the so called privileged classes.

Diseases and conditions that are successfully treated by a correction of the mode of life are apt to be regarded as functional in nature, when, in reality, definite although undiscoverable structural lesions already exist, the foundation of an insidious and progressive disease already laid.

Now, it is conceivable that a broader application of data as yielded by vital statistics would render more clearly recognizable the terrible significance of an enlightened public, living in idle acquiescence to positively injurious prevailing customs. A federation of forces, however, in connection with the investigation of special diseases even, is necessary to make this branch of inquiry productive of really important information; for example, the cooperation of committees on vital statistics with the creation of centres under the auspices of a national organization, such as the American Medical Association, would prove effective. I would instance lobar pneumonia, which, as before stated, is increasing in prevalence, as a disease in which the light of future investigation after this method of research would prove preliminary to important discoveries and decisions. Indeed, the local diversity in social conditions and climate in different sections which are far separated by geographical distances in this country, renders such a procedure an absolute necessity. The statistical data gathered by individuals, notably those of E. F. Wells, are of real value, and one point approximately settled is that the death rate by decades during eighty years is practically unaltered—"certainly not decreasing." The census for the decade between 1890 and 1900 shows an increased prevalence of this disease from 186 to 191 per 100,000.

A marked numerical increase in the number of cases of pneumonia has taken place since the advent of epidemic influenza, but this does not account for the slowly rising incidence of the disease during previous non-epidemic seasons. Other reasons have been given for the augmenting prevalence of pneumonia: increased facilities for travel and the tendency for people to congregate (Wells), the highly infectious character of the disease and the neglect of prophylactic measures in crowded centres (Walsh). Among accessory causes of the increased prevalence of pneumonia may be mentioned a change in the prevailing meteorological conditions. As shown elsewhere the wanton destruction of the native forests has been attended with an exaggeration in the range of variability of such meteorological conditions as temperature and humidity. It has been long known and universally recognized that this disease bears a vital relation to the seasons, and that the

greatest morbidity coincides with the most pronounced climatic changes. It is probable that the increased incidence of the disease will be shown to be dependent in part on augmenting prevalence of visceral degenerations, particularly of the cardiovascular system and the kidneys. Be it remembered that in a large measure these are the direct or indirect result of an era characterized by undue devotion to business, social excesses, and club life; with its attendant unseemly hours and unconcealed conviviality. It must be confessed that the extent to which lobar pneumonia is dependent on these degenerations acting as predisposing factors is imperfectly known, but it cannot be doubted that a conservative attitude toward the question accords to them a prominent position among the agencies unfavorably affecting the prognosis.

The table shown comprises all necropsied cases of lobar pneumonia at the Philadelphia Hospital for a period of six years, from January 1, 1896, to March 1, 1903. Out of a total of 275 cases, 250, or about 90.9 per cent., showed cardiovascular lesions, principally chronic endocarditis and general atheroma of the vessels. A small number of the cases, 14, or 5 per cent., showed acute plastic pericarditis, and 11, or 4 per cent., chronic pericarditis. Renal lesions were recognized in 90.5 per cent. of the totality of cases. Chronic interstitial nephritis was noted in 145, or 52.7 per cent.; chronic parenchymatous nephritis in 50, or 18 per cent., and acute nephritis in 38, or 13.8 per cent. Among the remaining 25 cases was one of renal calculus, another of renal tuberculosis, and in many of the remainder subacute nephritis was noted.

These figures afford strong presumptive evidence that renal and cardiovascular degeneration rank as potent predisposing conditions, and clear and convincing proof that they bear a close and vital relation to the high mortality rate of lobar pneumonia. It should be stated that the patients admitted into the Philadelphia Hospital belong to the pauper element of society and the subjects are principally adults.

The reports of the health departments of leading cities, in particular that of New York, furnish valuable data from which important tentative influences may be drawn, but sure ground can result only from research work of a broader character than has yet been undertaken in this country. From the record of vital statistics of Philadelphia and New York I have compiled two tables which show that pneumonia is more or less limited to centres, and these correspond in the main to the most densely populated areas, with their allied conditions of squalor and poverty.

Pneumonia, like other acute infections that prevail epidemically, shows a wavelike character, on

comparing different years for the same locality. Exclusive of epidemic outbreaks there is an evident tendency to a preponderating incidence, in overcrowded districts, and among the impoverished classes. Thus the average mortality rate for four years in New York, taking the eight wards which are most densely populated, from the tabular list is 18 per cent.

The fourth, sixth, seventh, tenth, eleventh, thirteenth, fourteenth and seventeenth wards of New York city were embraced in this estimation. In contrast with the figures just given, eight wards representing the most sparsely settled portions of the city of New York (*e. g.*, first, fifth, eighth, ninth, fifteenth, sixteenth, eighteenth, and nineteenth) gave for the same period of four years an average mortality of 14.3 per cent. It was observed in the compilation of these mortality statistics that an elimination of the epidemic periods would make the differences in percentage dependent on the population somewhat greater.

In arranging the statistics for Philadelphia I have included only those wards in which the inhabitants were equally distributed throughout the entire ward. *Per contra*, wards having large area and a low population, per acre, but this population located in certain sections of the ward only, have not been included. Thus, the following wards became available for the purpose of contrasting those giving the highest with others showing the lowest mortality: First, second, third, fourth, fifth, sixth, seventh, ninth, tenth, eleventh, twelfth, thirteenth, fourteenth, fifteenth, sixteenth, seventeenth, eighteenth, nineteenth, twentieth, twenty-eighth, twenty-ninth, thirtieth, thirty-first, thirty-second and thirty-seventh. The eighth ward was not included on account of being inhabited principally by a better-to-do class and on account of containing the Pennsylvania Hospital, the former condition lessening the liability of pneumonia, while the latter institution named would tend to increase the mortality from this disease, since many of its patients come from the third, fourth, fifth and sixth wards.

The portion of the city west of the Schuylkill River was excluded from this computation for reasons similar to those just mentioned.

Out of the twenty-five wards included in our figures I have estimated a percentage of deaths from those showing the most dense population per acre, allowing for the location of hospitals, homes, etc. (*e. g.*, second, third, fourth, seventh, thirteenth, seventeenth, and nineteenth wards), and I find the percentage of deaths from pneumonia to be 12.8 per cent. Those wards showing less dense population, the first, ninth, tenth, sixteenth, twenty-eighth and thirty-second, gave an average of 9.5 per cent.

The second, third, and fourth wards were occu-

pied largely by foreigners (Italians, Russians), and showed the highest percentage of deaths from pneumonia, while the seventh ward, which contains a large colored population, also shows a very high death rate.

As shown by MacDougall's statistics, unfavorable occupational conditions probably have less effect in causing pneumonia than phthisis. In my own investigations it was observed that divisions of Philadelphia having an industrial population modestly though comfortably housed furnished a death rate but little in excess of that of the sections inhabited by the well-to-do. The whole subject of occupational diseases, eminently important to the medical world, is closely united with the social and economic conditions of the wage-earning classes, but its consideration here would lead me too far a-field.

CANCER AND IMMUNITY;

BEING

THE ORATION IN SURGERY.*

By A. F. JONAS, M. D.,
OMAHA.

[After a few preliminary remarks, in which he reviewed the great advances in surgery, and referred to the number of yet open questions, the author stated that among the many problems awaiting solution, especially in relation to malignant disease, that of immunity and immunization offered a field full of promise and hope. He continued as follows:]

The two greatest problems of the future, cancer and immunity, shall engage our attention to-day. Malignant disease seems to be on the increase. We stand so helpless in its presence when fully developed that we exert our feeble energies and grasp eagerly for any fact that seems to offer a new light for its better understanding. It will be our effort at this time to, as briefly as possible, review the more important facts known regarding the ætiology of cancer and then, after making clear to ourselves the revelations thus far made in the recent studies of immunity, determine, if possible, what relations, if any, exist between the two.

These considerations were prompted by personal observations made in a number of cases of undoubted malignancy that indicated the probable infectiousness of cancer. It is well known to us all that the infectiousness of most infectious diseases was first determined clinically and that the clinical observations were later determined and confirmed microscopically and experimentally. The cases to be here related came under the author's personal care, and it is hoped that they may serve as contributory

evidence to the observations already recorded by others *that malignant disease, under certain conditions, is infectious.*

CASE 1.—Mrs. H., aged 40, of spare build, very small amount of adipose tissue, presented in the outer and upper quadrant of the left breast a hard, nodular, painful, walnut-sized growth, of one year's duration. In the axilla could be felt a hazelnut-sized nodule. She had frequent lancinating, radiating pains in the breast. There were no evidences of acute or subacute inflammatory signs, no local redness or elevation of temperature. The clinical diagnosis of cancer of the breast was made and a radical operation was advised. Various family matters prevented her from submitting to an immediate operation, so that several months passed, after which it was observed that the neoplasm had diminished in size and it finally disappeared.

It may be urged that this may not have been a cancer or that no one should make a diagnosis unless there is a confirmation by the microscope. Is the microscope always certain? We have all observed cases that ran a clinical course of malignancy after the microscopic findings indicated benignancy, and vice versa. The pathologist always inquires after the clinical features. He is disinclined to give an opinion unless he can know something of the history and symptomatology. The above case, in every detail, resembled many others that were demonstrated microscopically to be malignant, consequently it would appear that we are justified in the clinical diagnosis of cancer.

CASE 2.—Mrs. J., age 35, presented herself with an "inoperable," extensively ulcerating carcinoma, involving the outer half of the right breast. The breast was unusually large. The outer portion of the ulcerating surface had been in constant contact with the upper and inner side of the arm. Portions from both breast and arm were removed for microscopical examination and proved to be alveolar carcinoma. No operation. She died in three months.

CASE 3.—Mrs. D., age 35. She came under observation with a typical epithelioma of the cervix uteri. The vagina was large and relaxed, so that the neoplasm rested in contact with the lower portion of the posterior vaginal wall. Hysterectomy was recommended, but was refused. She presented herself again in two months, in which time there had developed an epithelioma at the point of contact between the cervical growth and the posterior vaginal wall. An operation was done, but the patient died from recurrence eight months later.

CASE 4.—Mrs. G., age 45. Came under observation with a typical cauliflower growth involving the cervix uteri. Small particles were removed, which proved, microscopically, to be carcinoma. The uterus was fixed, the growth appearing to be too extensive for operative interference. No operation was advised. After several months the neoplasm became smaller and gradually disappeared, the

* Delivered at the fifty-fourth annual meeting of the American Medical Association, held in New Orleans, May 5, 6, 7, and 8, 1903.

uterus becoming movable. At the present time, eight years later, she appears well.

Here we have four cases of undoubted cancer, each one of which presented some of the features of an infection, as in lupus or syphilis. Cancer is extremely slow in its development, its premalignant stage often lasting many years. This fact possibly may account for the negative outcome of inoculative experiments hitherto conducted. This long developmental stage is not unlike lupus, leprosy, and other forms of undoubted infection. In two of our cases we observed secondary growths which appeared at points where the primary neoplasm was brought, more or less continuously, in contact with previously healthy surfaces, a very common occurrence in nearly all forms of infection. In two of our cases the neoplasm disappeared spontaneously, the disappearance depending, no doubt, on some form of catabolism not yet understood. The elucidation of this form of cytomorphosis will give the key to the control, inhibition and elimination of the atypical cell proliferation which constitutes malignancy.

The term cancer, so commonly employed, refers to growths made up chiefly of epithelial cells. There is really no good reason why the term cancer should be limited to epithelial growths. Cancer signifies crab. It was originally used to signify malignancy and meant connective tissue growths as well as those of epithelial origin. For our purpose at this time we will limit the term cancer to epithelial neoplasms and we will confine these considerations to its ætiological factors.

The mystery of its origin seems as deep almost as in the days when cellular pathology was unknown. No problem in pathology has received more thought and speculation, no subject has had bestowed on it more earnest effort and unremitting toil. Regarding its ætiological evidence we must confess that we have only a mass of negative proof. When ob-

servers believed that they had found the specific organisms, scores of workers in the same field soon demonstrated their error. So, to-day, we can only say that the evidence which shows what we do *not* know of the cause of cancer is voluminous, and we must admit that we know little of its ætiology.

We know something of its cell characteristics. We know that malignant disease is essentially a cell proliferation that has, biologically, many features that are opposed to the physiological tissues in which they take their origin. We find an atypical life history in the cancer cells. The nucleus

divides in an asymmetrical way. We note that unusual Caryocinetic figures in the nucleus are usual in new growths, pointing to changes in the cellular life history. Regarding carcinoma, certain bodies have been demonstrated, believed by some to be parasites, having some causal relation to the cell changes.

It is a well established fact that the nucleus perpetuates the nature and function of the cell, and any change in the nucleus changes the cell in its function and process of division. According to W. V. Shaw, "the growth of cancer cells is then to be looked on as an effort of reproduction in damaged tissue, the incidence of the damage falling on the nuclear structures."¹

This statement is based on observations made by

him in connection with experiments on free swimming larvæ which developed from the stimulation of ova of certain lowly organized animals, causing a proliferation of cells. The ova had not been fertilized by spermatozoa. Adult organisms were not developed, but larvæ capable of independent life. These results were obtained by stimulating the ova with strychnine and by mechanical movements of the ova. This cell growth was compared to growth of tissue in partially damaged structures. Shaw believes that such damage alters the nature of these cell structures so that the vegetative functions of



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¹ *Lancet*, September 20, 1902.

the cell run riot and the cells become parasitic toward the organism in which the growth is taking place. This view seems to find support in those connective tissue growths that develop in tissues that have sustained a trauma and in which the sarcoma develops; or in epithelial growths that form on surfaces that have been subject to prolonged irritation, as exemplified by the chimney sweep's and paraffin worker's cancer forming on an old chronic dermatitis; or a cancer forming on the site of a prolonged irritation by the smoker's pipe stem on the lower lip. We have seen many times that cancer develops in epithelial tissue that has been subjected to irritation for a long time, usually extending over a period of years. We have long recognized irritation to be at least one of the causative factors. Just what metabolic disturbances take place and what the underlying causes are, is not yet clear. That cancer is infectious has been proved by many clinical observations. This has been shown by Eberth, who collected twenty-two cases where cancer was transmitted from lip to lip, tongue, and palate. Behla reported eight instances of death from malignant growths in physicians and surgeons who were inoculated from tumors and four instances of apparent human infection from cancerous animals, dog and hen. He also alludes to a cancer epidemic among the white mice in the Pathological Institute at Freiburg, as evidence of the contagiousness of cancer (Hektoen). Roswell Park believes that, for New York State at least, cancer is increasing at an alarming rate.

Attempts have been made to show that cancer is endemic, peculiar to certain localities. Behla cites cases of Behrens's, who found in a village ten deaths out of thirty-eight to be due to cancer. Pfeiffer, Powers, and Friesinger maintain that in certain houses (cancer houses) and marshy districts in the vicinity of ditches and streams containing sluggish water, especially if the stagnant and polluted water is used for watering garden vegetables and for drinking purposes, cancer is relatively frequent (Hektoen). This would point rather to a microphyte than to a microzoon as the ætiological factor.

Since infection of living tissue is believed in every instance to be due to bacterial invasion, naturally bacteriologists directed their attention toward the discovery of a specific germ. Very soon we had a long list to enumerate. Plimmer, of London, examined in six years, 1,298 carcinomata, and in 1,130 he believed that he found parasitic bodies. Sjöbring laid much stress on cell inclusions. Russell described his fuchsin bodies, which were spherical or oval. L. Pfeiffer, of Weimar, published several monographs on the protozoa as a cause of cancer. Eisen brought out his *Cancro amaba*. Korotneff believed that he had found an organism which he

termed *Rhopalocephalus carcinomatosus*. Bosr found and described an organism that he called *Myrosporidia coccidia*. Gaylord, of Buffalo, described at great length bodies that he believed bore an ætiological relation to cancer. Sanfelice, of the University of Cagliari, emphasized the ætiological importance of bodies that he named *Saccharomyces neoformans*. A very large number of other publications on this subject made their appearance, none of which differed in any essential point from those bodies just mentioned.

While the presence of the aforesaid bodies described by the different observers can be demonstrated to be present in a large proportion of the cases of cancer, all the requirements necessary to prove them to be the organisms solely responsible for cancer have not been fulfilled. The requirements necessary are (1) the organism must be isolated; (2) a cancer must be produced when the organism is introduced into another body; (3) the organism must be recovered from the cancer produced. It has been shown that, while the first requirement has only apparently been fulfilled, the second has been, in a number of cases, seemingly produced. More careful investigations have proved that the experimental growths were not cancer. The third requirement has not been fulfilled.

All of the work mentioned above was carefully reviewed in all its details by the cancer committee, who, in their second annual report to the surgical department of the Harvard Medical School, showed conclusively that the bodies described by the various investigators under different names were not cancer nor the cause of cancer. I can do no better than to quote in full the results of their labors. They bear the marks of painstaking and conscientious work. The conclusions of the Harvard cancer committee were written by Edward H. Nichols and were as follows:

It has been maintained by the adherents of the theory of the parasitic origin of cancer that

1. A proliferation of epithelial cells analogous to the lesions seen in cancerous tumors can be produced by certain well known protozoa (nodules caused by the *Coccidium oviforme*).

2. Certain skin lesions characterized by epithelial cell proliferation are due to the action of a so called protozoon (molluscum contagiosum).

3. Blastomycetes are constantly present in human cancers and are the cause of the lesion.

4. By experimental inoculation of animals with blastomycetes, true epithelial or cancerous nodules can be produced.

5. Finally, the well known endocellular bodies seen in the protoplasm of cancer cells have a definite morphology, are parasites and the cause of cancer.

It has been the object of the investigators, the results of whose work appear in the preceding pages.

to study each of these questions. As a result of the lines of work pursued by them under the direction of the Cancer Commission during the past year, it is concluded that:

1. The lesion produced by the *Coccidium oviforme* is essentially a process of chronic inflammation and is not analogous to the lesion seen in cancer.

2. The lesion of molluscum contagiosum is characterized by certain changes in the epidermis, is not due to the action of a protozoon, and is not analogous to cancer.

3. The so called "blastomycetes" (saccharomycetes) of Sanfelice and Plimmer are torulæ.

4. The lesions produced by these "blastomycetes" (torulæ) are, essentially, nodules of peculiar granulation tissue, are not cancerous, nor, in any sense, true tumors.

5. Blastomycetes are not constantly present in human cancers.

6. The peculiar bodies seen in the protoplasm of a cancer cell are not parasites, nor the cause of the lesion, but probably are, in part at least, atypical stages of the process of secretion by glandular epithelium.

It is clear that in the present status of the ætiology of cancer, bacteriologically considered, the case has not been proved. But it does not follow that it will not be shown that cancer is due to a specific and well defined organism. It may be an organism so minute as not to have been brought within the range of the microscope. It is possible that no stains have yet been found that possess the requisite affinity for its complex molecular constitution. The necessary artificial medium for its cultivation remains for some future investigator to solve. Be it what it may, since the clinical features give strong evidence of the infectiousness of cancer, the search must and will be continued along the same lines.

In this search for a specific contagium, cellular metabolism must not be forgotten. Its consideration and study is perhaps more important than the isolation of a specific germ. It can not be denied that the more exact our knowledge of cytomorphosis becomes, the clearer will be our understanding of cell proliferation. It has long been understood that there must be certain stimuli that cause cell growth and certain inhibitors that limit cell development and exercise control in accordance with the requirements of the tissues. Certain other influences bring about a disturbance of the normal equilibrium between the stimuli and the inhibitors. It is evident that the exact nature of the stimuli, the inhibitors, and the disturbers must be ascertained. This involves a study of the cell constituents and the fluids that surround it. As we see, it is a question of chemistry.

In this connection, it is important to take note of a very novel hypothesis bearing on the formation of

new growths propounded by Homer Wakefield.

He believes that a neoplastic formation is not an exaggeration of anabolism, increased or excessive proliferation, but that it is a product of catabolic stasis; that is, normal cell division is unimpaired, the anabolic process continuing to the point of maturity of the cell. It attains the meridian in its life and reaches the postmeridian state when it should undergo normal catabolism, a complete dissolution and disappearance of the cell. Instead, something has supervened to check catabolic changes, the cell becomes superannuated and its existence is prolonged until finally it undergoes various degenerative changes. Normal cell production continues, but normal cell dissolution is retarded or abolished, hence the cells accumulate, producing the appearance of what is regarded as cell proliferation.

This condition Wakefield has termed catabolic stasis, or subcatabolism. He states that the intercellular substance is richly alkaline and that the tissue cells are more or less soluble in it. The cells during the period of their growth generate sarcolactic acid and during this period they are richest in protoplasm. After the meridian the cells offer decreased resistance to the solvent powers of the alkaline medium and lose their protoplasm, the nucleus alone remaining.

He infers that, before the meridian is reached, the acidity produced by normal cellular activity protects the cells by its neutralizing effects on the intercellular alkalies and that this preserves the investment of protoplasm. Now, if from any cause the normal alkalescence of the intercellular substance is reduced or if, in a given area, the acidity increases, catabolic stasis affects all the cells in that area. Suboxidation consequently takes place. It is therefore believed that cancer formation is an acid process.

Briefly, tumor formation, according to this hypothesis, rests on a stasis of catabolism, subcatabolism, and suboxidation, in the presence of normal anabolism. The cell inclusions, observed by many investigators and regarded by them as protozoa, cancer parasites and as blastomycetes, Wakefield regards as products of disturbed nuclear division. This new hypothesis, at present, rests only on theoretical grounds, but the arguments are so thoughtful and so suggestive that they deserve careful attention. Their chief importance, at this time, consists in the bearing out and support of the methods of research along chemical lines.

We are all familiar with Virchow and the birth of cellular pathology, with Ehrenburg and the growth of bacteriology, and now we have arrived at, and are in, the humoral or chemical era. The trend of all research at the present time is beyond cells and beyond bacteria. It is to determine the chemical operations in and around the cells. This

line of research began in the leucocytes because they were the most available. In their study it was possible to establish basic principles. From the leucocytes to the erythrocytes was only a step and then the epithelial and connective tissue cells received attention. This field of research is a new one. It is occupied by a vast army of patient and earnest toilers. The fruits of their labors will be beyond our greatest expectations. It is our present purpose to see if the cancer problem can be solved along these lines.

(To be concluded.)

Original Communications.

REPORT OF A CASE OF PULSATING EMPYEMA NECESSITATIS, WITH THREE STRONGLY PULSATING TUMORS.*

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In Volume III of the *Transactions of the Philadelphia County Medical Society*, 1881, page 85, in the course of the discussion of a paper by the late Dr. Edward T. Bruen, entitled *Clinical Notes Relative to Physical Diagnosis*, I reported, in abstract, a case of pulsating empyema necessitatis that had been recently under my care at the Episcopal Hospital. As "discussions" are not recorded in the *Index Medicus*, or anywhere else, the case to which I refer is practically inaccessible to all students of the rare disease in question. It has, however, been quoted by two writers upon pulsating empyema: by Osler in the third, and by Wilson in the eighth, volume of the *Transactions of the Association of American Physicians*. In the latter it appears as No. 38 among the cases collected by Wilson and Eshner from the literature of the disease. On referring to my remarks upon Dr. Bruen's paper above mentioned, I find the statement that "further details are now withheld, as the notes of the case will probably soon be published in full." Twenty-two years have elapsed since this statement was made and the promise which it implies has not yet been fulfilled. The reason for this delay was apparently good and sufficient: viz., the absence of complete notes of the case. It is evident that such notes were once in existence, for in the scanty record of the case that I have preserved, I find the following: "April 16. Woman more comfortable, cough diminished. For details of phys. exam. see ward notes."

At the Episcopal Hospital the only existing records of this remarkable case are her name, Elizabeth M., the diagnosis, pulsating empyema, and the admission number, 295. The ward notes above mentioned, which one is requested, with exasperating irony, to "see," have completely disappeared. Fortunately, I have notes of the main facts of the case and I believe they are sufficient to warrant its publication.

The patient was a woman about thirty, who was admitted to the Episcopal Hospital on April 14, 1880. On the left side of her chest there were three strongly pulsating tumors, one in the mammary region, of about the size of half a large orange; a second, much smaller and of conical shape in the left anterolateral region, i. e., in the eighth intercostal space in a line with the anterior axillary border, and a third, the largest of the three, in the left posteroinferior region, its long diameter, about four inches, corresponding with that of the vertebral column. All three of these tumors possessed a strong, systolic, expansile pulsation. On palpating the large anterior tumor, the one in the left mammary region, splashing sounds were produced and a sensation was communicated to the fingers precisely like that experienced on handling a large hernial protrusion. It was evident that the tumor contained both air and fluid. There was dulness on percussion posteriorly up to the middle of the scapula. The line of dulness curved downward and forward until, in front, the whole of the anterior surface of the left thorax, usually occupied by the normal lung, was resonant almost to the point of tympany, while over the larger anterior tumor it was decidedly tympanitic. The semilunar tympanitic area of Traube was replaced by flatness on percussion. It was estimated that the depth of the fluid in front was about two inches and that the rest of the pleural cavity anteriorly was occupied by air. This may seem to contradict the statement that air and fluid were both present in the pulsating tumor in the mammary region, and to imply that the pulsation was due to an impact derived from the heart upon the air which it contained. I can only reply that the tumor undoubtedly contained both air and fluid, that it was tympanitic on percussion, and that it pulsated at least as strongly as the two other tumors which contained pus alone. Behind, above the line of dulness, there was unusually deep-pitched resonance and decided amphoric breathing. This amphoric quality of the respiration could, in fact, be heard all over the chest except over the posterior tumor, its greatest intensity being over the upper half of the scapula and between the upper half of the posterior border of the scapula and the vertebral column. There are no notes concerning the presence

* Read before the Association of American Physicians at its eighteenth annual meeting.

or absence of vocal fremitus, metallic tinkling, coin sound, or succussion splash.

From the meagre history of the case, it appears that the woman was in good health up to the time of the attack (date not stated), which began with pain in the side and not with the explosive symptoms which so often attend the rupture of lung tissue. In other words, the empyema probably began as such, or was secondary to pneumonia, or other infection, and was not the consequence of rupture of the lung from tubercle, abscess, gangrene, or other cause. Another fact corroborating the view that the perforation of lung or bronchus was the consequence and not the cause of the empyema was the patient's recollection of a night during which she had coughed and expectorated almost incessantly. It was probably at that time that the pus she had coughed and expectorated almost incessantly was established. Whether or not the tumors on the chest wall were present before that event could not be ascertained, but it is practically certain that they were.

The question of the date of the pulsation is a most interesting one. The sequence of events was probably as follows: The case began as empyema. The pus then pointed in the three above-mentioned spots upon the chest wall—empyema necessitatis. Before the pus could discharge itself through the integument a bronchus was perforated and air admitted into the pleural sac. Now the question arises whether the tumors were pulsating before the establishment of pneumothorax or whether the pulsation was synchronous with and dependent upon the latter. I am in favor of the latter supposition: first, because if the pulsation had preceded the rupture into the bronchus, it would probably have ceased on the occurrence of that event and the synchronous discharge of pus. This view is warranted by the fact that in most, if not in all, cases of pulsating empyema, the pulsation has ceased on the withdrawal of a moderate quantity of pus by aspiration. Secondly, the presence of air in the pleural sac is a contributory cause of pulsation, although it may not be, as Féréol supposed, indispensable to it.

In cases of pulsating empyema with pneumothorax, the air is usually, if not always, under high tension. What was the condition of the air, as regards tension, in my case, it is impossible to say, and it is impossible to determine the tension of the air in any case of pneumothorax without the aid of manometric experiments, which are, practically, never employed in clinical medicine. We must regard the question of the exact tension of the air in any given case of pneumothorax as *practically* insoluble.¹ The next question to arise is whether we

can, by means of the physical signs, determine a pneumothorax to be "closed" or "open." I know of no certain method of doing so. Even amphoric, metallic breathing, the most reliable sign of communication between pleural sac and bronchus, is heard in cases of closed pneumothorax. There is, however, one experiment which, if successful, settles the question in favor of open pneumothorax, but which, if unsuccessful, does not necessarily determine that it is closed. The patient is made to lie on the affected side, which is still further compressed by the hands of the examiner. He is then made to sit up or to turn to the other side while, at the same time, the pressure of the hands is relaxed. By this means, if the case is one of open pneumothorax, air may be drawn into the pleural sac and give rise to gurgling and metallic sounds, as the bubbles rise in the fluid and break upon its surface.

To return to my case: On the day after admission, *i. e.*, on April 15, 1880, paracentesis was performed by the late Professor John Ashhurst, Jr., the site of the puncture being the small conical tumor in the eighth interspace. More than a quart of thick, offensive pus was withdrawn when, some air escaping, it was thought advisable to desist. The pus was so thick that it could scarcely be poured from the bottle into which it was aspirated and was compared, by one present, to an infant's fæces. By the time a quart was removed, the pulsation in the large anterior tumor—the one in the left mammary region—had ceased and also the gurgling on palpation. The posterior tumor was greatly diminished in tension, but, the patient being still under the influence of ether at the time I left the hospital, I did not ascertain whether the pulsation in it had also ceased. The position of the heart remained unchanged. Coughing still produced a decided bulging of the large anterior tumor, although much less than before the operation. This bulging was doubtless produced by air alone.

April 22, 1880.—This morning the patient was found bathed in pus which was so foetid as to cause one of the nurses to faint, after which she vomited, complained of headache, and was laid up for twenty-four hours. The plaster had become loosened and the puncture made by the trocar had enlarged. Through the opening I introduced a flexible catheter and injected about a pint of carbolic acid solution, 1-60. The side was then enveloped in oakum.

April 23.—Passed in the catheter for about six inches in a direction closely applied to the left thoracic wall and injected a somewhat larger quantity of the same solution. I ceased on the patient's beginning to cough and removed the catheter. The act of coughing caused the injected fluid to spurt

¹ I emphasize the word "practically" for, theoretically, there is no difficulty about it.

out for a distance of two or three feet. Some pus, about two ounces, escaped with the last portion of the carbolic acid solution.

April 27.—A No. 11 catheter could be introduced but a very short distance and then could be felt through the parietes of the chest and appeared to be bent on itself. After the injection of a few ounces of carbolic acid solution—one drachm to the quart—the patient began to cough and the injection was stopped. Coughing brought away a few ounces of pus, which spurted from the opening.

Nothing further is known concerning this case beyond the facts that a drainage tube was subsequently inserted by Dr. Ashhurst at my request and that the woman was removed from the hospital and was alive a year afterward. The case is almost unique as regards the number of pulsating tumors, there being but one other, that of Chvostek (Case 23 in Wilson's series) in which there were three.

There has been much discussion concerning the cause of pulsation in certain rare cases of pleurisy, and it is manifest that no single cause or set of causes is always operative. According to Féréol, the presence of air in the pleural sac is indispensable to the production of pulsating pleurisy. He states that it is often latent, which simply means that it is difficult of detection. This necessarily follows from the fact that the effusion is generally large, the air being forced backward to the root of the lung, laterally to the neighborhood of the pericardium, or elsewhere. Although the air may be small in amount, its anomalous situation may render it easy of detection, as in the case I report, in which it was contained in one of the pulsating tumors. The air must also be under considerable tension from the pressure of the surrounding fluid and shut off from free communication with the bronchi. Under these circumstances it forms an elastic cushion which transmits the pulsations of the heart to the effusion and through the latter, to the chest wall.

On the other hand, Roux considers the presence of pneumothorax as unfavorable to the production of pulsation because the air, being compressible, would yield to and diminish the force of, the cardiac pulsations. There can be no doubt that Féréol's theory is not tenable, for, though the coexistence of pneumothorax may be the rule in cases of pulsating pleurisy, there are undoubted exceptions to it.

In quite a number of cases the pulsations of the heart have been transmitted through the lung which was compressed into a solid mass and adherent to the pericardium.

In two cases reported by Traube there was co-existing pericardial effusion with the heart displaced

to the right. He explains the pulsation by the greater degree of mobility possessed by the heart on account of the surrounding effusion, but attributes a large share of the phenomenon to the relaxation of the chest wall occasioned by destruction of the thoracic pleura.

Lépine is of the opinion that pulsating pleurisy (endopulsation) may be more common than is generally supposed. In his case it was discovered, so to speak, accidentally, and was of limited area. He thinks it reasonable, therefore, to suppose that careful palpation of various parts of the chest wall, and especially over the attachments of the diaphragm, might lead to its discovery in cases in which, but for such examination, it would be entirely overlooked. According to Lépine, the conditions giving rise to pulsation are the following: Complete compression of the lung, by the pressure of the effusion, rigidity of the mediastinum, and a certain degree of tension of the diaphragm. If the lung is not compressed, it will yield to the blows of the heart and extinguish them; if the mediastinal partition yields to the blows of the heart, they will be "absorbed" by the sound lung. Finally, the diaphragm must be immovable, so far as the respiratory act is concerned and yet capable of transmitting the cardiac impulse to the surface: *i. e.*, it must be in a certain state of tension impossible to define with precision.

After a careful study of many of the reported cases, it appears to the writer that the most important factors in the production of pulsating pleurisy are (1) left-sided and large effusion, (2) relaxation of the thoracic wall from paresis of the intercostal muscles, and (3) a somewhat forcible heart beat. The presence of air in the pleural sac under great tension and the adhesion of the compressed lung to the pericardium are cooperating but not essential causes.

It is customary for writers on pulsating pleurisy to group under the same head cases of intrapleural pulsation (endopulsation, as it is called by Lépine) and those with a pulsating tumor. So far as I know, Dr. Samuel West² is the only writer who has drawn a distinction between the general systolic shock of intrapleural pulsation and the expansile extrapleural pulsation observed in pulsating empyema necessitatis. To the writer it seems that this distinction is not sufficiently recognized and also that it is unscientific to include these two varieties of pulsation in the same category. It may be, it is true, that an intrapleural pulsation may become extrapleural by the pointing of the pus, as in the cases of Lorenzutti and Roux. On the other hand, however, an intrapleural pulsation may occur in cases of serous effusion, whereas an extrapleural pulsating pleurisy

² *Med. chirurg. Trans.*, vol. lxxx, p. 239.

is, of necessity, purulent, so that the term empyema necessitatis is applicable to it in more senses than one.

The rarity of pulsating pleurisy, whether the pulsation be intrapleural or extrapleural, is shown by the fact that Alfred Keppler,³ after searching the literature of more than two hundred years (from 1640 to 1887), was only able to collect thirty-eight examples of it. In 1893, J. C. Wilson tabulated sixty-eight cases of this rare disease, two of which had been recently under his own observation. I append brief abstracts of fifteen additional cases, all of which except two (the case of Bimmerman [1889] and Florand [1885]) were published at a later date than Wilson's valuable contribution. Comby, who published a monograph on pulsating empyema in 1895, and who was evidently unacquainted with Wilson's paper, was able to collect but forty-seven cases of the disease. These, however, are reported at length. In this connection I may call attention to a mistake that has been made both by Keppler and Wilson. Wilson's Case II is taken from Keppler's series and is wrongly ascribed to Pelletan. The case in question is to be found in Bérard's *Traité du diagnostic dans les maladies chirurgicales*, Paris, 1837, p. 179, and is entitled *Empyème pris pour un anévrisme*. There can be no doubt about the identity of the case in question, for both Keppler and Wilson mention the circumstance that a probe introduced by a student into the opening which had been made in the pulsating tumor, slipped from his grasp into the pleural cavity, from which it was subsequently removed by incision. This interesting circumstance is also related by Bérard. Comby, in his series, rightly assigns the case to Bérard.

The following cases of pulsating pleurisy added to the sixty-eight in Wilson's table increase the number by fifteen, making eighty-three in all:

CASE I.—Lorenzutti. *Annali Universali di medicina e chirurgia*, vol. ccxxxii, p. 385, 1875. In this case there was first observed a general intrapleural pulsation over the lower two-thirds of the left thorax. A day or two later a tumor with expansile pulsation appeared over the left nipple. Aspiration. Cessation of pulsation when 600 grammes of pus were removed. In all, three kilogrammes were withdrawn. Later, drainage tube inserted. Death a few days thereafter. Autopsy.

CASE II.—Proust. *Journal de médecine de Paris*, vol. ix, 1885, p. 25. Woman, æt. twenty-three. Left-sided empyema with intrapleural pulsation. No pneumothorax demonstrable.

CASE III.—Florand. *La France médicale*, i, 1886, p. 158. Woman, æt. twenty-seven. The disease

began as an ordinary pleurisy with serous effusion. Thoracentesis on January 27th, when two litres of serous effusion were withdrawn. Pulsation detected on March 24th. Second tapping on March 27th, when a litre and a half of pus was removed. Third tapping on April 18th; 1,800 grammes of pus. Pleurotomy on May 1st, followed by washing out pleural sac with solutions of boric acid and zinc chloride. Patient entirely well by end of November, with marked retraction of chest on left side.

CASE IV.—Bimmerman. *Geneeskundig Tijdschrift voor Nederlandsch Indië*, xxviii, 1889. Boy, æt. nine. Empyema pulsans (intrapleural). Litre of pus removed. Pleural sac washed out with two per cent. boric acid solution. Cessation of pulsation after removal of pus. Result of case not stated. Very brief article.

CASE V.—Pittarelli. *Gazz. degli ospedali*, xiv, 1893, p. 1260. Male, æt. thirty. Left-sided effusion. Pulsation (intrapleural) over lower two thirds of left side. Pus obtained by exploratory puncture. Several aspirations. Cure by author's method of injecting solutions of "soda" (3-1,000) and sublimate (1-9,000) coincidentally with the withdrawal of the pus.

CASE VI.—Béclère. *Bulletins et mémoires de la Soc. méd. des hôpitaux de Paris*, xi, 1894, p. 339. Case I. Male, æt. thirty-one. Left-sided, intrapleural pulsation. Disease began with cough in August, 1891. Previous health excellent. In November, succussion sound heard by patient and compared by him to the noise of a barrel half full of water. Seen by Dujardin-Beaumetz in May, 1892, who made the diagnosis of pyopneumothorax. Seen by Béclère on May 8, 1893. Extended left sided intrapleural pulsation, no tumor, no demonstrable pneumothorax, although succussion felt by patient two or three weeks before. Twenty-eight hundred grammes of pus withdrawn by aspiration. Patient exhibited three years later in excellent health (see *Bulletins et mémoires de la Société médicale des hôpitaux*, tome xiv, 1897, p. 1045). Only one aspiration was performed in this case. No injection into pleural sac were made.

CASE VII.—Béclère, case II. *Bulletins et mémoires de la Soc. méd. des hôpitaux de Paris*, xii, 1895, p. 42. Male, age not given. Extensive left-sided, intrapleural pulsation having its maximum in left axilla. No pneumothorax, no displacement of heart. Funnel-shaped chest. Two thirds of a litre of chocolate-colored pus withdrawn by aspiration. Great improvement thereafter. Patient living at time of report.

CASE VIII.—Toulmin. *University Med. Mag.*, vol. vii, 1894-95, p. 853. Boy, æt. five. Left-sided, intrapleural pulsating empyema. Continuance of pulsation after removal of 400 c. c. of pus by aspiration. Pneumococci in pus. Resection of portion of rib. Recovery.

CASE IX.—James. *International Clinics*, 1895, 5 s. ii. Left-sided pulsating empyema necessitatis.

³ *Deutsches Archiv. für klin. Med.*, 1887, Bd. xli., p. 220.

Large præcordial pulsating tumor about four inches in diameter, its centre between the third and fourth ribs. Resection of rib. Improvement. Developing signs and symptoms of phthisis pulmonalis at time of report.

CASE X.—Lépine. *La Province médicale*, Lyon, x, 1896, '95. Woman, æt. twenty-eight. Pulsating serous pleurisy, pulsations being felt over false ribs of left side. Heart to right of sternum. Cessation of pulsation after aspiration.

CASE XI.—Roux. *La Province médicale*, Lyon, x, 1896, p. 100. Male child, age not stated. Pneumococcus empyema left-sided, consecutive to scarlatina. Aspiration. Reproduction of fluid with pulsation at first intrapleural, then, with the pointing of the pus at one spot, extrapleural. Pleurotomy. Pneumothorax.

CASE XII.—McCosh. *Medical Record*, li, 1897, p. 156. Male æt. thirty-seven. Pulsating empyema necessitatis. One tumor about four inches in diameter. Marked pulsation. Portion of eighth rib resected. After operation the chest was filled with salt solution and the opening closed, whereupon the pulsation returned as vigorously as before. Great improvement after operation. Six months later the case was not progressing satisfactorily and the patient was advised by his physician, Dr. Titus, of Hightstown, N. J., to return to the hospital in New York for further operative procedures.

CASE XIII.—Sallès. Case I. *La Province médicale*, xi, 1897, p. 378. Male, æt. twenty-seven. Pulsating empyema of tuberculous origin. Pneumothorax. Displacement of heart. X ray examination. Admitted to hospital February 8, 1897; died February 18, 1897, without aspiration. Autopsy.

CASE XIV.—Sallès. Case II. Male, æt. fifty-four. *Ibid.* Pulsating empyema consecutive to traumatism. Pneumothorax. Colon bacillus in the effusion. Kicked by a horse in left side of chest on May 5, 1896; up to that time in perfect health. Admitted to hospital June 1, 1896. Pulsation both visible and palpable over whole of left side, increasing from above downward. Heart sounds and impulse most marked at xiphoid cartilage, but extending to right of sternum. Death on June 3d without aspiration. Autopsy.

CASE XV.—Dunin. The only reference to this case that I have been able to find is in Comby's monograph, in which it figures as Obs. xxviii. Comby merely states that Dr. Theodore Dunin has published in *La Gazette médicale de Varsovie* (*Gazetta Lekarska*) a case of pulsating empyema in a young person.

In the *Index-Catalogue of the Library of the Surgeon-General's Office*, second series, a case of pulsating empyema is assigned to Cavazzani (*Gazetta degli ospedali*, xviii, 1897, p. 781). The title of the paper is *Empiema Pulsante o Peripleurite?* and Cavazzani decides the question in favor of peri-

pleuritis. There was a tumor with expansile pulsation in the second, third, and fourth intercostal spaces close to left border of sternum. The patient had recently had an attack of pleurisy with effusion on the left side. When the tumor was present the signs of pleurisy had disappeared, and the heart was in its normal position. The patient was cured by an operation which consisted in the removal of the sternal ends of the second and third ribs and curetting the wall of the abscess. The patient was a woman æt. fifty-six.

A CASE OF EPIDURAL ABSCESS OF OTITIC ORIGIN—OPERATION—RECOVERY.*

By J. GUTTMAN, M. D.,
NEW YORK.

Intracranial suppurative affections have always, until recently, been looked upon as giving a very serious and often fatal prognosis. The recent advent of aural surgery has not only diminished the frequency of these diseases, but has also lessened their serious aspect. Intracranial complications of an otitic origin are comparatively rare, and are interesting, not only to the specialist, but also to the general practitioner. The latter, as a rule, is the first one to see these cases; and, although he is not expected to treat them successfully, still, by an early recognition of their gravity, and by an early consultation with a specialist, he can improve their prognosis to a very great extent.

A. B., a fifteen year old girl, was taken sick with influenza on February 10, 1902. She then complained of a cold in the head, and pain in the right ear. The next day she appeared at the New York Eye and Ear Clinic, where acute otitis media was diagnosed, and paracentesis of the right drum membrane was performed; she was told to go to bed, and to instil a warm boric acid solution into the ear. On the following day, February 21st, the ear began to discharge, the family physician was called in, and he prescribed some internal medication. Three days later, the pain in the ear returned with increased severity, the temperature rose to 103° F., accompanied by a chill and vomiting. An aurist was called in consultation, and he again performed paracentesis, and ordered an ice coil to the head.

On March 2nd, I was consulted in regard to the case. I found the patient in bed, complaining of intense headache. Temperature 103° F. Pulse, 100. The neck was held rigid, and even a slight movement of the head was very painful. The mastoid region itself was not swollen, but it was very sensitive to pressure, mainly over the region of the emissary veins; the headache was also most intense over that point. Examination of the ear showed a thick sanguineopurulent discharge; the drum, and especially Schrapnell's membrane, was swollen, œde-

* Presented at the Otological Section of the New York Academy of Medicine, March 12, 1903.

matous, and bulging forward. I advised immediate operation, but this was greatly objected to, on account of the possibility that the fever might be due to the grippe and its accompanying bronchitis. Under these circumstances, I could do no more than incise Schrapnell's membrane. Thick pus came through the opening, when this was wiped away I could see a new drop of pus appear in the cut I had just made. This slight operation relieved the patient considerably for two days, when the headache reappeared, vomiting set in, and the patient became stuporous. The patient's relatives now consented to an operation, and she was removed to the Ophthalmic and Aural Institute. Temperature on admission, 100° F. Pulse, 90. The optic disc was somewhat hyperæmic. This symptom, together with the stiffness of the neck, the intense headache, tenderness in the region of the emissary veins, as well as the vomiting, stupor and absence of swelling behind the ear, made me think of cerebral complications.

Operation.—I made the usual incision, behind the ear, for a Schwarze operation. Suspecting some complication in the cerebellar cavity, I also made a horizontal incision backward, toward the protuberantia capitis. The bone was comparatively soft, slightly hyperæmic, no fistula on the cortex. I chiselled through to the antrum, whence a stream of pus came out; exploring the antrum, my probe entered a thin fistula, leading backward and downward. There appeared to be no bottom to this fistula, and the surrounding tissues felt soft. I was now convinced, that in my next procedure I should encounter the brain. By enlarging the above fistula with a chisel, a stream of pus mixed with blood rushed out, under high pressure, and was pulsating as if driven by a pump. About two ounces were evacuated. I was now positive that I had to deal with an epidural abscess. After evacuating the pus, I found the dura covered with a thick, villous, fatty, grayish colored granulation tissue, which was carefully removed with a sharp spoon. The dura underneath appeared normal. In order to lay bare the whole cavity I removed the overhanging bone with chisel and bone forceps; the cavity, of the size of a small fist, extended almost to the protuberantia capitis. The next step in the operation was to ascertain the condition of the lateral sinus, but I was unable to find it, as it was probably collapsed and obliterated. The wound was then packed and the patient put to bed.

On the next day the patient's condition was considerably improved. The headache and fever had disappeared; four days later, the wound was dressed for the first time, and nine days later, the patient left the hospital, in good condition. The discharge from the ear had ceased at the end of the first week; after dressing the wound, at regular intervals, it had completely healed by the 15th of July. The patient has gained fifteen pounds since the operation.

Intracranial complications caused by purulent inflammations of the middle ear are: epidural abscess, meningitis, sinus phlebitis, and abscess of the brain. These are mentioned in order of the fre-

quency of their occurrence. E. Hoffman, in 1888, was the first one to give a full and lengthy description of the pathology and therapy of pachymeningitis externa purulenta, caused by inflammation of the middle ear.

Now that otitic surgery has become more extensive and thorough, epidural abscess is encountered more often than before. Jansen found in operating on one hundred and forty-nine acute mastoids, forty-nine cases of epidural abscess, although I believe that the number of cases reported as epidural abscess, would diminish considerably, if all the cases where the destruction of the bone in mastoiditis reaches the dura, were eliminated. These cases are only an aggravated form of an ordinary mastoiditis, where the purulent process in the bone, the lamina vitrea, also became necrosed; whereas, in the true form of epidural abscess, the accumulation of pus in the epidural cavity is considerable, it is under high pressure, and upon opening the cavity, escapes as if driven by a pump. A large area of the dura in these cases is covered with villous granulation tissue.

The above mentioned case is instructive, inasmuch as it shows that a "slight cold" in the nose led to an acute purulent inflammation of the middle ear, and in a few days the patient's life was in great danger, as in all probability the abscess would have broken through the dura into the brain, ultimately causing the death of the patient.

333 EAST FOURTH STREET.

ASTIGMATISM CURED BY CORNEAL TRAUMA.

By PERCY FRIDENBERG, M. D.,
NEW YORK,

ATTENDING OPHTHALMIC AND AURAL SURGEON TO THE
RANDALL'S ISLAND AND INFANTS' HOSPITALS, ETC.

Within a few weeks an interesting case was reported¹ in which complete (subconjunctival) tenotomy of the left external rectus muscle caused the entire disappearance within three days of a preexisting corneal myopic astigmatism, against the rule, of 1.75 D. The curvature of the vertical meridian had not changed; that of the horizontal meridian had diminished.

Chance and that tendency for the unexpected to happen which brings rare cases together at times, may account for my seeing within a few days after reading of this peculiar cure a case in which corneal astigmatism, of a low degree, was neutralized, not by operation or by other intervention of the surgeon, but by a direct injury to the cornea, producing a cut

¹ An Astigmatism Cured by Operation. By George J. Bull, M.D., Paris. *New York Medical Journal*, February 7, 1903.

across this membrane, which in healing became flattened in its vertical meridian just sufficiently to equalize the curvature which had before been excessive and had required the use of a cylinder to bring the refraction of the horizontal meridian up to its level.

Dr. B. F. S., aged twenty-six, came to me at eight o'clock in the evening of February 12, 1903, in great alarm as to the condition of his left eye. About two hours before, at dusk, while walking along a side street, where boys were playing "tip-cat," he had been struck on the left eye by the "cat," a piece of wood about four inches long, pointed at either end. The force of the blow was such as to break the patient's spectacles, driving the fragments against the eye and causing at once great shock and apprehension, although but little pain. On examination the following data were noted: There is no circumcorneal injection. The eye is only slightly sensitive to light. Pupil round, regular, reacts well. A perfectly sharp, linear wound extends straight across the cornea, running horizontally through the lower half of the pupil. The wound extends from the sclerocorneal margin on the nasal side to within a millimetre of the temporal edge, thus occupying practically the entire width of the cornea. The depth of penetration appears to be slight and the edges of the cut are in such perfect apposition that there is no roughening of the corneal surface or any swelling of the wound edges from imbibition. Within the next twenty-four hours pain and ciliary injection came on, necessitating the instillation of atropine solution 1 per cent., hot pads, applications of bichloride vaseline 1:5,000, and protection of the eye from light, under which measures the symptoms promptly subsided. Careful and repeated examinations convinced me that there was no splinter of glass within the eye, a complication which, in consideration of the character of the accident, had suggested itself at the first moment.

Within about a week the eye had paled, a scar was just barely visible as a faint gray hair-line on the cornea. Vision, which, immediately after the injury, had been $\frac{20}{70}$ with correction sph. + 1.5 D cyl. + 0.75 D axis 90° , was now $\frac{20}{30}$ —. Putting on his correcting spherocylinders, which, I may add, had been prescribed after examination under atropine a year or two previously, I found, to my surprise, that vision, instead of being improved, became worse, and was $\frac{20}{50}$ — (!) but promptly rose to $\frac{20}{20}$ when the cylinder was removed and a spherical + 1.5 D placed before the eye. In short, an astigmatism of three quarters of a dioptre, with the rule, had disappeared, being neutralized by the development of exactly the same amount, against the rule, by the scar contraction of a transverse incised corneal wound. Examination with the Javal ophthalmometer proved this to be actually the case, the instrument registering no corneal astigmatism. The images of the mires, on account of the recent injury, were not absolutely regular in outline. On March 7th the same optical conditions were found, except that the patient now accepted a cylinder + 0.25 D axis 90° and that a corresponding ophthalmometric reading was noted.

The mechanism of this spontaneous cure is exactly that which produces astigmatism after cataract extraction, viz., the flattening of the corneal curve from scar contraction. As the corneal section is usually upward or downward, the vertical meridian is affected, becomes flattened, requires a convex cylinder, axis horizontal, to increase its refraction; we have astigmatism against the rule. This decreases within the first month or two after operation, by which time an irreducible minimum is found, the amount of which depends upon the extent, position, and manner of healing of the corneal section. In the case reported there was no actual section, merely a superficial—although extensive—incision of the cornea. The astigmatism was correspondingly slight, and, by a most peculiar chance, just sufficient to neutralize a preexisting inequality of curvature. Surely a strange instance of the *vis medicatrix naturæ*, and perhaps, too, a hint of a far distant therapy. The prophetic eye may see, in the dim future, the operation of graduated superficial keratotomy for astigmatism. Unfortunately, such a consummation would not make us much happier. Hypermetropia and the lower and commoner degrees of myopia will still be "inoperable," and if one must wear glasses, it does not matter much whether they are spheres of spherocylinders.

114 WEST ONE HUNDRED AND TWENTY-SIXTH STREET.

An Addition to Roosevelt Hospital.—A one-story brick building, to cost \$3,000, will be built on the grounds occupied by Roosevelt Hospital, at Ninth and Tenth Avenues and Fifty-eight and Fifty-ninth Streets. This building will be used as a board room by the board of trustees of the hospital.

Johns Hopkins Medical School.—Johns Hopkins Medical College, of Baltimore, will shortly lose one of its prominent instructors in the person of Dr. Norman McLeod Harris, associate in bacteriology, who will become first assistant in bacteriology to Dr. E. O. Jordan, at the University of Chicago. Dr. Harris has published several works, the latest being a revised edition of Muir and Ritchie's manual on bacteriology, fresh from the press. Dr. Harris, though a young man, has been rapidly promoted since his entrance in 1897 to Johns Hopkins Medical School.

International Medical Congress at Madrid.—The fourteenth international medical congress held recently in Madrid was an unusually brilliant affair, though the accommodations provided were not in proportion to the influx of guests. The king and queen regent were present at the opening meeting. One afternoon a reception attended by the members of the congress was given in the royal gardens, and on another afternoon a gorgeous reception was held by the young king at the royal palace, when he received the guests in person.

THE AMERICAN MEDICAL ASSOCIATION

AT NEW ORLEANS, MAY 5, 6, 7, AND 8, 1903



Fifty Fourth Annual Meeting

VIEW OF CANAL STREET.

FEATURES OF THE MEETING.

WHILE there have been meetings at which a larger attendance has been registered than has so far been registered in New Orleans, there has never been any meeting of the American Medical Association more representative in its attendance than the present one. Every section of the United States is represented and the representatives have taken an active part in the affairs of the organization; thus showing that the feeling which formerly restricted active participation to certain local areas has given place to a catholic spirit that makes every member, wherever he may be located, feel that his interests in the organization are as important and as well looked after as those of the member situated in the larger centres of population. The present season of the year proves to be a most delightful one in which to visit New Orleans. The arrangements

made for the reception of the members and for the provision of hotel accommodation have been excellently planned and well carried out. As train after train arrived in the early part of the week, the members were met by representatives of the local committee of arrangements, who gave each of the visitors directions as to the best method of reaching the place where he had decided to stay. The only feature of the meeting which has aroused any criticism whatever has been the great distance between the meeting places of some of the sections; but for this fault the committee of arrangements cannot be held responsible, as there are few cities that would provide a sufficient number of meeting places adequate to accommodate simultaneously the House of Delegates and the twelve sections.

The Bureau of Registration was admirably arranged on the ground floor of the Washington Artillery Hall, and the services of this bureau and of

the Bureau of Information leave nothing to be desired.

As regards the scientific work of the association, as shown in the sections, the New Orleans meeting compares favorably with that of previous years. The main interest of the sessions of the House of Delegates centres around the final disposition of the vexed question of the code of ethics. The sessions of the subcommittee, to which this question was referred by the business committee, were of a most spirited character. This subcommittee, composed of representatives from every State, after a discus-

somewhat chaotic condition, the entire subject was referred to a special committee.

THE PATHOLOGICAL EXHIBIT,

while excellent in quality, was not so extensive as that of last year. Though this exhibit was in the main hall, it was not located favorably for the purpose of attracting the attention of members who were not specially in search of it. In view of the educational value of this exhibit and of the amount of labor and skill involved in its preparation, it would seem that at future meetings some greater



THE CITY HALL, NEW ORLEANS.

sion that in some instances verged on the acrimonious, finally adopted a modification of the code as proposed by the original committee on the code of ethics, which sets forth:

"The American Medical Association promulgates, as a purely suggestive and advisable document the following:

[Here follows the original report of the committee on the code of ethics as promulgated to some weeks since through the Medical Press.]

After various amendments and substitutes had been offered and the whole matter thrown into a

consideration should be expended towards affording greater prominence to this exhibit, with a view to impressing upon the members generally the importance of the work that is being done by this committee.

THE COMMERCIAL EXHIBITS,

which occupied the upper portion of this hall, were not quite so numerous or extensive as the corresponding exhibits at the Saratoga Springs meeting. This fact was no doubt due partly to the distance of New Orleans from the headquarters of most of

the exhibitors, and partly to a feeling on the part of the said exhibitors that the association gives them a very small return for the very considerable sums charged for space in the exhibit.

INDEPENDENT ORGANIZATIONS.

A number of independent organizations make it a practice to hold their annual meeting simultaneously with that of the American Medical Association. One of the most important of these, the American Academy of Medicine, failed to follow this custom this year, and its meeting will take place next week, at Washington, during the Congress of American Physicians in that city. The work done this year in the Confederation of State Medical Examining and Licensing Boards was of an unusual degree of interest, as will be seen by reference to the full report of the proceedings which appears elsewhere in this issue. While it is manifestly impossible to tabulate the quality of the instruction furnished respectively by the several colleges, we believe that the tables of actual hours of instructions, both didactic and clinical, presented by Dr. Webster, show a condition that will prove surprising to most students of medical education. To enable one to draw fair deductions from these sta-

tistics, however, the great variations which exist in the preliminary requirements of the several institutions must be borne in mind. Where a medical college requires the equivalent of a B. A. degree for entrance, that college can turn out a better equipped physician with 4,000 hours of study than another college with 6,000 hours, but to which the student is admitted with only a high school diploma. Admitting all the faults that may be found in this method of presenting the facts—and the author frankly admitted the imperfections unavoidably inherent in his method of presenting them—there still remains a fund of valuable information for the guid-

ance of those who have to do with the regulation of the curricula of medical schools. The minimum requirement for medical schools proposed by Dr. Webster seemed to be quite fairly drawn, and such as every examining board could insist on without working undue hardship.

Among the other associations holding meetings during the week there were two the proceedings of which proved of more than usual interest, namely, the American Proctologic Society, and the American Urologic Society. The latter, though only recently organized, presented a programme of papers of high practical value.

The executive committee of the Mississippi Valley Medical Association held a meeting in the St. Charles Hotel, on Wednesday afternoon, May 6th, and passed resolutions applying for representation in the American Medical Association. It was decided to hold the next meeting of the Mississippi Valley Medical Association at Memphis, Tenn., on October 7th, 8th, and 9th, of this year.

OPERATIONS BY PROFESSOR LORENZ.

The presence of Professor Adolf Lorenz at the meeting has attracted considerable attention. On Wednesday morning, May 6th, he conducted a clinic at the Charity Hospital, which was witnessed by an assemblage of some four or five hun-

dred physicians. Both the operations that he performed were for talipes equinovarus, and both were highly successful. It is needless to say more than that the methods used were those now so well known as associated especially with his work.

THE SOCIAL ASPECTS OF THE MEETING.

New Orleans turned out its most delightful aspects to the visitors. The weather of the early portion of the week was ideal; just warm enough to give a breath of the sweet South, and to bring out on the streets gay laughing crowds of brightly



DR. GEORGE H. SIMMONS
of Chicago
Secretary of the Association.

dressed ladies. The whole city seems attuned to light and laughter. The first reception was held in the Palm Garden of the St. Charles, on Tuesday evening, May 5th, and brought out a large number of the ladies of fashion of the city, whose charms of person, of mind, and of costume, greatly added to the delightfulness of the entertainment. The broad hallways and ample parlors of Mrs. Cartwright Eustis were thrown open to the visitors on Wednesday evening, and her reception was the most brilliant affair of the meeting. On Wednesday evening, Mrs. Maurice Stearns and Dr. and Mrs. Bruns also gave receptions for the members, thus enabling them to gain some idea of the character of a typical Southern home. On Thursday evening, a *fête champêtre* at the City Park in honor of the President brought out a full attendance, while the river excursion on Friday afternoon gave the visitors glimpses of typical scenes along the river front and on a sugar plantation. All the social entertainments were permeated with such cordial hospitality as to make the visitors thoroughly delighted with their stay.

THE PROCEEDINGS.

THE GENERAL SESSIONS.

The first grand session of the General Sessions of the American Medical Association, at its fifty-fourth annual meeting, held at New Orleans, met on Tuesday, May 5th, in the Tulane Theatre. The meeting was called to order by the president, Dr. Frank Billings, of Chicago.

According to custom, the proceedings were duly opened with prayer, which was offered by the Rev. H. G. Davis, of New Orleans.

ADDRESSES OF WELCOME

were then delivered; first, by the Hon. Paul Capdeville, mayor of New Orleans; then by the Hon. Leon Jastremski, of Baton Rouge, representing the Governor of Louisiana; and finally by Henry P. Dart, Esq., of the New Orleans Bar. These addresses were appropriately responded to by Dr. J. A. Witherspoon, of Nashville, Tenn., first vice-president of the association.



SUGAR LEVEE ON THE RIVER FRONT.

THE PRESIDENTIAL ADDRESS

on Medical Education in the United States (which is printed in full in this issue of the *Journal*), was then delivered by Dr. Frank Billings, of Chicago. At the conclusion of the address, a cordial vote of thanks was extended to the president, and the session was adjourned.

THE SECOND GENERAL SESSION

was held on Tuesday evening, May 5th, at the Carondelet Street Methodist Church. A portrait of Dr. B. G. Richardson, a former president of the association, was presented. The Oration in Surgery was delivered by Dr. A. F. Jonas, of Omaha, Neb., and is printed on page 828. Dr. Edmond Souchon gave a sketch of the life of Dr. Richardson in presenting his portrait.

THE THIRD GENERAL SESSION

was held on Wednesday evening, May 6th, when the Oration in Medicine was delivered by Dr. J. M. Anders, of Philadelphia, on Social Conditions in America in their Relation to Medical Progress and Disease (see p. 825).

At the close of Dr. Anders's Oration in Medicine (Extracts from which will be found printed on p. 825), Dr. W. L. Rodman, of Philadelphia, presented to the association an excellent portrait of the late Dr. Hunter McGuire, of Richmond, formerly a



DR. ISADORE DYER
of New Orleans

Chairman of the Entertainment Committee and one of the New Vice-Presidents

resident of New York and New Orleans. Dr. Rodman, in making the presentation, gave a brief and interesting sketch of the life of Dr. McGuire.

THE FOURTH GENERAL SESSION

was held in the Carondelet Street Methodist Episcopal Church, on Thursday evening, May 7th, the only business transacted being the delivery of the Oration in State Medicine, by Dr. W. H. Welch, of Baltimore. The topic treated of by Dr. Welch was that of infectious diseases.

PROCEEDINGS OF THE HOUSE OF DELEGATES.

THE FIRST SESSION

of the House of Delegates of the American Medical Association was held in the Council Chamber of the City Hall, on Monday afternoon, May 4th, at 3 p. m. The president, Dr. Frank Billings, took the chair.

Dr. Henry D. Holton, of Vermont, presented the report of the Committee on the Prophylaxis of Venereal Diseases. This report recommended the holding of a national congress, under the auspices of the American Medical Association, for the purpose of considering what effectual measures could be generally carried out with a view to the prophylaxis of venereal diseases. The committee believed that this event would mark an epoch in the history of this great national medical body.



DR. HENRY P. NEWMAN
of Chicago

Treasurer of the American Medical Association.



THE CABILDO

Where the seat of the Spanish Government was formerly located and all transfers were made.

The following data were submitted by the committee as a basis for the holding of such a congress:

1. As the States cannot with impunity ignore the existence of venereal diseases, and as it is the duty of the State to protect the people from contagious diseases, there should be instituted, through State and district societies, a propaganda of action looking toward a proper recognition of venereal diseases by the different legislatures.

2. It is recommended that the American Medical Association authorize delegates from each State to appoint special committees to organize such a movement in their respective States and district societies, and to send delegates to such a congress.

3. Such delegates may then, fortified by the authority of the American Medical Association, in such a congress bring to bear on their home legislatures the necessity of legislation against the spread of venereal diseases.

4. It is recommended to appoint a central committee of organization, to be in touch with the various State committees.

The congress would discuss and act on the following questions:

Prostitution: Its causes, and the means of diminishing its extent, (a) by safeguarding minors; (b) by raising the age of consent; (c) by socioeconomic measures; (d) by educational measures; and (e)

by the creation of a provident education law.

Prophylaxis by Treatment: (a) By making venereal diseases reportable, without giving names and addresses, solely for statistics of morbidity; (b) by liberal and enlarged hospital and dispensary facilities, with gratuitous treatment.

Legislation: (a) By State laws against the diffusing of syphilis and venereal diseases in an extragenital way; (b) by certifying the health of wet nurses; (c) by regulating the professions of ritual circumcisers, barbers, and dentists; (d) by sanitary laws against the transmission of syphilis.

Individual Prophylaxis: (a) By teaching the avoidance of dangerous contact; (b) by instructing the diseased how to avoid infecting others.

The committee further recommended that the name of the congress be The National Congress for the Prophylaxis of Venereal Diseases, under the Auspices of the American Medical Association.

The report of this committee was referred to the business committee of the association.

The secretary, Dr. G. H. Simmons, of Chicago, then read the report of the Committee on Scientific Research:

Early in the fall, this committee advertised in the pages of the *Journal of the American Medical Association*, and in other medical journals, that five grants of one hundred dollars each would be made

by the association to persons applying for the same, who could show that they possessed sufficient training and adequate opportunity to warrant the making of the grant. Applications had been received from a number of physicians, and from these applications the committee had selected as the most deserving, Dr. Newton Evans, of Battle Creek, Mich., and Dr. F. J. Otis, also of Battle Creek, for work on systemic infection with blastomycetes; Dr. G. F. Reudiger, of Rush Medical College, Chicago, for work on the virulent streptococcus; Dr. J. T. Moore, of Galveston, Tex., for a study on the period of latency of, and on relapses in, malarial fever; and Dr. H. E. Wetherell, of Philadelphia, for an experimental and clinical study of sweat secretion.

The report of this committee had been referred to the Board of Trustees, which had subsequently reported in favor of appropriating the money as indicated by the committee, when a report should be made and accepted by the association; the said report to be the property of the association. The report of this committee was adopted by the House of Delegates.

Dr. T. J. Happel, of Tennessee, chairman of the Board of Trustees, presented the annual report of the board. At the Denver meeting, the treasurer reported the total cash received from members of the association for the year as \$32,200. The receipts for 1902 from the same source were \$59,180, showing a gain of \$26,980. The total amount of cash in the treasurer's hands was \$17,092.85, which included a reserve, for building purposes, of \$3,000. The tables showed cash on hand, \$21,590, being a gain in cash of \$4,497, and a building on which the association had spent \$17,546.96, a gain of \$71,546, over the reserve funds. The total *Journal* business, including cash in hand, as shown by the report of the trustees for 1898, was \$47,140. This year the books of the *Journal* office showed in cash, \$130,021.30, which amount included \$9,000 less in requisitions; but not considering this, the face of the books showed a gain of \$82,891.23 in business over 1898, the gain being almost double the total business reported that year. The business for this year showed a net profit of \$40,140.

The board discussed the matter of national incorporation. The amendments to the articles of incorporation and the by-laws adopted at the Saratoga meeting, and ratified at the meeting in Chicago, in 1902, which had been questioned as not complying with certain requirements, were legal. The requirements above referred to—that these amendments should have been proposed in open meeting one year previous to being acted on and published—had no binding validity, because the American Medical Association was a corporation of the State of Illinois.

As to the propriety of so small a number constituting a quorum at an adjourned session, that was a matter which the association must decide for itself. There was nothing in the by-laws to prevent any number, even to the full membership of the association, attending the adjourned session if they so desired.

The board decided that it was not its duty to take steps toward securing the proposed national incorporation.

The report of the board was referred to the business committee, which recommended the adoption of the report of the board, feeling that no further action in the matter of national incorporation could now be taken.

The report of the business committee on the report of the Board of Trustees was adopted, with the exception of that part pertaining to national incorporation. A committee of five was appointed, to secure the advice of the best legal talent in the United States as to whether the association could or could not be incorporated under a national charter. The said committee was instructed to report, at the next annual meeting, to the House of Delegates.

Dr. E. Elliot Harris, of New York, presented the report of the Committee on the Establishment of a National Bureau of Medicines and Foods. The report was received and the committee continued.

Dr. Harris also presented the report of the Committee on Revision of the Code of Ethics. At the conclusion of the report, he proposed a resolution to the effect that the special committee on revision of the code of medical ethics unanimously recommended that its report be referred to an enlarged committee, consisting of this special committee and one delegate from each State not already represented on the special committee, to be appointed by the President. He moved, further, that the report of the committee and its resolutions, with any amendments pertaining to this subject, be referred to the business committee for action.

Dr. Charles A. L. Reed, of Ohio, offered a substitute for the report of the committee, and also a new code of ethics.

The substitute report, together with the resolutions offered and the report of the special committee, was referred to the business committee.

Dr. L. S. McMurtry, of Kentucky, presented a report of the Committee on an Association Medal, and asked that the committee be empowered to arrange specifications and details, so as to be able at the next meeting to present material that would be worthy of the award of the medal. This power was granted to the committee.

The Committee on the Senn Medal reported that none of the papers submitted had met the requirements for the award; consequently the medal was not awarded to any competitor.

Dr. Henry D. Holten, of Vermont, presented the report of the Committee on the Rush Monument Fund. The committee asked that a sum, not exceeding \$500, be placed to its credit, wherewith to defray the expenses incidental to the unveiling of the monument. The report showed that the committee had already collected \$15,036.35.

The report was accepted and referred to the Board of Trustees, with the recommendation that the money be appropriated as asked for.

WEDNESDAY, MAY 6TH.

At the meeting of the House of Delegates held on Wednesday morning, May 6th, Dr. Arthur B. Bevan, of Illinois, presented the report of the committee on education. Among other things, the committee stated in its report that the first step in advancing medical education should be the adoption of an educational requirement of membership, name-

ly, the fixing of a minimum, both as to preliminary education and as to medical education. This, in the opinion of the committee, should be:

First, As a preliminary requirement, a high school education, *i. e.*, sufficient to enable the student to pass the examinations required for entrance at the standard universities.

Second, A four year medical course of at least seven months in each year. This requirement should become effective within five years, and should apply to graduates of 1908 and subsequently, sufficient notice being thus given to all medical schools of the country, to enable them to change their curricula so as to meet these requirements.

The committee further suggests that it be the duty of the committee on education (1) to secure the adoption of the education requirements determined upon by the American Medical Association, by each State medical society, and to assist the State medical societies in securing the adoption of the same. (2) To see that all medical schools are thoroughly informed of the educational requirements of the State, and to urge upon such schools as do not demand such requirements, the necessity of doing so. (3) To inform themselves as to the requirements and character of work done by each medical school. (4) To inform themselves as to the laws governing the practice of medicine in each State, and as to the manner in which these laws are being enforced. (5) To inform the State examining boards and licensing bureaus of the educational requirements of the American Medical Association, and to urge those boards whose requirements are not equal to those of the association, to adopt the higher standard. (6) To inform themselves upon all matters pertaining to medical education. (8) To make a full report on their work to the House of Delegates at each annual meeting.

This report was referred to the business committee, which recommended its adoption, and that it be referred to the Board of Trustees with the endorsement of the House of Delegates.

The report of the provisional Committee on the Establishment of a National Bureau of Medicine and Foods was recommitted to the original committee for further consideration.

The Manila Medical Society was accorded representation in the association on the same basis as a State or Territorial society, provided that its organization be extended to include the Island of Luzon, and such other portions of the Philippines as may organize local medical societies.

The business committee recommended the appointment of a committee of three from the House of Delegates to cooperate with other bodies in the placing of a suitable memorial in Washington commemorative of the scientific attainments of the late Major Walter Reed.

Several amendments to the constitution and by-laws, which were altered last year, were adopted.

Dr. W. H. Welch, of Baltimore, offered resolutions pointing out the importance of the President of the United States appointing as a member of the Isthmian canal commission a medical man possessing fitting qualifications for this duty. He said that the association was convinced that the mere employment of a sanitary expert by the commission would not be likely to secure the desired results. The

resolutions were referred to the business committee, and were subsequently adopted by the House of Delegates. The secretary was instructed to transmit a copy of these resolutions to the President of the United States.

The afternoon session of the House of Delegates opened with the report of Dr. J. M. McCormack, chairman on the committee on reorganization, which outlined the plan of State and county reorganization and gave the results of the work thus far accomplished. These had been most satisfactory, both as regards the increase in numbers, and the improvement in the tone of the association. The report of the committee was adopted and a special vote of thank to the chairman was passed.

Dr. W. H. Sanders, of Alabama, offered the following resolutions, which were referred to the Committee on Public Health:

Whereas, the protection of the people from disease is the greatest aim of all true physicians; therefore, be it *Resolved*, by the American Medical Association,

1. That to formulate a complete, coherent, and constitutional public health system for this country, be declared one of the most important achievements to which this body can devote itself.

2. That immediate steps be taken to construct such a system, and to submit it for adoption by the people of the States and of the nation.

The Committee on National Legislation, in its report, dealt with the antivivisection bill. The report was referred to the business committee and reported that to the House of Delegates, with the recommendation that it be adopted. It was adopted.

Dr. H. N. Moyer, of Illinois, offered the following resolution on behalf of the business committee:

Resolved, that the American Medical Association approve the action of its committee in defeating the antivivisection bill, recently pending before Congress, and that Congress be strongly urged to give no further consideration to legislation of that character in the future.

The resolution was unanimously adopted.

The board of trustees appropriated \$500 to defray the necessary expenses of the Committee on Organization.

THURSDAY, MAY 7TH.

In the House of Delegates at the morning session, the Board of Trustees appropriated \$500 for the scientific exhibit. The business committee considered carefully the report of the Committee on the Prophylaxis of Venereal Diseases, and the proposal to hold a congress during the Louisiana Purchase Exposition, and reported favorably upon the report of that committee. This report was adopted by the House of Delegates. The Board of Trustees also appropriated \$500 for the use of the Committee on Scientific Research. It also further reported that Dr. J. N. MacCormack, of Kentucky, had been continued as organizer of the association for the next twelve months on terms satisfactory to himself and the Board of Trustees. In regard to the Rush Monument, the board granted the allowance of \$500 asked for to defray the expenses of unveiling.

Dr. Elliot Harris, of New York, presented the report of the enlarged Committee on the Revised Code of Ethics, consisting of the special committee and of one delegate from each State. It adopted unanimously the reports entitled *The Principles of Medical Ethics of the American Medical Association*, and recommended the same to the House of Delegates for adoption.

The code of ethics as adopted is not radically different from that already enforced, save for the introductory paragraph, which, instead of being mandatory as heretofore, reads thus: "The American Medical Association promulgates as a suggestive and advisory document the following:" The word "code" is eliminated from the title, and three sections of the proposed *Principles of a Set of Medical Ethics*, as proposed by Dr. C. A. L. Reed, of Cincinnati, were substituted for similar sections in the code as originally submitted. In submitting the paper with the title of *The Principles of Medical Ethics*, which is to take the place of the code, the committee offered the following explanation:

Your committee has given extended and careful thought to the proposed revision of the code of medical ethics referred to it for consideration. As you will note, on the caption of the report the word "code" has been eliminated, and the expression, "The Principles of Medical Ethics of the American Medical Association" adopted as adequately descriptive. In reference to this change, it is proper to say that such action on its part is based on the idea that the American Medical Association may be conceived to occupy some such relation to the constituent State associations as the United States, through its Constitution, holds to the several States. The committee, for this reason, regards it as wiser to formulate the principles of medical ethics without definite reference to code or penalties, thus leaving the respective States, etc., to form such code and establish such penalties as they may regard to be fitting and proper for regulating the professional conduct of their members; provided, of course, that in so doing there be no infringement of the established ethical principles of the association. The committee regards as wise, and well calculated to facilitate the business of the present organization and to promote its harmony, this course which leaves to the State associations large discretionary powers concerning membership and other admittedly State affairs. Your committee has retained, to a large extent, the phraseology of the existing code, while aiming at condensation of expression and a better understanding of some of its statements.

The report of the committee has been reached unanimously, without discussion or distrust on the part of its members, each aiming to formulate a result based on principle alone, and without regard to any past or present disagreements or misunderstandings whatsoever. Such being the case, the committee invites your candid and unprejudiced attention and action to the results of its labor, feeling that at least some good has been accomplished.

Dr. Reed seconded the motion for adoption, which was carried without a dissentient vote.

The by-law pertaining to the election of associate members was amended so as to allow of the election of members of the dental and pharmaceutical professions to full membership.

The Committee on Transportation recommended that the next place of meeting be Atlantic City, N. J. This recommendation was concurred in by the House of Delegates.

Dr. Edwin Walter, of Indiana, president of the Mississippi Valley Medical Association, said that at the last meeting of that association a resolution had been unanimously passed declaring that it was desirable that it should become a distinct branch of the American Medical Association. He asked, therefore, that the matter be referred to the Committee on Organization. Dr. MacCormack, of Kentucky, moved that the matter be referred to the Committee on Organization and that authority be given to the committee to consider the question of the division of this country into branch associations in accordance with the plan laid down in the by-laws, and that the committee be instructed to report on such a plan at the next annual meeting of the association.

Various minor amendments to the constitution and by-laws were proposed, and will lie over for a year for final action.

Thursday's session of the House of Delegates then closed.

THE FINAL SESSION

was held on Friday morning, May 8th, the following officers being elected:

President, Dr. J. H. Musser, of Philadelphia; vice-presidents, Dr. G. C. Savage, of Nashville, Dr. Isadore H. Dyer, of New Orleans, Dr. C. F. Hall, of Missouri, and Dr. George F. Jenkins, of Iowa; trustees, Dr. W. H. Welch, of Baltimore, Dr. Miles F. Porter, of Fort Wayne, and Dr. M. L. Harris, of Chicago. The treasurer, Dr. Henry P. Newman, and the secretary, Dr. G. H. Simmons, both of Chicago, were reelected. Dr. W. J. Mayo, of Rochester, Minn., was appointed orator in surgery; Dr. George S. Dock, of Michigan, orator in medicine; and Dr. H. M. Biggs, of New York, orator in State medicine.

Atlantic City, N. J., was chosen as the next place of meeting.

The final general session was purely formal, the absence of the President-elect preventing his installation. On vote, the installation was consequently postponed to the first session of the next meeting, at Atlantic City, Dr. Billings holding over until that time.

THE SECTIONS.

The sections began work at 2 p. m. on Tuesday, May 5th. Subsequently each section held two meetings daily in the morning and afternoon respectively.

THE PRACTICE OF MEDICINE.

This section met under the chairmanship of Dr. W. S. Thayer, of Baltimore. The officers elected for the forthcoming year are Dr. Alexander Lambert, of New York, chairman; and Dr. J. S. Miller, of Chicago, secretary.

SURGERY AND ANATOMY.

This section met in the Y. M. C. A. auditorium, Dr. James E. Moore, of Minneapolis, in the chair.

The following officers were elected: Chairman, Dr. Charles A. Powers, of Denver; secretary, Dr. E. Wyliss Andrews, of Chicago; member of the House of Delegates, Dr. William J. Mayo, of Rochester, Minn.



DR. VICTOR C. VAUGHAN
of Ann Arbor
Chairman of the Section in Pathology and Physiology.



DR. SOLOMON SOLIS COHEN
of Philadelphia
Chairman of the Section in Materia Medica, Pharmacy and Therapeutics.



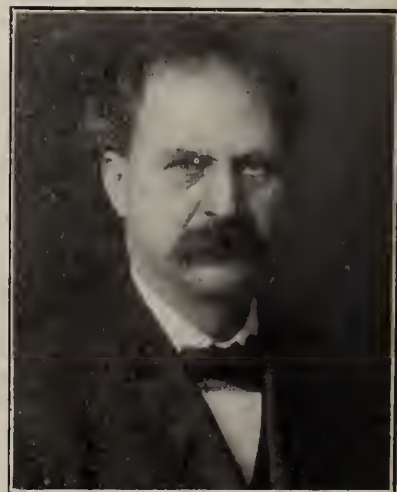
DR. JOHN A. FORDYCE
of New York
Chairman of the Section in Cutaneous Medicine and Surgery.



DR. JAMES E. MOORE
of Minneapolis
Chairman of Section in Surgery and Anatomy.



DR. GEORGE L. RICHARDS
of Fall River
Chairman of the Section in Laryngology and Otology.



DR. JOHN C. COOK
of Chicago
Chairman of Section in Diseases of Children.



DR. A. PALMER DUDLEY
of New York
Chairman of Section in Obstetrics and Diseases of Women.



DR. H. M. BRACKEN
of Minneapolis
Chairman of Section in Hygiene and Sanitary Science.



DR. M. L. RHEIN
of New York
Chairman of Section in Stomatology.

OBSTETRICS AND DISEASES OF WOMEN.

This section met in the Touro Synagogue, Dr. A. Palmer Dudley, of Chicago, in the chair. The officers elected in this section for the ensuing year, were, Dr. L. H. Dunning, of Indianapolis, chairman, and Dr. C. L. Bonifield, of Cincinnati, secretary (re-elected). Member of the House of Delegates, Dr. W. P. Manton, of Chicago.

PATHOLOGY AND PHYSIOLOGY.

This section met in Washington Artillery Hall, Dr. Victor C. Vaughan, of Ann Arbor, Mich., in the chair.

Officers were elected as follows: Dr. Joseph McFarland, of Philadelphia, chairman.

DISEASES OF CHILDREN.

This section met in the Y. M. C. A. Building, Dr. John C. Cook, of Chicago, in the chair.

The Chairman's Address.—Dr. Cook said that this section could dispel the idea that doctors were a national detriment, because they preserved the weak and thereby weakened the nation. They not merely preserved the weak but strengthened them. He then considered the child anatomically and physiologically, adducing from these sciences arguments in refutation of the common idea that a child was simply a miniature man, and *vice versa*. The variations in the proportion of water from foetal to adult life, of the relative proportions of mineral and animal matter in the respective osseous systems, the growth and development of cartilage, the alterations in the proportional relation of the heart and lungs to the body; the difference of the cell elements of the blood, of the fibres of the nervous system, etc., all pointed to the fallacy of that common opinion. He then considered the relations of parent control and State control of children, and the legislation in aid of the protection of child life and health promulgated by various States. He reminded them that a hundred years ago, Sir Robert Peel first stirred England to a realization of the disastrous effect of child labor on the nation. The reform in this matter induced by legislation and public education in that country had been followed in turn by Germany, France, Austria, and Russia, until now "Free America" owned and controlled the market in child slavery. Such a condition could not eventuate less disastrously here than elsewhere, if persisted in, and he urged this representative association, as eminently fitted for the task, to take upon itself the duty of elevating public sentiment in the matter and guiding sentimental legislation. The State could better afford to support and educate the child from seven to twenty years of age, than to support the paupers and discipline the criminals from twenty to fifty. It was not, however, against toil that he was inveighing—far from it—but against the kind of toil and the environments prevailing in factories, the unhygienic surroundings, etc., as being injurious to children during the period of development. The

association could aid the State in this matter by pointing out the sanitary surroundings of factories where children were employed, by insisting on at least two hundred and fifty cubic feet of air space, proper ventilation, a sufficiency of pure drinking water and of sunshine, toilet facilities for both sexes, etc. He concluded by recommending that each State should cause to be appointed a commission consisting of five members, at least two of whom should be physicians, to have jurisdiction over all education and labor questions; that the members of the commission be appointed by the supreme judges of the State; and that the commission should nominate or appoint inspectors, so that the question of child labor might be forever removed from the field of petty politics and vicious contract labor.

The following officers were elected: Chairman, Dr. Charles A. Kerley, of New York; secretary, Dr. C. E. Wahrer, of Fort Madison, Iowa; member of the House of Delegates, Dr. T. E. Tuley, of Louisville.

HYGIENE AND SANITARY SCIENCE.

This section met in the Carondelet Street Methodist Episcopal Church, Dr. H. M. Bracken, of Minneapolis, in the chair.

The following officers were elected: Chairman, Dr. D. T. Swarts, of Providence; secretary, Dr. John F. Fulton, of Baltimore; member of the House of Delegates, Dr. H. M. Bracken, of Minneapolis.

OPHTHALMOLOGY.

This section met at the College of Pharmacy, Dr. John E. Weeks, of New York, in the chair.

MATERIA MEDICA, PHARMACY, AND THERAPEUTICS.

This section met in the Carondelet Street Methodist Episcopal Church, Dr. Solomon Solis Cohen, of Philadelphia, in the chair.

Address of the Chairman.—Dr. Solomon Solis Cohen described therapeutics as the Cinderella of the medical household, long scorned by her haughty sisters Diagnosis and Pathology, but soon to be restored to her rightful place as the bride of Prince Humanity. He went deeply into the processes of life, and emphatically declared that there was a life-force, correlated with, but distinct from, heat, light, electricity, etc., just as these were correlated with, but differed from one another. Loeb's discoveries modified our conceptions of the physical and chemical processes of life, but did not affect the general principle of the specificity of life-force. Life consisted in the autogenous tendency to maintain vital activity against the antagonistic action of the environment, by inhibition or modification of the ordinary chemical reactions and the substitution of vital defensive reactions. The function of therapeutics was to preserve and restore health, to prevent and remedy disease—both life processes. Hence recovery was not something brought about by drugs or other agents, but a vital process due to the essential power of living matter. Unusual vital

phenomena should not always be interfered with. The therapist must know whether febrile heat was tending to the prolongation of curtailment of life in a given case before deciding to attempt its reduction. The effects that would follow its reduction, and those effects, desirable or otherwise, consequent on the various measures employed, must also be known. Besides the various physico-chemical agents, we had also suggestion—physiological therapy. Our choice must be guided by rational theory, tempered by wise empiricism, and adapted to all the circumstances of the given case. The following principles must always be borne in mind: (1) Among the phenomena exhibited by a sick person some were morbid—tending to the impairment and destruction of life; others salutary, tending to the preservation and perfection of life. These must be distinguished and aided or opposed respectively. (2) In some cases this defensive reaction was sufficient to restore health promptly, and the function of the therapist was merely to watch the progress of the case, and guard against failures or unexpected dangers. (3) In some cases it was possible for the therapist to hasten the restoration of health by judicious assistance of the defensive reaction, but in others interference, having no definite basis of action, was more likely to harm than good. (4) In some cases defensive reaction was insufficient in degree or tardy in development, or was accompanied with, or induced, secondary harmful disturbances. The physician was then called upon to stimulate or supplement the defense—as, for example, by the use of antitoxine in diphtheria—and to guard against harmful secondary disturbances, as by the use of the cold bath in certain cases of typhoid. (5) In other cases the defensive reaction was very slight or incomplete, as in cholera, and then the physician was called on for active intervention, but always on the lines pointed out by the incomplete reaction, or by analogy in similar cases, or by some peculiar and overwhelming danger; for example, hypodermoclysis or intravenous infusion to supply fluids, and external applications to supply heat. Neither morbid agents nor remedial measures added anything to the powers possessed by the body. They might alter or evoke the natural actions and reactions—the vital processes of disease and recovery, but it was the innate and peculiar energy of the living body that determined the nature of disease processes and of recovery, and our therapeutic measures must be guided by the course of the natural vital defensive processes, seeking to evoke, to stimulate, to assist, to supplement; never to oppose, or to risk doing harm by unwise interference.

The following officers were elected: Dr. Oliver T. Osborne, of New Haven, chairman; the secretary was re-elected; member of the house of delegates, Dr. W. J. Robinson, of New York.

NERVOUS AND MENTAL DISEASES.

This section met in the Touro Synagogue, Dr. F. W. Longdon, of Cincinnati, in the chair.

CUTANEOUS MEDICINE AND SURGERY.

This section met in the Y. M. C. A. building, Dr. John A. Fordyce, of New York, in the chair.

The following officers were elected: Chairman, Dr. H. G. Anthony, of Chicago; secretary, Dr. R. R. Campbell, of Chicago; member of the House of Delegates, Dr. J. F. Schonberg, of Philadelphia.

LARYNGOLOGY AND OTOTOLOGY.

This section met at the College of Pharmacy, Dr. George L. Richards, of Fall River, Mass., in the chair.

STOMATOLOGY.

This section met in the Touro Synagogue, Dr. M. L. Rhein, of New York, in the chair.

The Chairman's Address.—Dr. M. L. Rhein, of New York, laid stress on the constant loss of teeth consequent on various pathological disturbances of the periodontal tissues. The cleansing and polishing of every portion of the exposed tooth surface at regular intervals, so as to preserve the tone and health of the contiguous capillary circulation, would indefinitely preserve the life and stability of human teeth otherwise destined to perish. Yet the public got but little benefit from this well known fact. It was not uncommon to find teeth that were covered with the secretions of years, and becoming loose, with inflammation of the surrounding pericementum and loss of soft tissues from superficial necrosis, although the patients informed one that their mouths had had the constant care of Dr. X., who had cleaned their teeth every year for years. This was not due to lack of conscientiousness on the part of practitioners, but to the fact that such work was more than sufficient to take up all the time of a man with an average practice, while the necessity of performing the operations immediately necessary for the repair of existing lesions was of paramount importance. The question of expediency was raised by the difficulty of receiving commensurate pay for the hours of time required for faithfully carrying out the treatment by prophylaxis. The speaker referred to the claims made by Dr. Smith, of Philadelphia, and denied that the busy practitioner could give up his valuable time for this tedious, monotonous, and irksome labor, however important it might be for the salvation of the teeth of the human race. The employment of an assistant had, in his experience, failed to solve the problem, while the employment of a graduate to make a specialty of this work failed because of the impossibility of retaining for any length of time one possessed of ordinary ambition and talent. Patients objected to the inevitable constant changes, and could not fail to contrast the work of the new assistant, who had to be freshly taught, with the final work of the last assistant, which had become almost faultless from two years of constant practice. Better results, he thought, could be obtained if female assistants, not graduates, could be specially trained and employed for this work. This plan had, however, in some States, met with threats of prosecution for infraction of the dental laws, by the examining boards; consequently it had not been adopted, to the great loss of the general public. But, he asked, were such operations as cleansing and polish-

ing the teeth, massaging the gums, and the application of remedial agents by non-graduate assistants, under specific directions of the attending stomatologists, an infraction of the dental law? Surely, no more so than the administration of hypodermics, the passage of catheters, lavage and enemata, the dressing of wounds, and the numerous other services, performed under medical direction by trained nurses, were infractions of the medical law. The introduction of the trained dental nurse would easily solve the problem. It would be easy to add to the training schools for nurses a department for dental nurses. The speaker then outlined the curriculum such dental nurses should undergo, and the need of dental legislation to limit their sphere of action. This solution of the question the author said should receive the endorsement of the section for three good reasons: 1. It would tend materially to the public good. 2. It would open to women a new vocation second to none in desirability. 3. It

for higher educational qualifications, and, in 1895, was among the first to apply to the legislature of Louisiana for the enactment of a law establishing the present Board of Medical Examiners. The efforts of both the various associations and the medical press had aroused a spirit of reform throughout the country regarding the standard of medical education. Even with this point accomplished, however, there still remained the immense and important task of raising the standard of preliminary requirements for entry on the study of medicine.

Dr. A. F. Barrow, of St. Francisville, welcomed the confederation on behalf of the Louisiana State Board of Medical Examiners; after which the Hon. Paul Capdevielle, mayor of the city of New Orleans, addressed the members, apologizing for his tardiness in appearing to extend to the delegates a hearty welcome to the city.

Dr. Henry Beates, Jr., President of the Pennsylvania Board of Medical Examiners, and vice-presi-



DR. JOHN E. WEEKS
of New York
Chairman of Section on Ophthalmology.



DR. H. L. E. JOHNSON
of Washington
Chairman of the Committee on Medical Legislation.



DR. F. W. LANGDON
of Cincinnati
Chairman of Section in Nervous and Mental Diseases.

would materially aid the stomatologist in the quality of his results.

The following officers were elected: Dr. George F. Eames, of Boston, chairman; Dr. E. S. Talbot, of Chicago, secretary.

Coincident Meetings.

THE NATIONAL CONFEDERATION OF STATE MEDICAL EXAMINING AND LICENSING BOARDS.

The thirteenth annual meeting of the confederation was opened with prayer by the Rev. Daniel P. Lawton, S. J. Dr. Charles A. Chassignac welcomed the members on behalf of the medical profession of the city, and Dr. Rudolph Matas on behalf of the Medical Department of Tulane University. Dr. Matas said that the State licensing boards had no firmer or stauncher friends than were the reputable medical colleges. The faculty of Tulane University had always been active in supporting the demands

of the confederation acknowledged the addresses of welcome.

On motion of Dr. William Warren Potter, of Buffalo, the thanks of the confederation were extended to the several speakers for their addresses of welcome, and the executive council was instructed to have the address of Dr. Matas printed.

The annual report of the secretary-treasurer, Dr. A. Walter Suiter, of New York, was submitted orally. The report showed that at the last meeting the State boards of Virginia, Texas, Missouri, and Florida, had become members, while since that time, the boards of Utah, North Dakota, and Wyoming, had also entered into the confederation.

THE ADDRESS OF THE PRESIDENT.

The president, Dr. N. R. Coleman, of Columbus, Ohio, began his address by stating his belief that but a brief period would elapse before the medical registration laws would be so adjusted as fully to meet the requirements for which they were intended.

He referred to the great and grave discrepancies which existed between the curricula of the various medical colleges, and which were a source of great annoyance to the colleges, wrought great hardship on the medical students, and to a great degree made uniformity of examining boards an impossibility. Uniformity in the course of study had now come to be an urgent necessity. He pointed out in detail various changes which had been suggested and which seemed desirable. The general position of the teachers on medical colleges was criticized, as in most instances the teacher was so poorly paid as to render it necessary for him to subordinate for pecuniary reasons his teaching to his practice, to the detriment of the former. One difficulty in the way of the change suggested was the excessive number of colleges in existence. In 1877, there were sixty-five medical colleges in the United States; in twenty-six years they had increased 140 per cent. The details of the deficiencies in medical education, as shown in the results of the examination of medical examining boards, were then set forth, a number of questions being shown, together with the answers given by some graduates in medicine, which displayed the most appalling ignorance. The length of the medical course leading to the doctorate was next considered, and it was stated that, while most of the colleges ostensibly required a four years' course of study, it would be found, on analysis, that in many colleges only eighteen months of actual study were necessary. The President suggested that all the medical colleges hold their graduation at about the same period of the year, so that the boards could hold their meetings for examination at a period conveniently relative to that of graduation.

Dr. W. T. Morrow, of Kansas City, Mo., made an address on the Influence of the Medical Examining Boards in the Elevation of the Curriculum of the Medical Schools. This was debated at some length. The morning session was then adjourned.

THE SECOND SESSION

took place at 3 o'clock p. m. The President asked whether any one present could read Chinese, as there was present a Chinese doctor who wished to present his credentials. There being no one so qualified except the interpreter accompanying the Chinese gentleman himself, the regular business was proceeded with, and the report of the Committee on Curricula was submitted by the chairman of the committee, Dr. George W. Webster, of Chicago.

The report was a voluminous one, occupying some eighty pages of manuscript, but was submitted in abstract and aroused the greatest interest. Dr. Webster had endeavored to collect complete data as to the real facts regarding the curricula of the various colleges. Heretofore, all the statements made on the subject had been vague and general in character, such as that the college course consisted of four years of study, occupying eight months each. Dr. Webster had collated the details, as to the hours spent in such study and in clinical work in each of forty-three leading colleges. Two large charts were shown, giving, both in figures and graphically, the relative number of hours of clinical instruction and of total hours of instruction in each of the forty-three colleges. The figures are given in the accompanying tables.

Name of School.	Hours of clerical work.	Total hours of medical course.
University of Minn.	2,258	5,275
Northwestern University	2,064	5,014
Cleveland Coll. of P. and S.	1,816	4,734
Louisville Nat. Med. Coll.	1,638	6,818
Johns Hopkins University	1,604	4,532
Western Penna. University	1,440	4,964
Medico-Chirurgical Coll., Philadelphia	1,360	5,602
Cooper Medical College, San Francisco	1,205	4,628
Western Reserve University	1,200	5,080
Colorado School of Med.	1,094	4,784
Jefferson Medical College, Philadelphia	1,072	4,839
Pulte Medical College	1,062	3,626
Harvard University	1,043	3,824
University of Texas	1,022	4,318
Hamline University	1,009	4,273
Cornell University	902	4,331
College of P. and S., San Francisco	966	4,631
College of P. and S., Chicago	960	4,005
Wisconsin College of P. and S.	926	3,782
Georgetown University	916	3,659
Detroit Coll. of Med. and Surg.	896	4,048
University of Michigan	864	4,786
Am. Med. Missionary Coll.	825	4,660
University and Bell. Hospital Med. Coll.	788	5,512
University of Iowa	786	4,156
University of Buffalo	758	3,782
Columbian University	750	3,106
University of California	666	4,294
Denver and Gross Med. Coll.	644	3,154
Atlanta Coll. of P. and S.	598	4,424
Fort Worth University	572	2,892
Marion-Sims Med. Coll.	560	3,656
Vanderbilt University	546	3,926
University of Pennsylvania	538	2,731
University of Louisville	534	3,724
University Medical College of Kansas	532	3,754
Miami Medical College	524	3,022
University College of Medicine, Va.	510	3,243
St. Louis College of P. and S.	447	4,549
Central Med. Coll. of St. Joseph	338	2,664
University of Virginia	320	2,731
Dartmouth Medical College	230	3,182
Keokuk Medical College(Can't determine)		2,849

Dr. Webster submitted the following propositions for adoption:

1. The standard curriculum, which is to be adopted as a minimum requirement for the degree of M. D., shall consist of the following:
- a. The course shall consist of four terms in four separate calendar years.
- b. Each term shall consist of thirty weeks of work, exclusive of holidays, and of at least thirty hours in each week, or 900 hours of actual work.
- c. The entire course of four years shall consist of not less than 3,600 hours of actual work.
- d. This should be a standard of *required work*. Any *elective work* should be *in addition* to the above.
- e. The average time devoted to each study in the curriculum should be approximately that in column 2.
- f. Clinical work should constitute at least one-fourth of the work of the entire course.

Average Course.		
Average course.	Average	Proposed Standard.
Average total hours in 43 colleges in 4-year course	4,095	3,600
Average total hours in 43 colleges in:		
First year	973	900
Second year	1,039	900
Third year	1,040	900
Fourth year	1,090	900

Average hours in 43 colleges devoted to the following subjects:

Chemistry	375	340
Anatomy	549	500
Histology and embryology	219	200
Physiology	276	250
Pharmacology and therapeutics	118	110
Physical diagnosis	61	55
Surgery	596	540
Bacteriology	131	115
Ætiology and hygiene	33	30
Pathology	295	260
Medicine	544	500
Obstetrics	177	150
Dermatology and syphilology	64	50
Laryngology and rhinology	67	55
Pædiatrics	72	60
Ophthalmology and otology	106	95
Gynæcology	145	130
Neurology	82	75
Mental diseases and jurisprudence	27	25

The report was warmly commended by Dr. William A. Spurgeon, president of the Indiana board; Dr. Murray, of the Florida board; Dr. M. M. Smith, of the Texas board; Dr. E. S. Wright, of the Utah board; Dr. S. D. Van Meter, of the Colorado board, and Dr. Henry Beates, Jr., of the Pennsylvania board. The recommendations were adopted and the committee extended a vote of thanks.

Dr. Henry Beates, Jr., of Philadelphia, presented his report as chairman of the Committee on Definition of the Practice of Medicine. After discussing the matter in a general way, Dr. Beates submitted the following definitions: "The practice of medicine is the treatment of diseases, deformities, or injuries," and "the practitioner of medicine is one who directly or indirectly assumes the responsibilities of offering or granting service for the treatment of diseases, deformities or injuries." After considerable discussion and some criticisms on the part of Dr. E. B. Harvey, of Massachusetts, who preferred that the definition be left out of the law, the definition was adopted as presented.

The secretary, Dr. Suiter, of New York, offered a resolution to the effect that the national confederation communicate to the Legislature of the State of Florida its approval of the bill now before that body creating a mixed board for the entire State. The resolution was adopted and the president directed to communicate it to both houses of the legislature.

THIRD SESSION.

The confederation met for its third and final session on Monday evening, at 8.30, and the first business taken up was the presentation of a paper by Dr. F. A. Larue, giving the results of the operation of the medical law of Louisiana. After sketching the history of medical legislation in the State, he gave a tabulated report of the number of applicants for examination, and of the proportion of failures among the applicants for each college. On the whole, there had been 402 applications for examination, of which number 63 applicants, or 16 per cent., had failed. In discussing the paper, Dr. Webster, of Illinois, said that the board of his State ordinarily examined some 200 men at each examination, holding usually six examinations annually. He mentioned this as a means of demonstrating the impracticability of introducing clinical methods into the examination.

Dr. Larue asked the members to favor him with their advice in a case now before him for settlement. In this case, the applicant, a Chinaman, presented what he asserted to be a diploma from the Ung Wah Ye Yaw, or Eastern Chinese Medical College of Canton province. The applicant, Wong Po Sai, said that he had been in the United States for twenty-nine years, and had in his possession a certificate from the Harbor Department of Hong Kong as a surgeon for Chinese emigrant ships.

Dr. S. B. McGavran, of Cadiz, Ohio, read a paper on What the Medical Practice Act has Accomplished in Ohio. In discussing the paper, Dr. E. B. Harvey, of Boston, said that the State of Ohio had, in his opinion, the best medical law of any of the States.

Dr. Henry Beates, Jr., in commenting on the paper, stated that Pennsylvania was not yet on the high plane of Ohio, in explanation of which fact he stated that, during the last session of the legislature of the State of Pennsylvania, a bill had passed the lower house by an overwhelming majority, and had been sent to the senate, when Dr. Hobart Amory Hare, and Dr. L. Webster Fox, and a delegation from the Jefferson Medical College, and Dr. John V. Shoemaker, of the Medico-Chirurgical College, aided by the authorities of the West Penn Medical College, of Pittsburgh, and the Hahnemann Medical College of Philadelphia, had brought influence to bear that had resulted in the bill being "hung up" in the senate committee. He congratulated Ohio on having no physicians who, for whatever reasons, would oppose advances in medical legislation.

The Relation of Examining Boards to the Medical Profession was the title of a paper by Dr. E. L. McGehee, of New Orleans, who devoted himself to urging activity in the effort to bring about reciprocity of licensure between the several examining boards. Dr. J. C. Webster, of Memphis, submitted a set of resolutions advocating the establishment of reciprocity of license, which was discussed by several members with considerable vigor on both sides. The discussion was continued, even after a motion to table the resolution had been offered. It was pointed out that the whole matter had been gone over once before, and further consideration was postponed.

Dr. Henry Beates, Jr., of Philadelphia, moved that the annual dues be raised from the present amount of \$10 to \$25 per annum, but this motion was ruled out of order, as it was in the nature of an amendment to the constitution.

The election of officers resulted as follows: President, Dr. Henry Beates, Jr., of Philadelphia; first vice-president, Dr. A. Walter Suiter, of Herkimer, N. Y.; second vice-president, Dr. George W. Webster, of Chicago, Ill.; secretary-treasurer, Dr. F. A. Larue, of New Orleans; executive council, Dr. William S. Foster, of Pittsburgh; Dr. Joseph M. Matthews, of Louisville; Dr. William A. Spurgeon, of Muncie, Ind.; Dr. William Warren Potter, of Buffalo, and Dr. Augustus Korndoerfer, of Philadelphia. The Committee on Curricula was continued. After passing votes of thanks to the local committee and to the retiring president and secretary, the confederation adjourned.

THE ASSOCIATION OF MEDICAL COLLEGES.

This association held its meeting in Washington Artillery Hall, on Monday afternoon, May 4th, under the presidency of Dr. W. L. Rodman. In his address, Dr. Rodman said that the line of membership in the association should be drawn more strictly than heretofore, and that the preliminary requirements should be elevated in consonance with the views of the boards of examiners.

The majority report of the committee on requirements for membership was submitted by Dr. Parks Ritchie, of Chicago. It recommended that a standard equivalent to that of a diploma from a four year course in a high school, be established as the minimum requirement for entry upon the study of medicine; that twelve calendar months must elapse between the beginning of any course and the beginning of the preceding course; and that after July, 1905, each of the four years of the medical course should be separate and distinct from the courses of the arts and science faculties of a university.

Dr. W. H. Wathen, of Louisville, submitted a minority report, in which he compared American education methods with those of Europe, and pointed out the essential distinction between them, in that in European countries few pupils could be properly prepared for professional schools save through colleges and universities, while in America they could be well prepared in the *free* public schools; hence to adopt a universal requirement of a baccalaureate for admission to professional schools, would be unjust to the profession and the people. But in accepting a high school diploma for such admission, the association should *finally* expressly provide that the diploma of no high school obtainable in less time than that now demanded by the majority of good schools, viz., attendance for twelve years of not less than forty weeks each from the beginning of the primary to the completion of the secondary course, could be accepted. He also urged that no time credits should be allowed for work done, except in a recognized medical college, and the insistence on a discontinuance of a combined academic and professional course.

THE AMERICAN MEDICAL EDITORS' ASSOCIATION.

This association held two sessions on Monday, May 4th, and one on Tuesday, May 5th, at the St. Charles Hotel. The annual banquet was held at Antoine's, on Monday evening. Dr. C. E. de M. Sajous, of Philadelphia, was elected president; Dr. Charles Cassaignac, of New Orleans, and Dr. O. F. Bull, of St. Louis, vice-presidents; and Dr. Joseph Macdonald, of New York, secretary and treasurer. The executive committee was elected as follows: Dr. Winslow Anderson, of San Francisco; Dr. I. N. Love, of New York; Dr. Harold Moyer, of Chicago; Dr. W. A. Young, of Toronto; Dr. C. F. Taylor, of Philadelphia; Dr. Thomas Hawkins, of Denver; and Dr. Alexander Store, of St. Paul.

THE AMERICAN MEDICAL TEMPERANCE ASSOCIATION.

This association met on Wednesday and Thursday mornings, May 6th and 7th, at the Y. M. C. A. Hall. Dr. N. S. Davis, of Chicago, sent a paper reviewing the entire question of the State regulation of the use of alcohol and alcoholic drugs, and taking the position that the traffic in alcohol, being a matter of public health, should not be subject to the general vote, but should be regulated wholly by experts in sanitary science and by the courts.

Dr. Henry O. Marcy, of Boston, presented a paper on table wines and their use from a medical standpoint.

The officers of the preceding year were reelected.

THE AMERICAN PROCTOLOGIC SOCIETY.

A two days' session of this society was held and a number of valuable papers were presented.

The following officers were elected: President, Dr. William M. Beach, of Pittsburgh; vice-president, Dr. Leon Straus, of St. Louis; secretary-treasurer, Dr. A. B. Cook, of Nashville; executive council, Dr. Samuel T. Earl, of Baltimore; Dr. John T. Jelks, of Memphis, and Dr. George B. Evans, of Dayton.

Therapeutical Notes.

In Gout and Rheumatism.—The *Revue médicale du Canada* for March 25th quotes the following from the *Journal médical de Paris*:

- R Salicylic acid.....3 grammes (45 grains);
- Quinine.....2 grammes (30 grains);
- Podophyllin.....0.1 gramme (1½ grain);
- Extract of colchicum.....0.30 gramme (4½ grains);
- Extract of phytolacca.....1 gramme (15 grains);
- Extract of capsicum.....1.50 gramme (22½ grains).

M. Make into fifty pills. From six to ten pills may be taken daily in gout or painful rheumatism.

The Treatment of Endemic Diarrhœa.—Dr. R. Le Clerc (*Année médicale de Caen*, February; *Revue médicale de Normandie*, March 10th) has found the following treatment of service in the form of diarrhœa which is endemic in Cochin China:

1. R Naphthalin.....0.15 gramme (2¼ grains);
- Powdered sugar } of each 0.10 gramme (1½ grain);
- Quinine sulphate } of each 0.10 gramme (1½ grain);
- Morphine hydrochloride.....0.005 gramme (1/100 grain);
- Essence of bergamot.....q. s.
- M. For one cachet. Three to be taken daily.
2. A milk regimen.

Glycerin Suppositories.—*Progrès médical* for March 7th attributes the following to Crinon:

- R Glycerin..... } of each 2 grammes (30 grains);
- Lanoline..... } of each 2 grammes (30 grains);
- White wax..... } of each 1 gramme (15 grains).
- Cacao butter..... } of each 1 gramme (15 grains).
- M. For one suppository.

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NEW YORK, SATURDAY, MAY 9, 1903.

DR. BILLINGS'S ADDRESS.

The presidential address before the American Medical Association, by Dr. Frank Billings, of Chicago, which we present in this issue of the *Journal*, seems to us in a high degree edifying. True, it deals at some length with a condition of things as regards medical education that is rapidly vanishing, but, until that condition has been altogether superseded by some such plan as Dr. Billings outlines, we must keep on at the effort to hasten its complete disappearance, and in no other way are we so likely to succeed as in that of harping upon its ridiculous shortcomings. The proprietary medical school is doomed, but let us not relax in our endeavors till its death warrant has been executed.

There can be no doubt that Dr. Billings is quite correct in ascribing to the striking advances of the last few years in medicine—that is to say, to most promising results achieved in the prevention, alleviation, and cure of disease—the notable awakening of public interest in medical investigation, including the interest of richly endowed universities and that of wealthy and public-spirited individuals. A creditable number of those results were reached in this country by men who had studied medicine before, yet there was a break in the system that denied to medical students the facilities for properly preparing themselves to enter upon a course of investigation. All the more credit to them, but let us not handicap our successors with any such hard terms as those on which they had to prosecute their work.

Dr. Billings is warranted, too, in depicting the further improvement of medical education as among

the prime objects of the existence of the American Medical Association. From the time of its organization it has been recognized that such was the case, and probably the time will never come when it will no longer number that among its chief functions. The university medical schools, comparatively few in number, but with the best attainable equipment, must soon occupy the field exclusively. It goes without saying that they must be situated in cities so large as to give them at all times ample material for clinical instruction. We have already made gratifying progress in this direction. It is but a few years ago that not one of the medical schools in New York was really a part of a university; now every one of the three prominent schools is under university government and enjoying university resources.

THE THERAPEUTIC POSSIBILITIES OF ERGOT.

Of the introduction of new drugs there is no end. We must confess to a more kindly feeling for an extension of the sphere of action of old ones, the actual value of which, in some degree at least, is witnessed, too, by their retention in the general medical armamentarium for a long period of time. When such a one is taken up afresh, its sphere of action investigated, some at least of its claims sanctioned by the authority of time sustained, and the field for its useful employment widened, we confess that we experience far more satisfaction than animates us on the first introduction of new medicaments, which, with some few exceptions usually “go up like a rocket and come down like the stick.” Of course, we do not wish our words to be taken as in any way implying a deprecation of the search for new remedies; but we do wish that there was not quite so great a tendency to neglect the old, many of which would doubtless well repay some of the more scientific investigation which we are now enabled to give them, than was the case of old time, and which is bestowed in profusion on the more recent introductions.

In a paper read before the New York County Medical Association, on March 16th, by Dr. Alfred T. Livingston, of Jamestown, N. Y., he gave a comprehensive view of the wide, and to a great extent unsuspected field of therapeutical possibili-

ties which lurk in ergot of rye, a drug largely associated in the minds of many practitioners almost solely with its use (or abuse) in the conduct of obstetrical cases. It is now nearly thirty years since Dr. Livingston began his clinical investigations into the various possible therapeutic properties of ergot, and if his experience can be confirmed by others, he will undoubtedly have succeeded in promoting an almost obsolescent drug to a post of highest honor in the materia medica. Dr. Livingston's first experience with ergot, outside of the beaten track, was in the case of a man who had been retching violently and constantly for over four hours, and was exhausted from the effects. The frontal veins were greatly distended, the pulse was full and bounding, and there was much pain. The injection slowly of a syringe of a solution of ergot was followed by results of a character as remarkable as they were gratifying. By the time that the syringe was emptied the suffusion had vanished, retching had ceased, pain had disappeared, and the full and bounding pulse had become soft, though slightly more frequent. He soon fell asleep, and slept continuously for six hours. Since that time Dr. Livingston has followed up his researches into the clinical results of the use of ergot, and is now able to state that, in his experience, this drug can be used with advantage in a large number of morbid conditions. Among these he names insomnia, in which it produces a sleep more natural than that produced by any other drug; many cases of headache, iritis, opium poisoning, drug habits, acute alcoholism, asthma, hysteria, hysteroepilepsy, and catalepsy. Many cases of general paresis in the early stage are also said to have been relieved by it. In acute inflammations he gives it a prominent place, especially in meningitis, pneumonia, peritonitis, appendicitis, amygdalitis, erysipelas, erythema, and inflammation of the veins and arteries. In surgery, also, it has a place, particularly as a preventive or modifier of shock.

As to the mode of administration, he strongly advocates the hypodermic method, and uses a solution of Squibb's extract of ergot, of a strength of a drachm of the ergot dissolved in an ounce of water and containing chloroform as a preservation in the proportion of two minims to each drachm of solution. Twenty-five or thirty minims of this solution represent about three grains of the drug. The

water in which solution is effected should be sterilized by boiling before use, and for some reason which he cannot explain, he finds that solutions a few days old are less painful and more satisfactory than those freshly prepared. Large doses, according to the requirements of the case, have been given by him, the maximum having been the equivalent of thirty grains of the solid extract in the twenty-four hours. The injection should be made slowly. This fact, we may add, was pointed out by Dr. Perrotin, in 1882, according to the *London Medical Record* for July of that year. In spite of his large experience with the drug, Dr. Livingston has never had an abscess consequent on its use, or indeed any other evil sequela.

This reads almost like a fairy tale, but much of what Dr. Livingston claimed for the use of the drug was corroborated at the same meeting by Dr. Frederick Holme Wiggin. Moreover, some of these applications are not altogether new, though they have not attained any general publicity. In erysipelas the local application of ergotine was used so far back as 1881, and a communication thereon was published in the *British Medical Journal* for December 10th of that year. In 1892, the author of that communication treated successfully on the voyage home from the West Coast of Africa a case of blackwater fever of the most virulent type, the drug acting in a manner that was as startling as anything recorded by Dr. Livingston. Professor J. M. Da Costa recommended ergotine, about 1881, as the best remedy to control the night sweats of phthisis. It was also highly praised by Dr. J. Dewar, in 1882, in pertussis, and its value in that disease was confirmed by the abstractor of Dr. Dewar's article in the *London Medical Record*. These remarks are not made with any view to depreciating the credit that Dr. Livingston may be entitled to for his extended researches; on the contrary, they are adduced to support his plea for a thorough trial at the hands of the profession, of a drug that seems to be unusually richly endowed with therapeutic possibilities, greater, if his researches find confirmation, even only in part, than most of us were previously aware of. And the reasonableness of the claims made is suggested by the fact that most of the conditions in which it is said to have proved so preeminently useful are characterized by one central underlying condition, viz.,

vascular dilatation due to loss of tone. The facts that the middle coat of the arteries is composed of unstriated muscular fibres, and that ergot causes the contraction of unstriated muscular tissue, at once suggest a plausible explanation of its asserted wide reaching action.

WOMAN PHYSICIANS AND SCIENTIFIC RESEARCH.

It is always a source of gratification to us to mark the really admirable work done by many of our "professional sisters," and we note with pleasure that the prize of one thousand dollars, offered two years ago by the Association for the Promotion of Scientific Research by Women has been awarded to Dr. Florence R. Sabin, for her paper on the Origin of the Lymphatic System. Dr. Sabin, who is assistant in anatomy at the Johns Hopkins Medical School, is to be congratulated on having done credit to herself and to her school, as, indeed, was only to be expected from her previous record. Dr. Sabin held the woman's fellowship in anatomy at Johns Hopkins for 1901-02, and is the first woman to hold a teaching appointment in that school.

THE SANITATION OF SAN FRANCISCO.

In a recent issue we chronicled the fact that a mercantile concern had temporarily blocked the good work of sanitary reform now going on in San Francisco, by obtaining an injunction restraining the board of health from its work in causing the demolition of unsanitary structures. We are glad to learn that the injunction has been quashed, and the work of the board of health has been resumed. It is this obstructive spirit which, being practised on a large scale, has created for San Francisco so much trouble from which it is only now emerging.

TRACHEOTOMY AND THROAT-CUTTING.

It not infrequently happens that a patient makes a humorous remark about his case. An amusing instance is communicated to us by Dr. D. H. Lamb, of Owosso, Mich. He had been called in consultation by Dr. A. M. Hume to a case of laryngeal obstruction. Tracheotomy was performed, and when the patient had regained his breath he made known his desire to write something and wrote: "I have operated on many, but they all died." The patient was a butcher. He recovered.

News Items.

Society Meetings for the Coming Week:

MONDAY, May 11th.—New York Academy of Medicine (Section in General Surgery); New York Academy of Sciences (Section in Chemistry and Technology); New York Medico-Historical Society (private); New York Ophthalmological Society (private); Gynecological Society of Boston; Burlington, Vt., Medical and Surgical Club; Norwalk, Conn., Medical Society (private); Medical Association of the Greater City of New York; Society of Medical Jurisprudence.

TUESDAY, May 12th.—New York Academy of Medicine (Section in Genitourinary Surgery); New York Medical Union (private); New York Obstetrical Society (private); Buffalo Academy of Medicine (Section in Medicine); Kings County, N. Y., Medical Association; Rome, N. Y., Medical Society; Medical Society of the County of Rensselaer, N. Y. (annual meeting); Newark, N. J., Medical Association (private); Trenton, N. J., Medical Association; Clinical Society of the Elizabeth, N. J., General Hospital and Dispensary; Northwestern Medical Society of Philadelphia; Practitioners' Club, Richmond, Ky.; Richmond, Va., Academy of Medicine and Surgery.

WEDNESDAY, May 13th.—New York Pathological Society; New York Surgical Society; American Microscopical Society of the City of New York; Society of the Alumni of the City (Charity) Hospital; Society for Medical Progress, New York; Pittsfield, Mass., Medical Association (private); Philadelphia County Medical Society; Lenox Medical and Surgical Society (private).

THURSDAY, May 14th.—New York Academy of Medicine (Section in Pædiatrics); New York Academy of Medicine (Section in Otology); Society of Medical Jurisprudence and State Medicine, New York; Brooklyn Pathological Society; Medical Society of the County of Cayuga, N. Y. (annual meeting); South Boston, Mass., Medical Club (private); Pathological Society of Philadelphia; Church Hill Medical Society of Richmond, Va.

FRIDAY, May 15th.—New York Academy of Medicine (Section in Orthopædic Surgery); Clinical Society of the New York Post-graduate Medical School and Hospital; Baltimore Clinical Society; Chicago Gynecological Society; Manhattan Medical and Surgical Society (private).

Change of Address.—Dr. Berthold Flesch to 307 East Eighty-seventh Street, near Second Avenue, New York.

Dr. Edwin F. Hitchcock to 301 West One Hundred and Thirty-ninth Street, New York.

Dr. Dittrich, to 230 East Twenty-third Street, New York.

The Florida State Medical Association of Colored Physicians will hold its fourth annual session on Tuesday, May 19th, at St. Augustine, Fla.

A New Hospital in Cincinnati.—A new hospital is to be built in Cincinnati, the plans for which will follow very closely those of the beautiful new Hamburg hospital of which the Germans, and the people of Hamburg especially, are so justly proud.

Milwaukee Emergency Hospital Fees.—An ordinance is being prepared to enforce payment of fees in cases where patients are taken to the hospital from shops covered by employees' liability insurance. The fees would probably amount to \$2,000 a year.

Death of Paul du Chaillu.—Paul du Chaillu, the celebrated explorer and writer on Simians, was recently stricken with partial paralysis, and died on May 1st, at St. Petersburg.

Summary Measures to Protect Health.—Mayor Harrison, of Chicago, has ordered that all unsanitary buildings that cannot be repaired by their owners, shall be torn down, if condemned by the board of health.

Decrease in Population.—According to the report of Health Officer Koon, the birth rate of Grand Rapids, Mich., is by no means commensurate with the increase of the population, the disparity between 1900 and 1902 being 5.25 per thousand.

A New Medical Journal.—The *Louisville Monthly Journal of Medicine and Surgery* has been incorporated, with \$2,000 capital stock. The incorporators are Dr. H. H. Grant, Dr. J. M. Mathews, Dr. A. M. Cartledge, and Dr. Henry E. Tuley.

Two Physicians Suspended.—The Alumni Association of the Michigan College of Medicine and Surgery lately suspended two of its members, on the ground that they had violated the rule which forbids its members to advertise. One of the physicians will appeal.

Baptists to Build a Hospital.—The Fifteenth Street Baptist Church of Brooklyn has determined to erect a non-sectarian hospital and has purchased a desirable site at Fourth Avenue and Fourteenth Street, where it is expected to begin building in June.

Gymnasium for the Children's Hospital.—Plans have been filed at the Bureau of Buildings, Manhattan, for a one-story brick gymnasium for the Children's Hospital on Randall's Island, opposite One Hundred and Twenty-fifth Street. The city will be the owner.

To Recover for an Autopsy.—At the Massachusetts General Hospital, an autopsy was performed on the body of a Jewish baker. His wife now brings suit for \$2,000, alleging that the body after the autopsy was in such a condition that it could not be buried according to Hebrew rites.

Lakeside Hospital, Cleveland.—The emergency department of this hospital has been enlarged and a complete x ray electrical apparatus added to it. An electric automobile ambulance has also been provided for accident cases, of which Lakeside cares for about five hundred in a year.

Mississippi State Medical Association.—At the meeting of this association lately held in Vicksburg, the following officers were elected: President, Dr. Charles D. Mitchell, of Pontotoc; vice-presidents, Dr. J. Waldauer, of Vicksburg, Dr. May F. Jones, of Columbus, and Dr. C. L. Culley, of Jackson; secretary, Dr. J. J. Haralson, of Foust; treasurer, Dr. J. F. Hunter, of Jackson.

American Neurological Association.—The American Neurological Association will hold its twenty-ninth annual meeting at the Arlington Hotel, Washington, D. C., on May 12, 13, and 14, 1903.

The Metropolitan Hospital.—A benefit, in the form of a theatrical entertainment, will be given at the Herald Square Theatre, on May 10th, the proceeds to go to the Metropolitan Hospital. Several leading members of the theatrical profession have volunteered their services.

Buffalo Quarantine Plans.—A hospital for smallpox patients will shortly be erected in Buffalo, at a cost of about \$50,000. It will contain wards for male and female patients, besides quarters for the attendants. The kitchen and power house will be separate from, but connected by a covered way with, the hospital.

Brooklyn Consumptive Hospital.—The Roman Catholic women of Brooklyn borough are engaged in the task of endeavoring to raise \$150,000 for the building of a hospital for the exclusive use and treatment of persons afflicted with tuberculosis. The disease appears to be on the increase in that borough.

Denver's Low Death Rate.—The death rate of Denver, Colo., for March is announced by Health Commissioner Clough to be lower than that of almost any other city of its size in the world. The mortality was 12.20 per cent. of the population, exclusive of tuberculosis cases contracted elsewhere, and 15.63 including such cases.

Warning against Hydrophobia.—Superintendent Bodine, of the department of compulsory education in Chicago, will act with the health department in enforcing the provision of Trustee Kuflewski's resolution to warn parents and children of the threatened spread of hydrophobia by placing notices in each of the school buildings.

A Mountain Hospital in the Philippines.—Captain C. C. McCullough, assistant surgeon U. S. A., and Lieutenant J. A. Woodruff, of the Engineer Corps, have been detailed to select a suitable site in the mountains of the Philippines near Marevales at an elevation of about 3,000 feet, for the location of a large modern hospital and recuperating station. It is proposed to build a station to which both men and officers may be sent to recuperate from the effects of service in the tropics.

A Loving Cup for Dr. J. L. Dawson.—Before the close of the last session of the Medical College of the State of South Carolina, Dr. John L. Dawson, a member of the faculty found that it was necessary for him to leave the city on account of his health, and that therefore he would be unable to complete his course of lectures. The student body of the college have recently forwarded to Dr. Dawson at Watkins, N. Y., a handsome loving cup accompanied by a letter setting forth the high esteem in which he was held by the students.

The American Electro-Therapeutic Association will hold its thirteenth annual meeting at the Hotel Windsor, Atlantic City, N. J., on Tuesday, Wednesday and Thursday, September 22nd, 23rd, and 24th. Further information concerning the meeting can be obtained from the secretary, Dr. Clarence E. Skinner, New Haven, Conn.

Royal Arcanum Medical Examiners' Association of the City of New York.—This organization with a membership of more than fifty, came into formal existence on April 26th, after a dinner at the Hotel Marlborough, Manhattan. The object of the society is to advance the interests of the Royal Arcanum. By-laws were passed and officers elected.

A New Hospital for Woodhaven.—A hospital to be known as St. Anthony's Hospital, a branch of St. Peter's Hospital, will shortly be built by the Sisters of the Poor of St. Francis Xavier, at Woodhaven, Borough of Queens. It will be the only institution of its character under Catholic auspices in the diocese of Brooklyn, and will be open to all, regardless to sex, age, or creed.

Chicago Health Department Investigation.—Charges have been filed with the corporation council of the city of Chicago against the sanitary inspection bureau of the health department. Among other things it is charged that the inspectors have not insisted upon the proper placarding of houses in which cases of contagious disease have been found.

Roosevelt Hospital Censured by a Jury.—A jury in the coroners' court lately censured the authorities of Roosevelt Hospital in the case of Enos Lane, a boy who was struck by an automobile. He was taken to Roosevelt Hospital and dismissed on the ground that there was nothing the matter with him. He died early the next day at his home, 324 East Sixtieth Street.

Kentucky State Medical Society.—This association held its closing session on Friday, April 25th, in Louisville. The following officers were elected: President, Dr. Steele Bailey, of Stanford; vice-presidents, Dr. T. P. Stickler, of Elizabethtown, Dr. J. T. Reynolds, of Mt. Sterling, and Dr. J. B. Bullitt, of Louisville; treasurer, Dr. W. B. McClure, of Lexington.

Cooperative Housekeeping by Physicians Attending Conventions.—During the recent convention of the American Medical Association, at New Orleans, a party of visiting physicians, to avoid the crowded hotels and, perhaps, the better to absorb the atmosphere of New Orleans, rented a house in the French quarter, having provided their own staff of servants, and set up housekeeping according to their own ideas. In the party were Dr. Frank P. Foster, editor of the *New York Medical Journal*, Dr. I. N. Love, and Mr. William Evans, of New York; Dr. William Warren Potter, of Buffalo; Dr. Charles A. L. Reed, of Cincinnati; Dr. Joseph M. Matthews, Dr. H. H. Grant, and Dr. L. S. McMurtry, of Louisville.

The Disinfection of Schoolhouses has been urged in Detroit, by Health Officer Klefer, in a communication to the board of education. He offers to instruct the janitors in the process of disinfection so that it may be performed at regular intervals in the schoolhouses throughout the city.

The Pennsylvania State Board of Medical Examiners, representing the State Medical Society, will meet in Philadelphia at Industrial Hall, and Pittsburg Central High School, June 23, 24, 25, and 26, 1903. Those desiring cards of admission, the necessary blanks, and standard requirements, should write to Mr. Frank Hall, clerk of medical council, Harrisburg, Pa.

St. George's Hospital, London.—The question of selling the site on which this old and well-known hospital now stands, and of removing to a larger site, was lately discussed at a meeting of the governors of St. George's. An offer of £275,000 has been refused as being quite inadequate, St. George's being situated in a most desirable and fashionable quarter, viz., Hyde Park Corner.

Appropriations Increased.—Bills have lately been passed by the legislature at Albany increasing the appropriation for State hospitals for the insane, by nearly \$900,000 over the allowance of 1902. A site will shortly be purchased for a new State hospital for the insane patients of the counties of Albany, Rensselaer and North New York, for which an appropriation of \$50,000 has been granted.

Tenement Reform in Cincinnati.—Tenement reform is in the air. The board of visiting women, under the direction of the Associated Charities, have condemned many buildings and the board of public service have the matter under consideration. Visitors from churches and charitable institutions will also hand in reports, and, if notices to remedy existing conditions are not heeded, it is said that pressure will be brought to bear on the authorities.

The Health Board and the Dogs.—President Lederle, of the health department, has apparently won the promise of cooperation from the Society of the Prevention of Cruelty to Animals. The board of aldermen has as yet come to no decision regarding the muzzling of dogs, and it may be that muzzling is not the best method. But some precautionary measures are needed, and doubtless some plan will shortly be decided upon which will secure the safety of the populace.

Professional Appointments at Columbia.—Dr. Christian A. Herter, of the class of '85, who is connected with the Rockefeller Institute, was appointed to fill the chair of pharmacology and therapeutics recently established at Columbia University. Dr. Herter will take charge of work in materia medica, formerly in the hands of Dr. Peabody. Dr. L. Emmett Holt, professor of pædiatrics, has been assigned a chair in the faculty; Dr. Edward B. Cragin replaces Dr. Tuttle in the department of gynæcology. Dr. Weir becomes professor of clinical surgery, and Dr. J. A. Blake and Dr. G. E. Brewer are appointed lecturers in surgery.

A Charleston, S. C., Physician Honored.—Dr. Mazyck P. Ravenel, of Charleston, S. C., has been invited by the members of the Royal Commission on Tuberculosis to meet with them in Liverpool, England, on May 10th. Two years ago, at the Tuberculosis Congress in England, Dr. Ravenel replied to Dr. Koch's paper, his reply attracting universal attention.

The Association of American Physicians will hold its eighteenth annual meeting in connection with the Sixth Triennial Congress of American Physicians and Surgeons, in the New Willard Hotel, Washington, D. C., on May 12th, 13th, and 14th. The programme is as follows:

Tuesday, May 12th, Session of the Association, 10 A. M.—The President's Address, by Dr. James Stewart, of Montreal; Bathycardia (low heart), by Dr. E. G. Janeway, of New York; Post-typhoid Sepsis, by Dr. Francis Delafield, of New York; Clinical Observations on the Heart and Arteries of Individuals who have suffered from Typhoid Fever, by Dr. W. S. Thayer, of Baltimore; Note on Typhoid Fever and Scarlatina, by Dr. L. Hektoen, of Chicago; Artificial Immunity in Experimental Tuberculosis, by Dr. E. L. Trudeau, of Saranac Lake; Studies in Mammalian Tuberculosis III; Description of a Bovine Bacillus from Man; Culture test for distinguishing the Bovine from the Human Type of Bacilli, by Dr. Theobald Smith, of Boston; The Transmission of Bovine Tuberculosis by Milk, by Dr. Geo. M. Kober, of Washington; Primary Tuberculosis of the Tonsil, The Tonsil as Portal of Tuberculous Infection, by Dr. Henry Koplik, of New York; A Skin Lesion associated with Rapid Growth of Long Bones (*Les Vergetures de Croissance*, Jules Comby), by Dr. W. P. Northrup, of New York; The Visceral Lesions of the Erythema Group of Skin Diseases (Third Series), by Dr. William Osler, of Baltimore; Dermato-myositis, by Dr. F. Forchheimer, of Cincinnati.

Session of the Congress, 3 P. M.—The Congress will be opened by the President; Discussion on the Pancreas and Pancreatic Diseases:—On the Anatomy and Histology, by Dr. E. L. Opie, of Baltimore; On the Physiology and Physiological Chemistry, by Professor R. H. Chittenden, of New Haven; On the Ætiology and Pathological Anatomy, by Dr. Simon Flexner, of Philadelphia; On the Symptomatology and Diagnosis, by Dr. Reginald H. Fitz, of Boston; On the Surgery, by Professor von Mikulicz, of Breslau, Germany, and Dr. Roswell Park, of Buffalo; Followed by a discussion by Dr. Charles G. Stockton, Dr. Herbert U. Williams, and Dr. Maurice H. Richardson.

Session of the Congress, 8 P. M.—Address by the President of the congress, Professor William W. Keene, of Philadelphia, on the Duties and Responsibilities of Trustees of Medical Institutions; this address will be followed by a reception at the Arlington Hotel.

Wednesday, May 13th, Session of the Association:—Election of New Members; Acute Lymphatic Leucæmia, by Dr. A. O. J. Kelly, of Philadelphia; Lymphatic Leucæmia without enlargement of the Lymph Glands, by Dr. George Blumer, of Albany, and Dr. H. C. Gordinier, of Troy; Report of an Autopsy and the Microscopic Findings in a case of Acute Lymphatic Leucæmia, by Dr. F. P. Kinnicut, of New York; A Clinical and Pathological Study of two cases of Splenic Leucæmia, presenting early and late stages of Cirrhosis (early and late stages of Banti's Disease), by Dr. George Dock, of Ann Arbor, and Dr. Aldred S. Warthin, of Ann Arbor; The Relation of Chronic Enlargement of the Spleen to Anæmia in Infancy, by Dr. John L. Morse, of Boston; Chronic Cyanosis and Enlarged Spleen, with Polycythæmia—a new Clinical Entity, by Dr. William Osler, of Baltimore; Resemblance to Adrenalin of the Toxine causing high tension pulse in Nephritis, by Dr. William H. Thomson, of New York; Studies on the Action of Alcohol upon the Circulation in Fevers, by Dr. Richard C. Cabot, of Boston; A Preliminary Report on the Influence of Alcohol in Infectious Diseases, by Dr. H. A. Hare, of Philadelphia; Infantile Scorbutus, by Dr. T. M. Rotch, of Boston; Sudden Death and Unexpected Death in Infancy and Childhood, with special reference to the so-called Thymus Death, by Dr. J. P. Crozer Griffith, of Phil-

adelphia; Gonococcal Peritonitis in Children simulating Appendicitis, by Dr. W. P. Northrup, of New York; Observations upon Results obtained in Infant Feeding with various forms of Milk in Tenements and Institutions in New York, by Dr. L. Emmett Holt, and Dr. William H. Park, of New York.

Session of the Congress, 3 P. M.—Discussion on the Medical and Surgical Aspects of the Diseases of the Gall Bladder and Bile Ducts:—On the Diagnosis of Affections of the Gall Bladder and Bile Ducts, by Dr. John H. Musser, of Philadelphia; On the Differential Diagnosis in Diseases of the Gall Bladder and Bile Ducts, by Dr. George E. Brewer, of New York; On the Ætiology and Pathology of Gall Stones, by Dr. C. A. Herter, of New York; On Diseases of the Gall Bladder and Bile Ducts, with special reference to Diseases of the Stomach and Intestines, by Professor Ewald, of Berlin, Germany; A Study of 534 Operations upon the Gall Bladder and Bile Ducts, by Dr. William J. Mayo, of Rochester, Minn.; On the Surgical Treatment of Obstruction of the Common Bile Duct by Stone or Tumor, by Professor Hans Kehr, of Halberstadt, Germany; followed by a discussion by Dr. Frank Billings, Dr. George Dock, Dr. W. S. Halstead, and Dr. Henry Sewall.

The Dinner of the association will be held at the New Willard Hotel, at 7.30 P. M.

Thursday, May 14th, Session of the Association, 10 A. M.—Nomination of Officers; Actinomycosis of the Central Nervous System, with report of a case due to an unidentified member of the Actinomyces Group, by Dr. W. T. Howard, Jr., of Cleveland; Infectious Forms of Myelitis, by Dr. B. Sachs, of New York; Cardiorespiratory Murmurs as Marks of a certain Type of Neurasthenia, by Dr. Jas. J. Putnam, of Boston; Acute Bulbar Paralysis, with Clinical Reports and Autopsies, by Dr. Charles L. Dana, of New York; The Morbid Changes in Hereditary Ataxia, by Dr. L. F. Barker, of Chicago; Autolysis in Lobar Pneumonia, by Dr. Simon Flexner, of Philadelphia; The Adrenal Gland and its active principle in their relations to Cytolysis and antitoxine production, by Dr. A. C. Abbott, of Philadelphia; An Experimental Study of the Nephrotoxines, by Dr. R. M. Pearce, of Philadelphia; Studies upon the Capsule of the Kidney, by Dr. S. J. Meltzer, for Dr. Haven Emerson, of New York; Report of a Successful Decapsulation of the Kidney, by Dr. James Tyson and Dr. Charles H. Frazier, of Philadelphia; Paroxysmal Hæmatinuria, by Dr. W. G. Thompson, of New York; The Treatment of Migraine, by Dr. B. K. Rachford, of Cincinnati.

Session of the Association, 2.30 P. M.—Observations on Some Points in the Pathology of Thyreoid and Parathyreoid, by Dr. W. G. MacCallum, of Baltimore; The Influence of Different Varieties of Fat on the Formation and Excretion of Acetone, by Dr. E. P. Joslin, of Boston; A Further Report on the Study of Bacterial Cells, by Dr. V. C. Vaughan, of Ann Arbor; Gastric Syphilis, by Dr. H. A. Lafleur, of Montreal; Pulsating Empyema Necessitatis, by Dr. F. P. Henry, of Philadelphia; Pulsating Serous Pleurisy, by Dr. A. McPhedran, of Toronto; A Case of Rapidly Progressive Cancer of the Lung, by Dr. J. H. Musser, of Philadelphia; A Case of Extensive Pulmonary Infarction, by Dr. A. McPhedran and Dr. J. J. Mackenzie, of Toronto; The Third and Final Report of a Case of Presystolic Mitral Murmur, complicating Pregnancy, etc., with Exhibition of a specimen, showing triple Valvular Lesion, by Dr. James Tyson, of Philadelphia; A Case of Extreme Malformation of the Heart, by Dr. J. H. Wright, of Boston, and Dr. A. K. Drake, of Boston; Some of the Therapeutic Uses of the X Rays, by Dr. Francis William, of Boston; Experimental Studies on the Eosinophilia of Trichinosis—a preliminary communication, by Dr. H. A. Williams, of Buffalo; Intussusception, with Report of a Case of Recovery after Extrusion of eleven inches of Ileum, by Dr. Norman Bridge, of Los Angeles; A Case of Disseminated Hæmorrhagic Encephalo-myelitis, by Dr. J. H. Wright, of Boston; Typhoid Fever, an Analysis of 700 Cases, by Dr. J. McCrae, of Montreal; A Rapid Method of Hardening and Embedding Tissues, by Dr. B. M. Bolton, of St. Louis; Election of Officers and Concluding Business.

A Smoker will be held at 8 P. M. In connection with the Smoker there will be a lantern slide demonstration. Among other exhibitions will be: Lantern Slide Demonstration of the Ring Bodies in the Blood of Anæmic Patients, by Dr. R. C. Cabot, of Boston; Lantern Slide Demonstration of Twenty-one cases of Paget's Disease (Osteitis Deformans), by Dr. E. A. Locke, of Boston.

Official News.

Infectious Diseases in New York:

We are indebted to the Sanitary Bureau of the Health Department for the following statement of cases and deaths reported for the two weeks ending May 2, 1903:

DISEASES.	Week end'g April 25		Week end'g May 2.	
	Cases.	Deaths.	Cases.	Deaths.
Measles	283	7	286	20
Diphtheria and Croup	335	45	367	45
Scarlet fever	296	24	359	30
Small-pox	0	0	0	0
Chicken-pox	116	0	66	0
Tuberculosis	336	175	338	181
Typhoid fever	44	9	43	16
Cerebro-spinal meningitis	0	0	0	0

Public Health and Marine-Hospital Service
Health Reports:

The following cases of smallpox, yellow fever, cholera, and plague, have been reported to the surgeon-general, Public Health and Marine-Hospital Service, during the week ending May 2, 1903:

Smallpox—United States.

Places.	Date.	Cases.	Deaths.
Alabama—Mobile	Apr. 18-25	6	
California—Los Angeles	Apr. 4-11	7	
California—San Francisco	Apr. 12-19	6	
District of Columbia—Washington	Apr. 18-25	1	
Georgia—Atlanta	Apr. 15-29	5	
Illinois—Belleville	Apr. 18-25	1	
Illinois—Chicago	Apr. 18-25	17	
Illinois—Galesburg	Apr. 18-25	3	
Indiana—Indianapolis	Apr. 18-25	1	
Iowa—Dubuque	Apr. 18-25	1	
Maine—Eastport	Apr. 22	3	
Maryland—Baltimore	Apr. 18-25	1	
Massachusetts—Cambridge	Apr. 18-25	1	
Massachusetts—Holyoke	Apr. 18-25	4	
Massachusetts—Lowell	Apr. 18-25	2	
Michigan—Flint	Apr. 18-25	1	
Michigan—Grand Rapids	Apr. 18-25	2	
Michigan—Port Huron	Apr. 18-25	1	
Missouri—St. Louis	Apr. 19-26	5	
Nebraska—Omaha	Apr. 18-25	4	
New Hampshire—Manchester	Apr. 18-25	5	
New Hampshire—Nashua	Apr. 18-25	3	
New York—Buffalo	Apr. 18-25	4	
Ohio—Cincinnati	Apr. 18-25	2	1
Ohio—Dayton	Apr. 18-25	1	
Ohio—Hamilton	Apr. 18-25	1	
Oregon	Apr. 22	250	
Pennsylvania—Altoona	Apr. 18-25	2	
Pennsylvania—Carbondale	Apr. 14-21	2	
Pennsylvania—McKeesport	Mar. 28-Apr. 4	3	
Pennsylvania—McKeesport	Apr. 18-25	3	
Pennsylvania—Philadelphia	Apr. 18-25	22	1
Pennsylvania—Pittsburg	Apr. 18-25	18	2
Pennsylvania—Reading	Apr. 13-20	4	
Pennsylvania—Scranton	Apr. 18-25	6	
South Carolina—Charleston	Apr. 18-25	2	2
Tennessee—Memphis	Apr. 18-25	1	
Utah—Salt Lake City	Apr. 18-25	16	
Washington—Tacoma	Apr. 13-20	2	
Wisconsin—Milwaukee	Apr. 18-25	1	

Smallpox—Foreign.

Belgium—Brussels	Apr. 4-11	6	
Brazil—Rio de Janeiro	Mar. 29-Apr. 5	3	
Canary Islands—Las Palmas	Mar. 21-Apr. 4	44	
China—Hongkong	Mar. 7-14	4	
Colombia—Barranquilla	Apr. 5-12	1	
Colombia—Cartagena	Apr. 5-12	1	
France—Rheims	Apr. 5-12	1	
Great Britain—Birmingham	Apr. 4-11	6	
Great Britain—Bristol	Mar. 28-Apr. 11	6	3
Great Britain—Cardiff	Feb. 21-Mar. 28	22	1
Great Britain—Dundee	Mar. 28-Apr. 11	1	
Great Britain—Leeds	Apr. 4-11	7	1
Great Britain—Liverpool	Apr. 4-11	66	2
Great Britain—London	Apr. 4-11	5	
Great Britain—Manchester	Apr. 4-11	11	1
Great Britain—Newcastle-on-Tyne	Mar. 21-Apr. 11	4	
Great Britain—South Shields	Mar. 21-Apr. 11	8	
India—Bombay	Mar. 24-31	100	
India—Calcutta	Mar. 21-28	2	
Mexico—City of Mexico	Apr. 5-12	14	6
Russia—Moscow	Mar. 27-Apr. 4	1	1
Russia—Odessa	Mar. 27-Apr. 4	2	2
Russia—St. Petersburg	Mar. 27-Apr. 4	33	4
Straits Settlements—Singapore	Mar. 7-14	1	
Turkey—Alexandretta	Mar. 27-Apr. 4	3	

Smallpox—Insular.

Philippines—Manila	Mar. 7-21	9	
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Yellow Fever.

Brazil—Rio de Janeiro	Mar. 29-Apr. 5	33	
Colombia—Panama	Apr. 15-22	2	1
Costa Rica—Limon	Apr. 17	1	
Mexico—Vera Cruz	Apr. 11-25	10	2

Cholera—Insular.

Philippines—Provinces	Feb. 28-Mar. 14	326	225
Philippines—Not prev'sly reported		467	316

Cholera—Foreign.

India—Bombay	Mar. 24-31	1	
India—Calcutta	Mar. 21-28	52	

Plague—Insular.

Hawaii—Honolulu	Apr. 15	1	
Philippines—Manila	Mar. 7-21	24	17

Plague—Foreign.

China—Hongkong	Mar. 7-14	17	17
India—Bombay	Mar. 24-31	1,755	
India—Calcutta	Mar. 21-28	816	

Public Health and Marine-Hospital Service:

Official List of Changes of Station and Duties of Commissioned and Non-commissioned Officers of the Public Health and Marine-Hospital Service, for the Seven Days ending April 30, 1903:

- PETTUS, W. J., Assistant Surgeon-General. Granted leave of absence for seven days, from April 26th.
- BAILHACHE, PRESTON H., Surgeon. Five days' leave of absence from April 29, 1903, under provisions of paragraph 189 of the Regulations.
- IRWIN, FAIRFAX, Surgeon. Granted leave of absence for seven days, from April 28th.
- PECKHAM, C. T., Surgeon. Granted leave of absence for five days, from April 1, 1903, on account of sickness, under provisions of paragraph 191 of the Regulations.
- PARKER, H. B., Passed Assistant Surgeon. Relieved from duty in the hygienic laboratory, and directed to proceed to Vera Cruz, Mexico, for special temporary duty as chairman of working party of Yellow Fever Institute.
- FRANCIS, EDWARD, Assistant Surgeon. Relieved from duty at the hygienic laboratory, and directed to report to Passed Assistant Surgeon H. B. Parker and proceed to Jalapa, Mexico, for special temporary duty, as member of working party of Yellow Fever Institute.
- BARNESBY, P. N., Acting Assistant Surgeon. Granted leave of absence for two days, from April 13, 1903, on account of sickness, under provisions of paragraph 191 of the Regulations.
- McCONNELL, A. P., Acting Assistant Surgeon. Leave of absence for three days, from April 20, 1903, granted by bureau letter of April 16, 1903, revoked.
- O'REILLY, W. J., Acting Assistant Surgeon. Granted leave of absence for twenty days, from April 4th.
- STEARNS, H. H., Acting Assistant Surgeon. Granted leave of absence for seven days, from April 15, 1903, on account of sickness, under provisions of paragraph 191 of the Regulations.
- WATTERS, M. H., Pharmacist. Granted leave of absence for eight days, from May 4th.

Board Convened.

Board convened to meet at Washington, D. C., April 30, 1903, for the physical examination of an applicant for appointment in the Revenue Cutter Service. Detail for the board: Assistant Surgeon-General L. L. WILLIAMS, chairman; Assistant Surgeon-General H. D. GEDDINGS, recorder.

Naval Intelligence.

Official List of Changes in the Medical Corps of the United States Navy for the Week ending May 2, 1903:

- BAKER, M. W., Assistant Surgeon. Ordered to duty as member and recorder of a board of officers at the Naval Academy.
- GROW, E. J., Passed Assistant Surgeon. On being discharged from treatment at the Naval Hospital, Mare Island, Cal., will report for duty at that hospital.
- HOLLOWAY, J. H., Assistant Surgeon. Detached from the *Franklin* and ordered home to wait orders.

SMITH, C. G., Assistant Surgeon. Detached from the *Marietta* and ordered to the *Newport*.

SMITH, G. T., Surgeon. Ordered to duty as a member of the board of officers at the Naval Academy.

STONE, M. V., Assistant Surgeon. Granted sick leave for three months.

WALTON, T. C., Medical Director (retired). Ordered to duty as senior member of a board of officers at the Naval Academy.

WILLIAMS, R. B., Assistant Surgeon. Detached from the *Decatur* and ordered to the *Chauncey*.

Army Intelligence:

Official List of Changes in the Stations and Duties of Officers serving in the Medical Department of the United States Army for the Week ending May 2, 1903:

The official report states that there were no changes during this week.

Births, Marriages, and Deaths.

Married.

ABBE—DAUER.—In Wolfenbüttel, Germany, on Sunday, April 12th, Dr. Cleveland Abbe, Jr., of Washington, and Miss Friederika Dauer.

ANDERS—WUNDERLICH.—In Ardmore, Pennsylvania, on Wednesday, April 29th, Dr. J. M. Anders and Miss Margaret Gertrude Wunderlich.

CUNNINGHAM—RILEY.—In New York City, on Wednesday, April 29th, Dr. William P. Cunningham and Miss Catherine Riley.

DREWRY—CREWS.—In Chatham, Virginia, on Wednesday, April 29th, Dr. David Barnes Drewry and Miss Bessie Gordon Crews.

DUNN—SCHMITZ.—In San Francisco, California, on Tuesday, April 21st, Mr. John T. Dunn and Miss Amalia Schmitz, daughter of Dr. J. P. Schmitz.

HEFFTER—GANS.—In Greenwich, Connecticut, on Friday, May 1st, Dr. George Otto Heffter, of New York City, and Miss Rebecca S. Gans.

HOLMES—SWANN.—In Denver, Colorado, on Saturday, April 25th, Dr. A. M. Holmes and Miss Azile Swann.

JILLSON—SEIBERT.—In Brooklyn, N. Y., on Wednesday, April 29th, Dr. Franklin Campbell Jillson, of Boston, and Miss Alice Seibert.

STAFFORD—BITTING.—In Camden, N. J., on Wednesday, April 29th, Dr. John Adelbert Stafford, of Philadelphia, and Miss Annie Lane Bitting.

THIEDE—CREAGER.—In Rockville, Maryland, on Thursday, April 30th, Dr. G. A. Thiede, of Baltimore, and Miss Mae Creager.

WILLSON—WURTS.—In Philadelphia, Pa., on Monday, May 4th, Dr. Robert N. Willson, Jr., and Miss Dorothea Wurts.

WOOD—TANNER.—In Sagamore, Michigan, on Tuesday, April 28th, Dr. Fiske Wood, of Brooklyn, and Miss Florence Hope Tanner.

YOHNN—STONE.—In Washington, D. C., on Wednesday, April 29th, Dr. Charles Regan Yohn and Miss Mary Margaret Stone.

Died.

BRYSON.—In St. Louis, Missouri, on Tuesday, May 5th, Dr. John P. Bryson, in the fifty-fifth year of his age.

CONLAND.—In Brattleboro, Vermont, on Saturday, May 2d, Dr. Mames Conland, in the fifty-second year of his age.

HINKSON.—In San Francisco, California, on Tuesday, April 21st, Dr. Addison C. Hinkson, in the thirtieth year of his age.

NEWELL.—In Rochester, N. Y., on Thursday, April 23d, Dr. Jared Monroe Newell, in the eighty-third year of his age.

ROACHE.—In Brooklyn, N. Y., on Sunday, May 3d, Dr. James Aloysius Roache, in the forty-fourth year of his age.

TEGG.—In Rochester, N. Y., on Friday, April 24th, Dr. Albert Tegg, in the sixty-third year of his age.

Pith of Current Literature.

PRACTICE OF MEDICINE.

Some Further Experiments Regarding the Nature and Specific Treatment of Hay Fever. By Sir F. Semon. (*British Medical Journal*, April 18th).—The author reports a second series of experiments with Dunbar's hay fever toxine and antitoxine, and their effects upon persons not actually suffering from hay fever, but showing a greater liability than ordinary people. The results justify the belief that there is such a class of persons, who, although not actually suffering from hay fever, yet are more susceptible to the influence of the pollen toxine than the great majority of persons. But it remains to be seen whether this fact establishes a connection between genuine hay fever and paroxysmal sneezing or vasomotor coryza.

Pleural Crepitus in a Case of Exudative Pleurisy. By Dr. Luigi Capellari. (*Gazzetta degli ospedali e delle cliniche*, March 29th).—The author reports a case of exudative pleurisy in a man, aged twenty-four years, with a negative previous history, in whom crepitant râles could be heard. An exploratory puncture confirmed the diagnosis of exudation which had been made on the basis of a complete flatness on percussion. Over this area of flatness, which occupied the sixth, seventh and eighth intercostal spaces between the spine and the angle of the scapula, a crepitus was audible, which was analogous to the pulmonary crepitant râle indicating the involvement of the lung. In favor of its being a pleural sound, however, was the fact that it was circumscribed, that it was audible with the patient in the vertical position, that it was increased on pressure and audible in the interval between inspiration and expiration, more distinctly on inspiration, and was unchanged after an access of cough. According to Schüle, this crepitus may be due to bridges of adhesions existing between the parietal and visceral surfaces of the pleura, and the present author thinks that, in his case, there were such bridges which transmitted to the surface of the area of flatness the rubbing sound of opposing surfaces of pleura in an interlobar fissure.

SURGERY AND ANATOMY.

Radical Operation for Umbilical Hernia.—Professor Menge (*Zentralblatt für Gynäkologie*, March 28th) has recently operated in two cases of hernia, an umbilical and a subumbilical one, according to Biondi's method. In the first case, there was a moderately sized hernia with a cystocele. Wertheim's operation for prolapsus was first performed, and then the radical operation for hernia with omphalectomy. In the second case there was a large hernia below the umbilicus in the linea alba, with evidences of incarceration. Both cases gave perfect results. The main peculiar feature of Biondi's procedure lies in the transverse section of the fascia with absolute hæmostasis.

On the Surgical Treatment of Gallstones.—Dr. P. I. Diakonoff (*Chirurgia*, January) concludes a clinical and statistical study of the surgical treatment of gallstones with the following summary: (1) Gallstone disease is very rare in Russia. The presence of gallstones in the gallbladder or the gallducts must be regarded as a very dangerous condition, not only on account of the danger of an impediment to the biliary function, but also an account of the possibility of inflammatory complications which may develop in the gallbladder, the bile ducts, or the adjoining structures. (3) The diagnosis of gallstones is at present very difficult, but it may be greatly facilitated by the improvement of the technics of Röntgen ray diagnosis. Operative treatment is indicated in all cases of gallstones where the diagnosis has been made with certainty. (5) Of the various operations which are performed for gallstones, the ordinary cholecystotomy should be entirely abandoned, and cholecystectomy, as the more radical operation, should be performed more frequently. If the permeability of the common bile duct is in doubt, or if there are other reasons making drainage imperative, cholecystostomy is the best operation. The other operations on the gallbladder and ducts, *e. g.*, cysticotomy, choledochotomy, etc., are much more rarely required, *i. e.*, in cases of impaction of a stone in one or the other of the two ducts.

On Posterior Cephalomas.—Dr. D. I. Tatarinoff (*Chirurgia*, January) reports a case of posterior cerebral tumor in an infant aged two months. The child was born at term and there were no deformities of any kind in the family history. The tumor on his head was noted at birth, and about a month later an exploratory puncture was made, some fluid escaped, but a few days later the swelling assumed its original size. The child, on admission, was in an emaciated condition, was suffering from whooping cough, and was found to have a tumor projecting from the head below the occipital protuberance in the median line with a pedicle 14.5 centimetres in circumference. The tumor was 27 centimetres wide and 19 centimetres high, with bluish-red coverings, which felt tense on palpation. The entire tumor was translucent, and the sutures and fontanelles were normally disposed. An operation was performed under general anæsthesia; a circular incision was made around the pedicle, a small amount of cerebrospinal liquid escaped, and the brain substance was revealed and pushed back into the cavity of the cranium. The periosteum was then peeled away from the edges of the bony hiatus and thus two flaps were made and sutured over the gap. The skin was then sutured and the wound dressed. During the first few days there was a slight discharge of cerebrospinal fluid, and a slight rise of temperature, but after that the recovery was uneventful and the wound healed perfectly. The removed portion of skin and tumor showed that the growth consisted principally of fat and connective tissue, and that the dura mater did not participate in its formation. Hence, although clinically this looked like a meningocele, it corresponded more to the lesion known as cephaloma. Such cases are

very rare, only a few of them having been successfully operated upon. The author urges the application of radical measures in such cases, and the uselessness of palliative means, such as aspiration, the injection of iodine, etc., into these growths. The author has found only fourteen cases of this kind in literature and gives a résumé of each.

A Case of Congenital Parosteal Sarcoma in an Infant Arising in Connection with the Acromion Process of the Left Scapula; Removal; Recovery. By H. J. Curtis, F. R. C. S. (*Lancet*, April 11th).—The patient in this case was a male infant aged six months. The points of interest were: (1) The question of clinical diagnosis between a benign and malignant tumor; in favor of malignancy were the fixity of the tumor, and its rapid growth. (2) The remarkable ease with which the tumor shelled out in spite of its sarcomatous nature. (3) The thin, but well defined, capsule and the ill-defined seat of origin of the tumor, which was, in fact, a parosteal growth, as distinguished from a sarcoma originating in the cervical lymphatic glands. (4) Its congenital nature.

Jejunostomy in Cancer of the Stomach.—Dr. N. I. Napalkoff (*Chirurgia*, January) discusses the indications for an intestinal, as opposed to a gastric, fistula for the purposes of feeding, in connection with a report of three cases of cancer of the stomach in which this operation of jejunostomy was performed by him. This operation is not often employed, as most surgeons, on finding very extensive involvement of the stomach with cancer, let the incision be an exploratory one and sew up the abdomen. Many surgeons, however, have found that this operation, while it may prolong the life of the patient for only a short time, renders the patient's condition more bearable, relieves him of pain, and has a good effect on his general condition. Although all three of the author's patients died within three weeks of the operation, yet these favorable effects had been noted for a time in two of the cases. The author reviews all the cases of this kind that have been operated upon by jejunostomy and have been reported in literature, and finds that, in the majority, a temporary improvement and a relief of symptoms was noted. In some instances the patients even gained in weight after the operations. Of eighteen cases Maydl saw six patients live for over six months after the operation. In speaking of the indications of an intestinal, as compared to a gastric, fistula, the author emphasizes the disadvantage of the former, which excludes the stomach from the process of digestion. An intestinal fistula for feeding purposes is indicated, however, if the stomach is the seat of cancer and is markedly contracted so that it cannot be drawn into the wound to make a gastric fistula, and so that, even if such a fistula could be made, there would be uncontrollable vomiting afterwards. When the stomach is atrophied and distended, the introduction of food through a gastric fistula would only tend to dilate it still further, and the substances introduced would not be absorbed. If cancer of the œsophagus involves an extensive area of the stomach, a gastric fistula is contraindicated, and the same

rule holds good in cases in which there is cancer of the stomach and cancer of the omentum. An intestinal fistula is indicated instead of a gastro-intestinal anastomosis (1) when the cancerous process in the stomach is very extensive, so that there is scarcely any room for the anastomosis; (2) when there are extensive adhesions of the stomach and intestines, which make the operation impossible; (3) when there are abundant hæmorrhages from ulcerated surfaces in the stomach; (4) when there are deep ulcers in the wall of the stomach threatening perforation. An intestinal fistula is also indicated when the anatomical conditions permit an anastomosis, but the patient is too weak to bear the operation.

OBSTETRICS AND DISEASES OF WOMEN.

The Surgical Treatment of Puerperal Pyæmia. By Dr. E. Michels. (*Lancet*, April 11th).—The author reports a case of puerperal pyæmia occurring in a woman aged twenty-eight years. The term puerperal pyæmia is used in the narrower sense of the word, being confined to that form of puerperal infection which is propagated by way of the venous circulation, is characterized by rigors and sudden rises of temperature, and almost invariably leads to death by septic embolism. In the case here reported an indistinct fulness was noted in the left inguinal region, and as the patient's condition seemed desperate, an operation was determined on. On opening the abdomen the swelling was found to be the left ovarian vein. It was ligatured off, opened, and found to be full of a softened mass of fœtid thrombus. This was emptied out, and the wound cleaned and closed. The patient made a wonderful and rapid recovery.

New Operation for Prolapsus Uteri.—Dr. A. Rieck (*Zentralblatt für Gynäkologie*, March 28th) describes his method, which consists in denuding, longitudinally, one half of the anterior wall of the vagina deeply, the other half superficially, and suturing the one half over the other. The same procedure is followed on the posterior wall, and a perinæorrhaphy is performed when necessary. The author has operated on four cases in this manner, but so recently that he can give no information yet as to the recurrence of the condition.

The Use of the Colpeurynter in Incarceration of a Retroflexed Gravid Uterus.—Dr. W. Albert (*Muenchener medicinische Wochenschrift*, March 24th) says that frequently an incarcerated pregnant uterus cannot be raised by the fingers or by posture, and that instrumental manipulation may be serious, or even dangerous. He reports five successful cases in which Braun's colpeurynter was inserted into the vagina between the uterus and the pelvic floor and left in for several hours after being slowly filled with water. In all instances, the uterus was easily raised to its normal position and was kept in place, the patients carrying the pregnancy to its normal termination.

MATERIA MEDICA, PHARMACY, AND THERAPEUTICS.

Therapeutic Results of Paraffin Injections.—Dr. H. Eckstein (*Berliner klinische Wochenschrift*, March 23rd and 30th) reports a great number of cases in which he has used paraffin for correction of deformities. He has employed the method in plastic operation on the nose, in the covering of defects of bone in the forehead, in the closure of a fistula remaining after an appendicectomy, to replace a breast removed by operation, to represent a testicle, as a covering for hernial openings, etc. In all these instances, he has been successful.

A Case of Acute Trional Poisoning Remarks. By Dr. F. P. Wightwick and Dr. H. D. Rolleston. (*Lancet*, April 18th).—The authors report the case of a woman aged twenty-nine years, who took 125 grains of trional at a single dose. An hour later she became nauseated and was soon unconscious. Her pulse was very weak but not rapid, and all reflexes were abolished. Strychnine was given and the stomach washed out. She could be roused the next day, but was very drowsy. It was not for four days that the reflexes returned, and the patient appeared natural. At no time was the urine abnormal in any way. Trional poisoning is rare, and is usually due to the cumulative effects of numerous doses. The most striking symptoms are severe cardiac failure and loss of reflexes. Hæmatoporphyria, and symptoms of ataxia and peripheral neuritis have been observed. The correct treatment of trional poisoning is the administration of purgatives and washing out the stomach with a solution of sodium bicarbonate.

Some Dangers of Hypnotics. By Dr. N. Tirard. (*Lancet*, April 11th).—In this paper the author does not consider the relative advantages of hypnotics, as he does not wish to facilitate their employment. He hopes to diminish the frequency of their use by developing the following propositions: (1) They may all involve danger; (2) the conditions under which they may procure undesirable results are not always dependent upon the dose; (3) the danger may be limited to the patient; (4) the danger may involve the prescriber or the dispenser; and (5) before the employment of a hypnotic the bare symptom, sleeplessness, is perhaps the least important factor to be considered.

NERVOUS AND MENTAL DISEASES.

Traumatic Hysteria, Cured by Operation.—M. F. Mouisset (*Lyon médical*, February 22d) records the case of a man of forty-three years of age, who sixteen years before had fallen while exercising, striking on the skull and leaving a deep scar over the left eye. He had had since the accident, frequent attacks of loss of consciousness combined with tonic and clonic convulsions. At these times, the scar always became deeply congested and had the sensation of being pricked. The entire scar was excised, since which time the patient has been free from convulsive seizures. The author admits that the trivial operation acted suggestively upon a man

afflicted with a grave neuropathy, and cites Brown-Séquard as authority for the cessation of seizures when an epileptogenic centre is removed. He thinks that even the anæsthesia employed for the operation might have acted as a cause of cure.

Arterial Pressure and Patellar Reflexes in Asthmatics.—M. Mancargé (*Lyon médical*, March 15th) has found on examination of 145 cases of asthma, that the patellar reflex was exaggerated in 103 instances, and was combined in ninety-nine cases with a constant lowering of arterial pressure. This fact can be used as a means of diagnosis, as asthmatic symptoms accompanied by normal or increased blood pressure would suggest an asthma of renal or aortic origin. A relation between the states of blood pressure and the patellar reflex seems to be established, a low blood pressure appearing with exaggerated reflexes, and a high blood pressure with diminished or absent reflexes. The finding is entirely clinical, of course, as there is no "reflexometer" as there is a sphygmometer.

Therapeutic Remissions in General Paresis.—M. Devay (*Lyon médical*, February 22d) says that general paresis must be regarded ætiologically as syphilitic, not parasymphilitic, not alcoholic, not arthritic, not toxic. The efficient cause of the disease is always syphilitic, although alcoholism, arthritism, nervous or insane heredity, various excesses, and injury, may be correlated causes. Antisyphilitic treatment should always be vigorously pushed, no matter at what stage the patient is first seen. If, after six months, it is without result, the likelihood is that nothing will be of any use. If a cure or a remission appears, the treatment must still be continued.

Ætiology of Progressive Paralysis.—Dr. E. Raimann (*Wiener klinische Wochenschrift*, March 26th) has tested Bruce's statement that the *Bacterium coli* has an ætiological significance in the production of progressive paralysis. Bruce found that the serum of these patients exerted an agglutinating action upon cultures of the colon bacillus. Raimann examined forty cases of the disease in various stages and found that the agglutination test was very varying. He reaches a conclusion directly antagonistic to that of Bruce, and asserts that normal serum agglutinates the colon bacillus better than the serum of paretics. He concludes that, even if paresis is shown to be a disease of intoxication, there is no present evidence to justify our regarding it as due to the colon bacillus.

DISEASES OF CHILDREN.

Treatment of Barlow's Disease.—Professor Heubner (*Berliner klinische Wochenschrift*, March 30th) in exhaustively discussing this disease, says that, so far as treatment is concerned, not a drop of medicine need be given. The treatment is entirely dietetic. If the child has been fed on milk cooked for a long time, or on some milk food, milk boiled for a short time or not at all, should be administered. The milk should be perfectly pure. As most of the children are over one year of age, the milk need

not be diluted, and may be given in five meals a day. The loss of appetite vanishes almost instantly. If the pure milk is not well taken, it may be diluted suitably. In addition to the milk, the child should be given from two to three teaspoonfuls of fresh beef juice, and it may receive a teaspoonful of apple sauce, or cherry or strawberry juice made from the fresh fruit. Children over nine months of age may also have a little mashed potatoes, spinach, the juice of red cabbage or of carrots. The treatment will be astonishingly efficacious, and proves that Barlow's disease is a disease of nutrition entirely, but not so deep seated an ailment as rhachitis.

Double Hydatid Cyst of the Liver in a Child.—L. Moquio (*Revista Médica del Uruguay*, Year VI, No. 2) describes the case of a child aged twelve years, who, having previously enjoyed good health, suddenly developed symptoms of colitis. In a few days after these symptoms had entirely subsided, icterus appeared. This gradually increased, and there was reason to believe that the case was one of obstructive jaundice. At the same time, a tumor appeared in the right side of the abdomen below the liver, and this was first thought to be of renal origin. The diagnosis of hydatid cyst was made, however, and this diagnosis was confirmed upon operation; a hydatid cyst the size of a foetal head was found attached to the liver by a pedicle. Enormous distention of the bile ducts was seen; and as no evidence of their compression was evident at that time, a cholecystotomy was performed to drain out the bile. After the operation, though there was some discharge of bile from the wound, icterus still persisted. The child finally succumbed to a bronchopneumonia, to which were added symptoms of peritonitis. Autopsy revealed the cause of the obstructive jaundice in a second cyst within the liver and pressing upon the bile ducts.

GENITO-URINARY DISEASES.

Total Extirpation of the Prostate for Radical Cure of Enlargement of that Organ. By Dr. P. J. Freyer. (*British Medical Journal*, April 18th).—In this article the author reports a fifth series of ten cases of hypertrophy of the prostate, operated upon by his method of total extirpation. In all, this makes thirty-one such cases reported by him, the patients varying in age from fifty-eight to seventy-nine years, the prostates weighing from one ounce and a half to ten ounces and a quarter. In a very large proportion of cases the patients were moribund before operation, and scarcely one was free from a grave complication of some kind. Of the thirty-one cases, twenty-seven were successful, both immediate or remote, the patients being able to pass and retain their urine as well as they ever did. In no case has there been any relapse. Of the fatal cases, two patients died from mania, one from heatstroke on the tenth day, and one from coma due to retention of morbid products of the urine in the blood which had set in before the operation.

The Operative Treatment of Enlarged Prostate. By Sir W. Thomson. (*British Medical Journal*, April 18th).—In this article the author reviews

all the operative methods of treatment of enlarged prostate. He practises suprapubic enucleation through the bladder, as introduced by McGill and carried out by Freyer. Among the points he calls attention to are the following: (1) The lateral lobes are usually the cause of obstruction. (2) The bulk of the prostate, as felt in the rectum, gives no indication of its intravesical contour. (3) The size of the prostate has no necessary relation to the severity of the urinary distress. (4) The smaller the tumor the more difficult relatively is its enucleation.

CUTANEOUS MEDICINE AND SURGERY.

Gonorrhœal Pruritus.—Dr. E. Domenici (*Gazzetta degli ospedali e delle cliniche*, March 1st) reports the case of a man, aged sixty years, who had contracted gonorrhœa and had been treated for it by means of irrigations which removed the discharge from his urethra. Soon afterwards he was seized with an attack of rheumatism in the wrists and elbow joints, and when this disappeared under the use of iodides and salicylates he developed an intense pruritus of the forearms and arms above the joints that had been affected with rheumatism. The author attributes this pruritus to the action of the gonorrhœal toxine upon the skin, and excludes drug pruritus and senile pruritus, the other possible causes. He urges the energetic and thorough treatment of urethral infection, in order to prevent the occurrence of such cases.

The Treatment of Ring-worm. By George Thomas Jackson, M. D. (*Medical Record*, April 11th).—The preparation recommended by the author has been in use, at the Vanderbilt Clinic, New York, for the past two or three years. Its success has been very gratifying. One or more drachms of the crystals of iodine are mixed with one ounce of real goose grease. This ointment should be applied to the affected area twice a day for the first few days, until a reaction is produced, after this the applications need not be made oftener than once a day. At the end of two or three weeks the hair falls out and the affected area resembles a patch of alopecia areata. Epilation is not necessary and only a little pain is experienced after the first applications. In treating ringworm of the beard the pain experienced is greater, so that the treatment may have to be suspended for a few days at a time, and a less irritating ointment used in its place. In very obstinate cases the author uses an ointment composed of from half a drachm to a drachm of croton oil in one ounce of sulphur ointment. No epilation is needed. The hair will grow again after the use of either of these ointments.

LARYNGOLOGY, RHINOLOGY, AND OTOTOLOGY.

A New Method of Treating Suppurating Catarrh of the Middle Ear. By Dr. A. A. Gray. (*Lancet*, April 18th).—The author calls attention to the value of a solution of iodoform in aniline in the treatment of cases of suppurating catarrh of the middle ear. The solution is a saturated one—one part of iodoform to seven of aniline—and is used as follows: The ear is syringed out and dried, and

then five minims of the solution, soaked up on a small piece of cotton wool are applied to the suppurating spot or perforation. The cotton is left in five minutes, the excess on the walls of the meatus being removed, but not that in the tympanum. The author reports four cases in which the use of the solution acted most beneficially. The objections to it are two: Aniline being toxic and very penetrating, not more than a certain quantity must be used; over five minims may cause cyanosis. The second objection is that in susceptible patients, it may cause erythema and if too often repeated may even bring on eczema. It, therefore, should not be used oftener than once or twice a week. It is particularly indicated in foul-smelling and presumably tuberculous cases.

Operative Treatment of Purulent Meningitis.

—Dr. H. Haberer (*Wiener klinische Wochenschrift*, March 26th) reports the case of a woman in whom a purulent process in the region of the left temporal bone, with meningeal involvement, was diagnosed. When the patient was operated on, a diffuse, instead of a circumscribed, meningitis was discovered. The temporal bone was opened widely and the cavity drained, but death followed in a few days. The author says that these operations have but a temporary influence in diffuse meningitis.

Intranasal Obstruction and its Treatment.

By H. Hoyle Butts, M. D. (*Medical Record*, April 11th).—Dr. Butts writes chiefly for the benefit of the general practitioner. After briefly reviewing the evils of mouth breathing and its consequences, and calling attention to the possible dangers that may follow interference with the free flow of mucus from the accessory sinuses, he proceeds to a consideration of the treatment of intracranial obstruction. The chief causes and their treatment are: (1) *Acute and Passive Hyperæmia*. Acute rhinitis yields readily to ordinary treatment and lasts only a few days. Repeated attacks of acute rhinitis lead to passive hyperæmia of the turbinates, which may last for an indefinite time. The nose should be sprayed with liquid albolene until the relaxed tissues have had time to return to their normal condition. This will usually happen after a few days' treatment. (2) *Foreign Bodies*. (a) Accumulated crusts. Spray the nose first with a mild alkaline solution until it is clean, and then use an oily spray. (b) Other foreign matter. Treatment will vary with the nature of the obstruction. In general it may be said that after spraying the nose with a 4 per cent. solution of cocaine the foreign body should be removed by means of toothed nasal forceps. (3) *Rhinitis Hypertrophica*. This is a consequence of long continued passive hyperæmia. Hypertrophied tissue can be distinguished from merely swollen tissue by the facts that it will not readily dent on being pressed by a blunt probe, and that it will not shrink on being painted with cocaine. The inferior turbinated bodies are the parts of the nasal chamber most easily affected. The anterior ends of the middle turbinates occasionally become involved. The best way of treating the inferior turbinates is by means of the electrocautery. The nose is first sprayed with an alkaline cleaning solution,

then with a 10 per cent. solution of cocaine, and finally the seat of operation is treated with cocaine on cotton. The cautery wire should be brought to a bright cherry-red only, it should be kept in constant slight motion, it should be made to destroy as little mucous membrane as possible. It is best to make the incision parallel with the axis of the turbinate and make the depth of the wound compensate for its narrowness. Under no circumstances should hypertrophy of the middle turbinate be treated by the cautery. The hypertrophied tissue is best removed, if necessary, by the cold wire snare. After-treatment should consist in simply spraying the nose with a 1 per cent. solution of eucalyptus in liquid albolene. Dressings in the nose are not desirable. (4) *Ecchondrosis and Exostosis of the Nasal Sæptum*. These are easily removed with a saw. The important question is, when should they be removed? The author lays down these three rules: "(1) When a sæptal spur seriously impedes the respiratory function of the nasal fossa, it should be removed. (2) When a sæptal spur impedes the drainage from an accessory sinus or a nasal fossa, it should be removed. (3) When a sæptal spur is in contact with opposing structures, it should be removed." The author advises against the use of adrenalin, as it is better to have the hæmorrhage happen at the time of operation rather than some hours later. (5) *Deflections of the Cartilaginous Sæptum*. The indications for operative intervention in this condition are the same as the ones given for spurs of the sæptum. When operation is necessary it will be found that the method suggested by Asch will give very gratifying results. Asch's operation is described in great detail by the author. (6) *Irregularities of the Bony Sæptum*. Deflections and deformities of the bony sæptum are usually either congenital or due to some inflammatory process. They are rarely the result of traumatism. Operations on the bony sæptum should be confined to those that can be performed with the saw or with the electric trephine. Forcibly rupturing the bone may have a fatal result. (7) *Abscess of the Sæptum*. This should be treated like an abscess elsewhere, by incision and drainage. Neglected abscesses may produce a life-long deformity. If syphilis is at the bottom of the trouble, specific treatment should not be neglected. (8) *Nasal Myxomata*. In about 50 per cent. of all cases, polypi are bilateral. They usually spring from the middle turbinates or from the middle meatus. They can best be removed by means of the cold wire snare. The seat of attachment of the pedicle must be removed if possible. This will usually be done if the snare is properly used. After the loop has been carefully adjusted about the pedicle the tip of the snare is pressed firmly against the anterior tip of the middle turbinate bone and is kept in this position while the loop is being tightened. By using the snare in this manner the point of attachment will be effectually removed and with a minimum of damage. Contrary to the usual text-book advice, the author advises that the operation should be performed as rapidly as possible. He also advises against touching the spots from which the polypi arise, with either the galvanocautery or ordinary caustic. The surgeon's main reliance should be placed on the thoroughness with which he has done the cutting operation.

PHYSIOLOGY AND PATHOLOGY.

Experiments Proving the Non-transmission of Tuberculosis from Hogs Affected with that Disease.—Though it has been amply proved that the danger of transmission of bovine tuberculosis through the ingestion of beef is but slight, definite knowledge of the danger of tuberculous infection from the flesh of the hog has hitherto been lacking, writes J. Zabana (*La Semana Médica*, February 26th); and as such meat is not infrequently eaten uncooked, the experiments which he has carried out are not without interest and practical value. These he describes as follows: The flesh from the shoulder and thigh of hogs affected with generalized tuberculosis was triturated, the juice expressed, and intraperitoneal injections of three, five, eight, and ten cubic centimetres of this juice administered to guinea pigs; the results being negative in every case, though check animals, inoculated with an emulsion of the tuberculous organs from the same hogs, developed a generalized tuberculosis.

Human and Bovine Tuberculosis.—Professor E. von Behring (*Wiener klinische Wochenschrift*, March 19th) discusses the relations between Koch's tubercle bacillus and similar organisms. The usual criteria of differentiation are not always to be relied upon, as the author and Roemer have shown that a certain generation of chicken tubercle bacilli are absolutely identical with bovine bacilli. The bacilli appearing in mammals, however, often present differences in the anatomical changes produced, in culture, etc. The author believes that bovine bacilli may easily produce disease in man, and that the former are especially virulent. Behring speaks of tuberculosis of the newly born due to the weak resistance of the epithelium of the gastric and intestinal mucosa, and repeats his plan of giving nurslings antitoxic proteids by mouth as a prophylactic.

Congenital Absence of the Four Extremities.—M. G. Allaire and M. H. le Meignen (*Gazette médicale de Nantes*, January 24th) record the case of a man, now fifty-two years old and in good health, who has a congenital absence of both arms and legs. In all other respects, he is splendidly developed and bears no scars or lesions of the viscera. The right arm is represented by a stump twenty-three centimetres long and is freely movable, such muscles as exist, especially the deltoid, being well developed. The stump of the humerus is well seen by the aid of the Röntgen ray. The osseous stump of the left arm is but seven inches in its total length. The right thigh is twenty-three centimetres long, and the left twenty-five. Walking is accomplished by twisting and turning the body on the stumps of the thighs. The genital organs and rectum are small, and but one testicle can be demonstrated. The reporters reject the theory of intrauterine amputation as a cause for the deformity in this case, on account of the symmetry of the deformities; they prefer to regard the peculiarities as due to some prenatal influence acting upon the development of the extremities, the nature of which is absolutely unknown.

Spherical Thrombi Floating Free in the Cavity of the Heart.—Dr. Kobsarenko, of Kieff (*Roussky Archiv Patologyi*, November 30, 1902) finds that

free spherical thrombi very rarely develop in the cavities of the heart. In one case a thrombus of this kind was found in the right auricle. In fifteen other cases it was found in the left auricle. In these fifteen cases no valvular lesion was found in two instances, while in thirteen others there was a stenosis of the venous auriculoventricular orifice in the left auricle. The size of the thrombi varies between that of a cherry and that of a hen's egg. Their consistence has been noted only in six cases. In one case it was soft, in five other cases hard. One author speaks of an endothelial membrane around the thrombus. These thrombi are found in men and women between the ages of twenty-five and forty years. A seventeenth case has been observed recently in Kieff, and is described in the present article.

The Formation of a Hæmorrhagic Infarct in the Superior Mesenteric Artery.—Dr. S. Kirkoroff, of Khichinioff (*Roussky Archiv Patologiyi*, November 30, 1902) calls attention to the fact that the formation of infarcts in the superior mesenteric artery does not conform with the law of Cohnheim, which says that hæmorrhagic infarcts occur only in organs the arteries of which are terminal. The work of Litten and Faber has shown, however, that the superior mesenteric artery, not having any arterial anastomoses, presents itself, from a functional viewpoint, as a terminal artery. The case reported is that of an infarct of a large branch of the superior mesenteric artery.

The Results of Intravenous Injections of Dilute Formalin Solution in Septicæmic Rabbits. By W. H. Park, M. D., and W. A. Payne, M. D. (*Medical News*, April 4th).—The experiments were performed in the Research Laboratory of the New York Department of Health, after the report of Dr. Barrows's case of streptococcus septicæmia, in which recovery followed the injection of formalin solution. The experiments, though of limited number, seem to show: (1) That, with even slightly virulent streptococci and with even large doses of formalin, streptococci can, in rabbits, go on increasing in the blood and cause death through septicæmia. (2) That injections of formalin may hasten the fatal result. In the experiments performed, all the rabbits that received formalin after the streptococcus injection died before the check animals. The same results were obtained in a series of experiments, in which virulent pneumococci were used in place of streptococci. (3) That the fatal outcome of septicæmia in man after dilute formalin injections, taken in connection with the author's experiments and with experiments recorded elsewhere, should cause us to be guarded in using formalin, and that we should weigh each case injected in order to determine, not only if the formalin has actually caused the improvement in case recovery should ensue, but also to determine, in the event of a fatal result, whether the formalin injections have not actually hastened the patient's death.

On Golgi's Intracellular Network in the Nervous Elements of the Gasserian Ganglion.—Dr. Serge Soukhanoff, of Moscow (*Roussky Archiv Patologiyi*, November 30, 1902) has investigated the structure of the nerve cells contained in the Gas-

serian ganglion in rabbits at different ages. The ganglia were removed from the skulls of these animals as quickly as possible, placed in Veratti's liquid [5 per cent. potassium bichromate, 1 part; 0.1 per cent. of platinum and potassium chloride, 1 part; and 1 per cent. osmic acid, from $\frac{1}{2}$ to 1 part] for from ten to twenty days. The preparations were thereupon placed in a mixture of copper bichromate [1 part of 5 per cent. solution of copper sulphate or acetate and 3 parts of a 5 per cent. solution of potassium bichromate] for from one to two days, and finally into a 1 per cent. solution of silver nitrate for from one to four days. The duration of the fixation process varied with the age of the animal; the older the animal, the longer time was required for the process. After having examined a number of ganglia, the author became convinced that the intracellular network of Golgi was visible in a comparatively insignificant number of cells. In places the desired reaction is more or less well marked; in others the reaction was but partially observed. The structure of the intracellular network of the Gasserian ganglion resembles closely that of the spinal ganglia, as these structures are analogous to each other. The peripheral zone of the cells is free from this network, and this zone varies in extent with the distinctness of the outline of the cell. The network belongs to the intracellular apparatus, but has nothing to do with the nucleus of the cell. It is composed of filaments of unequal thickness, and gives the impression of a closed system, no part of it projecting beyond its limits into the periphery of the cell body. While the author could not identify the significance of the intracellular network of Golgi with the fibrillary (conductive) apparatus, its analogy with the intracellular canaliculi could not be ignored.

Note Upon a Possible Relationship Between Carcinoma and Nerve or Trophic Areas. By G. L. Cheate, F. R. C. S. (*British Medical Journal*, April 18th).—In this article the author points out certain features in the pathology of cancer, especially in connection with its distribution. These features are: First, that there is a proportion of cases which show a marked relationship between the spread of the primary focus and the distribution of nerves and trophic areas. Arising out of this observation is the practical issue that the extent of these areas should be taken into consideration in marking out incisions when removal of cancer is contemplated. Second, that there is reason for thinking that the incidence of cancer within a nerve area is not a fortuitous circumstance, but may be due to the direct or indirect nervous influence over that area.

HYGIENE AND SANITARY SCIENCE.

Alcohol as a Food.—M. H. Roger (*Presse médicale*, March 4th) says that, scientifically, we must regard alcohol as a food, if a food is defined as a substance capable of furnishing calories. It is however, a dangerous and a costly food. As to replacing alcohol by some other aliment, Roger says that alcoholic drinks can be easily dispensed with if a little more butter and sugar are taken with meals. These are cheaper than alcohol and do not cause dangerous and irreparable lesions.

Book Notices.

A Treatise on Diseases of the Eye, Nose, Throat, and Ear. For Students and Practitioners. By Various Authors. Edited by WILLIAM CAMPBELL POSEY, A. B., M. D., Professor of Ophthalmology in the Philadelphia Polyclinic, etc.; and JONATHAN WRIGHT, M. D., Attending Laryngologist to Kings County Hospital, etc. Illustrated with 650 Engravings and 36 Plates in Colors and Monochrome. Philadelphia and New York: Lea Brothers & Company, 1902. Pp. xiv-19 to 1238.

A work of such encyclopædic proportions should, we think, have been bound in two or more volumes. Aside from this criticism, the publisher deserves much praise. The text is printed in large, clear type, the headings are well displayed, and the illustrations and colored plates are, with some exceptions, excellent. The work consists of 685 pages on the eye, 390 on the throat and nose, and 125 on the ear. Each chapter is dealt with by a different authority. For this reason it is noteworthy that the work is comparatively innocent of the repetitions, omissions, and inconsistencies so common to "systems." In short, each chapter is complete in itself.

While not of uniform excellence, they are all satisfactory, and their thoroughness and their teachings may be depended upon. Obviously it is impossible here even to mention all the subjects treated. The chapter on The Eye in its Relation to General Diseases, by Professor C. F. Clark, is especially thorough, instructive, and suggestive. A shorter chapter on The Neuroses of the Nose and Throat, by Dr. Emil Mayer, is a valuable, painstaking abstract of the literature of odd cases, together with a report of interesting personal experiences, logically classified.

Recherches anthropométriques sur la croissance des diverses parties du corps. Détermination de l'adolescent type aux différents âges pubertaires d'après 36,000 mensurations sur 100 sujets suivis individuellement de 13 à 18 ans. Ouvrage couronné par la Société d'anthropologie de Paris, 1902. Par le Dr. PAUL GODIN. Préface par M. le Dr. L. MANOUVRIER, Professeur à l'École d'anthropologie de Paris. Paris: A. Maloine, 1903. Pp. xiv-212. (Prix, 5 fr.)

In a work for which the Broca prize for 1902 was awarded by the Société d'anthropologie of Paris, the author has collated the data of thirty-six thousand measurement made at intervals of six months between the ages of thirteen and eighteen years on the persons of one hundred cadets at the preparatory military school of Saint-Hippolyte du Fort, with the object of gaining more precise knowledge of the morphological anatomy of the adolescent and its variations under the influence of growth and puberty. The series is of particular value for the reason that each of the individuals was observed and examined nine times in all throughout the period of four years and a half, over which the investigations extended, allowing a study of one hundred individualities or variations in growth as well as a gen-

eral view of the mean values. The period from thirteen and a half to eighteen years is perhaps the most interesting and important for the study of development.

The author begins his measurements with subjects who are still children, and ends when they are almost adults. This period is one of great intellectual activity and of organic needs which are not infrequently antagonistic. Puberty takes possession of the individual between the fifteenth and sixteenth years. In spite of its gradual instillation, the process represents one of increased activity for the entire organism, especially for the muscular system. As the characteristic phenomenon of puberty escapes notation, the determination of its appearance is based on evidences of such overactivity, consisting almost exclusively of phenomena of growth, as of the hairs on the pubes and in the axillæ, and that of the development of the vocal cords, increase of length and thickness of the neck, augmented circumference of the trunk and limbs, with an accompanying rise in weight. Growth, which was principally osseous before puberty, becomes muscular during this period.

It is interesting to note the observation of a change of color in the hair and in the iris in quite a large number of cases (28 per cent.). The hair always assumes a darker shade with puberty, while the reverse is the case with the iris. In quite a large number of cases (23 per cent.), the iris, which had shown a complex coloring with an arrangement of the pigment in dots, striæ, etc., becomes almost uniform in hue. It is impossible in a general review to do more than indicate the deductions reached. The tables and statistics of measurement must be studied in the original. They offer extremely valuable anthropometric and anatomical data.

Surgical Anatomy and Operative Surgery. For Students and Practitioners. By JOHN J. McGRATH, M. D., Professor of Surgical Anatomy and Operative Surgery at the New York Postgraduate Medical School, etc. With 227 Illustrations, including Colors and Half-tones. Philadelphia: F. A. Davis Company, 1902. Pp. xiv-559. (Price, \$4.)

The main purpose of this book seems to be that of serving as a guide to students pursuing a course of operative surgery on the cadaver. Viewed from this standpoint solely, it is a practical exposition of the subject. "Cadaveric surgery" is mainly under consideration, and the student is offered the staple article of surgical operations in cold blood, but lacking the warmth of color which a consideration of clinical surgical interest would supply. This is exemplified in the matter of operations for appendicular inflammation, in regard to which, in a correct fashion, McBurney's and Battle's incisions are described; yet there is not one word of advice as to when the choice should fall to either, or as to when both may have to be abandoned for the free incision of all muscles. At this stage the question of hernia incident to the latter procedure, and its avoidance, ought to be dealt with. In short, the work lacks the critical element.

The range of operations described is very com-

plete, and the narrative of each is ushered in with a description of the regional surgical anatomy bearing on the operation. The many diagrammatic illustrations—we side with the author—greatly facilitate the understanding of the operations.

There is but one region in which the author has neglected to describe the methods of surgical intervention, that of the heart. We find no mention of puncture of the pericardial sac, pericardiotomy, or heart suture. Concerning all other operative procedures, they accord with the best opinions of the day.

The author expressly stated in the preface that the technics of operations would be omitted. Now, technics can no more be avoided in a properly conducted operative course on the cadaver than *in vivo*. Through this disregard for technics and the cited omissions as to what character of operation to choose, the book, otherwise good, is deprived of much pædagogical value.

Anatomy. A Manual for Students and Practitioners. By WILLIAM H. ROCKWELL, JR., M. D., Formerly Assistant Demonstrator of Anatomy in the College of Physicians and Surgeons, Columbia University. Edited by BERN B. GALLAUDET, M. D., Demonstrator of Anatomy and Instructor in Surgery, College of Physicians and Surgeons, Columbia University, etc. Illustrated with Seventy Engravings. Philadelphia and New York: Lea Brothers & Company, 1903. Pp. 3 to 620. (Price, \$2.25.)

In offering this handbook of anatomy to the medical student, the aim of the author has been to present an epitomized edition of Gray's *Textbook of Anatomy*. While many compends of anatomy not founded on other books have from time to time been published, this abridged, well edited edition of Gray's *Anatomy* is superior in that it presents anatomy as a narrative and not in the schoolboylike fashion of fixed questions and answers. The book constitutes a framework upon which to build up a more elaborate and detailed knowledge of the subject.

The illustrations are borrowed from all sources and with a thoughtfulness that reflects admirably the experience of the author as a teacher of anatomy.

I Vari Metodi Anestesi e Loro Indicazioni. Dott. GIOVANNI PALLERONI, Assistente alla Clinica Chirurgica Generale della A. Università di Palermo, etc. Napoli: V. Pasquale, 1902. Pp. 7 to 272.

In this manual not a single anæsthetic or combination of anæsthetics appears to have escaped the author's scrutiny. The entire gamut of narcotics, from chloroform to spinal anæsthesia has been discussed, and every page is replete with citations from foreign authorities—in fact, these literary references in the text and appended bibliography are a noteworthy feature and go far toward making this book very valuable as a reference work.

One third of this treatise is devoted to the consideration of chloroform. The attitude toward ether is that the mortality attendant upon its use is greater than that of chloroform, if the complications following ether anæsthesia are taken into consideration.

Notwithstanding the acceptable published utterances as to the greater fatality of chloroform, it is the most widely used anæsthetic the world over. Spinal anæsthesia is only indicated when no other method is available.

By these few citations we hope to have directed the attention of those specially interested in anæsthesia to a foreign publication abounding in much that is practical and erudite, though we entirely dissent from the author's estimate of ether from the point of view of safety.

A Manual of Medicine. Edited by W. H. ALLCHIN, M. D., Lond., F. R. C. P., F. R. S. Edin., Senior Physician and Lecturer on Clinical Medicine, Westminster Hospital, etc. Volume IV. Diseases of the Respiratory and Circulatory Systems. New York and London: The Macmillan Company, 1902. Pp. x-493. (Price, \$2.)

This volume on diseases of the respiratory and circulatory systems is especially commendable. While the editor, with becoming modesty, calls this work a manual, that is, a handbook, it is so only in size. Its contained material is more extensive than that of most textbooks and almost as great as that of some of the more pretentious systems of medicine. One notes with pleasure that attention is given to detailed clinical description.

The contributors to this volume are J. Mitchell Bruce, who writes on diseases of the heart and blood vessels; Francis de Haviland Hall, on diseases of the pleura; Leonard Hill, on the physiology of respiration and circulation; Hector Mackenzie, on diseases of the lower respiratory tract; Lewis Smith, on disorders of the upper respiratory tract, and the editor, on disorders of the diaphragm and dropsy.

A System of Physiologic Therapeutics. A Practical Exposition of the Methods, other than Drug-giving, Useful in the Prevention of Disease and in the Treatment of the Sick. Edited by SOLOMON SOLIS-COHEN, A. M., M. D., Professor of Medicine and Therapeutics in the Philadelphia Polyclinic, etc. Volume VI. Dietotherapy and Food in Health. By NATHAN S. DAVIS, JR., A. M., M. D., Professor of the Principles and Practice of Medicine in Northwestern University Medical School, etc. Philadelphia: P. Blakiston's Son & Company, 1902. Pp. ix. 17 to 372.

This volume of the series is one of the best that have appeared. It offers to the profession a very practical and therefore valuable compendium on the food treatment of disease. The principles of dietetics are thoroughly discussed and presented in a very readable style. The important subject of diet in health—perhaps more important than diet in disease—is not slighted.

The work is divided into two parts: I. General Principles of Diet and Diet in Health. II. Diet in Disease. The first part discusses the various kinds of food and beverages, gives their nutritional character, their composition, and their values, and in a concise manner treats of infant feeding, substitutes for mother's milk, and the preparation of infants' food.

Food as a cause of disease might have been dealt with more in detail. To errors in diet and excessive eating and drinking a large amount of disease among the higher classes may be attributed. On this account the subject is worthy of more than a three page mention.

Part II deals with diet in special diseases and deserves, on account of its practical treatment, very great praise.

The Practical Medicine Series of Year Books, comprising Ten Volumes on the Year's Progress in Medicine and Surgery. Under the General Editorial Charge of GUSTAVUS P. HEAD, M. D., Professor of Laryngology and Rhinology, Chicago Postgraduate Medical School. Volume II. General Surgery. Edited by JOHN B. MURPHY, M. D., Professor of Surgery, Northwestern University Medical School. November, 1902. Chicago: The Year Book Publishers. Pp. 3 to 553. (Price, \$2.)

The widely scattered records of newer surgical procedures are very serviceably gathered in this year book. It is almost a perfect collection of surgical progress during the past year, for a most diligent search has brought to light no omissions of any importance.

It is evident from its perusal that the army of surgeons have been fighting all along the line, but particular points of attack have been appendicular inflammation, cholecystitis, and hypertrophy of the prostate. To these a larger space has been devoted than to other topics.

In keeping with the admonition expressed in the preface, that the high mortality from these operations is attendant in great measure upon delay arising from faulty and deficient diagnosis, the abstracts dealing with diagnostics are as much in evidence as the reviews of technics. From the introduction to the index, every page reflects thoughtful and conscientious work which renders it a book of service to the progressive surgeon and active practitioner.

BOOKS, ETC., RECEIVED.

Collected Essays and Articles on Physiology and Medicine. By Austin Flint, M. D., LL. D., Professor of Physiology in the Cornell University Medical College, etc. In Two Volumes. New York: D. Appleton & Company, 1903. Volume I. Pp. xxviii-465. Volume II. Pp. viii-518.

A Text-book of Legal Medicine and Toxicology. Edited by Frederick Peterson, M. D., President of the New York State Commission in Lunacy, etc., and Walter S. Haines, M. D., Professor of Chemistry, Pharmacy, and Toxicology, Rush Medical College, Chicago. In Two Volumes. Volume I. Philadelphia, New York and London: W. B. Saunders & Company, 1903. Pp. 3 to 730. (Price, \$5.)

The Care of the Baby. A Manual for Mothers and Nurses, containing Practical Directions for the Management of Infancy and Childhood in Health and Disease. By J. P. Crozer Griffith, M. D., Clinical Professor of Diseases of Children, University of Pennsylvania, etc. Third Edition, thoroughly Revised. Philadelphia, New York, London: W. B. Saunders & Company, 1903. Pp. 7 to 436. (Price, \$1.50.)

Manuel de bactériologie clinique. Par M. Funck, Chef du Laboratoire de bactériologie de l'Université de Bruxelles, etc. Avec sept planches coloriées hors to the texte. Deuxième édition. Bruxelles: Henri Lamertin, 1903. Pp. vii-239.

Practical Points in Nursing for Nurses in Private Practice. By Emily A. M. Stoney, Graduate of the Training School for Nurses, Lawrence, Massachusetts, etc. Third Edition, thoroughly Revised. Illustrated with 79 Engravings in the Text and 8 Colored and Half-tone Plates. Philadelphia, New York, and London: W. B. Saunders & Company, 1903. Pp. 9 to 466. (Price, \$1.75.)

A Manual of Medical Jurisprudence, Insanity, and Toxicology. By Henry C. Chapman, M. D., Professor of Medical Jurisprudence in the Jefferson Medical College of Philadelphia. Third Edition, thoroughly Revised. With 64 Illustrations, and 4 Plates in Colors. Philadelphia, New York, and London: W. B. Saunders & Company, 1903. Pp. 7 to 329. (Price, \$1.75.)

Tuberculosis. Recast from Lectures delivered at Rush Medical College, in Affiliation with the University of Chicago. By Norman Bridge, A. M., M. D., Emeritus Professor of Medicine in Rush Medical College, Chicago, etc. Illustrated. Philadelphia, New York, and London: W. B. Saunders & Company, 1903. Pp. 3 to 302. (Price, \$1.50.)

New Inventions.

A NEW OPERATING AND EXAMINING TABLE.*

By A. E. ISAACS, M. D.,
SURGEON, BETH ISRAEL HOSPITAL, ETC.

About a year ago, in looking up furniture for the new Beth Israel Hospital, I had occasion to examine the various operating tables on the market. While there were many satisfactory tables for the heavy work usually done in the operating room, I could not find a light, suitable table for examinations, dressings, and the minor work done in the wards, that agreed with what my ideas of what such a table should be.

None of the many tables I saw combined the advantages of lightness, stability, easy motion, good drainage, and simple manipulation for the different positions.

I set about to devise one that should include the good features of other tables with some original ideas of my own, and, with the assistance of The Hospital Supply Company, by whom it was made, I have succeeded in perfecting the table I now present for your criticism.

In all the plans of this table I have kept two important points in view—simplicity in construction and manipulation, and economy in cost—though neither has been allowed to affect efficiency in practical use or quality in construction.

The result is a very neat and light table most easily manipulated in all changes of position, and so simple in construction that nothing is likely to get out of order. While it is strong enough to stand the strain of heavy and continual hospital use, it is specially adapted for examinations, dressings, and minor operative work, such as is done in the physician's private office.

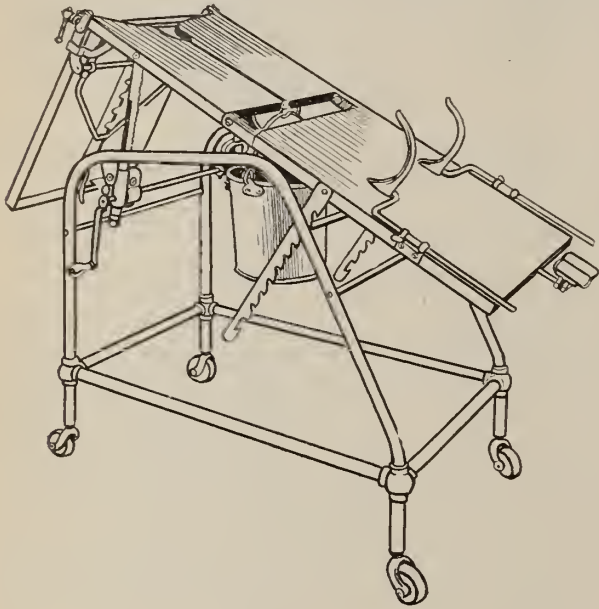
The first model was devised for use in the hospital wards and dispensary. The modifications that the present model includes, were made to adapt it to the requirements of general office use.

The table is built on aseptic principles, all enamelled steel, or steel and glass. It consists of a

* Presented at a meeting of the Eastern Medical Society, February 13, 1903.

central body and head and foot wings. The head wing holds its position automatically wherever placed in raising it; and, by releasing the small lever at its side, it can be lowered to any position. The foot wing, which is detachable, also works automatically, and will hold its position at any angle. The lowering is done by releasing a lever at the end of the foot wing, which frees the ratchet and allows it to be lowered to any position.

For the lithotomy position or gynæcological examinations, this foot wing is not needed. It can either be left hanging in place or removed entirely. The central body of the table consists of two leaves slightly inclined toward the centre with an open space between them for drainage. This space



broadens out into a U shape in front, allowing freedom in vaginal or rectal examination or instrumentation. Below this space is a gutter, which empties into the drainage pan or bucket.

The head piece is shaped with a slight angular depression toward its centre which drains into the same gutter and pan. The gutter can be drawn out, if necessary, to catch the vaginal irrigation, etc., or if not needed for that purpose, can be pushed back out of the way, allowing ample space for instrumentation.

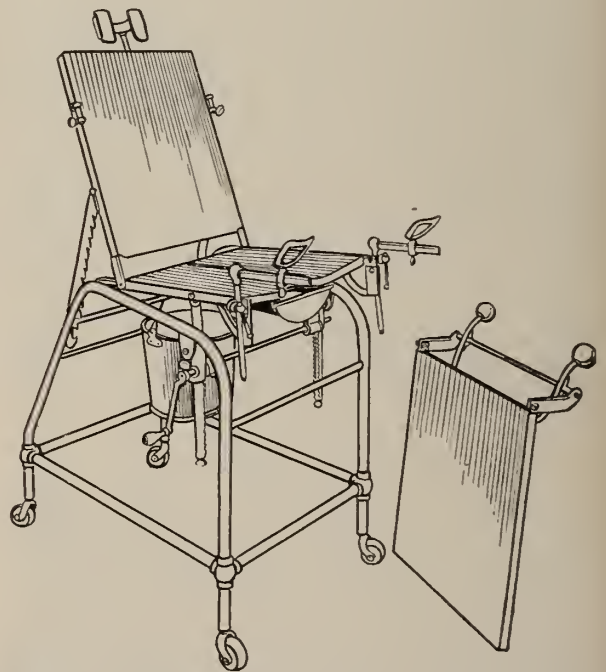
This table can be transformed from an operating table into a perfect chair, by raising the head wing and removing the foot wing. When thus used, the centre body forms the seat, which can be raised as high as desired, without changing the angle or relation between seat and back, hence the physician does not need to stoop in order to make rectal or vaginal examination, but may raise the patient to any convenient height. In irrigating, the seat can be lowered below the horizontal position, thus causing the drainage to flow forward, and not soil the clothing of the patient.

This table is arranged with clamps that receive interchangeable gynæcological or lithotomy stirrups of any pattern. The head piece is supplied with clamps to receive shoulder supports and a head rest

if needed. To assist the patient in getting on or off the table, it can be provided with a step on the front which can be turned in out of the way when not wanted.

A basin holder and instrument tray can be provided on either side of the table on swinging supports, which bring them into handy positions or swing them under the table when not in use. A cushion with detachable foot wing is also made, having its centre part open to preserve the drainage arrangements of the table.

An important feature of the table is the arrangement for raising it into, or lowering it from, the Trendelenburg position. The ratchets, levers, etc., usually used for this purpose, are troublesome and not reliable, as those of us who operate much must have experienced. I have more than once seen the patient take a sudden drop when a careless or absent minded nurse forgot for the moment how to work the ratchet, or when the crank which turns the ratchet accidentally slipped off with the table in an elevated position. With the arrangements of this table, such a thing cannot happen, as there is no catch or ratchet to be forgotten, and even should the crank slip off, the table cannot drop, but must remain firmly in whatever position it may be. It is elevated and lowered by a new device. Wherever



the crank stops, the table stays where it is, no matter how heavy a patient be on it. Moreover, by a system of leverage in the mechanism, the weight of the patient is reduced to about one tenth, so that in raising or lowering there is no extra effort required, and with a patient on the table a child could manipulate it.

That the good points of the table are appreciated is attested by the fact, which I have on the best of authority, that the new Mount Sinai Hospital has accepted the pattern for use in its wards and dressing rooms.

This table is built in several styles, either with all enamelled steel top, or with seat of heavy half inch French crystal plate glass, head and foot wings of enamelled steel, or with seat and head wing fitted with heavy half inch glass, while the foot wing is of enamelled steel.

240 EAST BROADWAY.

Miscellany.

Tuberculosis in France.—Owing to the steadily increasing mortality from tuberculosis in France, M. Combes, the premier, has approved of the adoption of certain principles of hygienic precaution, which consist (1) in the destruction of bacillary expectoration; (2) disinfectant washing of floors and walls; (3) disinfection of clothing and bedding; (4) isolation of declared cases of tuberculosis; (5) salubrity of sleeping and dwelling rooms; (6) inspection of meat and milk; (7) a recommendation to women and girls to abandon wearing corsets. M. Crotte, of the Crotte Institute for Tuberculous Patients, in the Rue de Turin, under the auspices of the city of Paris, asserts that the corset is "one of the most prolific causes of the propagation of consumption among women and girls."

The Cause of Death.—The following excerpt, quoted by the *Boston Medical and Surgical Journal* for January 15th, is almost good enough to be the finding of a "Crown's Quest." Speaking of the death of a distinguished member of the medical profession, a certain medical journal says: "Dr. —'s death, however, was doubtless inevitable, as he enjoyed all the advantages of skilled medical attendance."

Pyorrhœa Alveolaris and Renal Disease.—Dr. D. D. Smith (*Proceedings of the Philadelphia County Medical Society*, January 31st), in a paper on Mouth Infection Due to Natural Teeth, says: "Pyorrhœa alveolaris (formerly styled Riggs's disease), an inflammatory condition of gum margins, pericementum, cementum, and alveolar process, resulting in pus formation, and *wholly dependent on the presence of natural teeth in the mouth*, is unquestionably productive of some general diseases. My observations lead to the confident belief that the kidneys are the organs affected by the products of this particular pyæmic condition. An error quite generally accepted for fact, is the belief that pyorrhœa alveolaris results from uræmic poisoning. While uræmia and pyorrhœa may be, and often are, associated, the presence of urea in the blood is not a cause of alveolar pyorrhœa; but the converse of this proposition is a true pathological condition. Uræmia is a usual result of alveolar pyorrhœa, due to the perpetual ingestion of mouth toxines—pus and other effete products—which are constantly and inevitably taken into the stomach from this inflammatory condition *in the mouth*."

A. New Suture for Deep Incisions.—At the thirty-third annual meeting of the Medical Society of Virginia, Dr. Jacob Michaux (*Virginia Medical*

Semimonthly, March 27th) reported the following suture of his own devising for deep incisions. He said: My method is as follows: Take a suture with a needle on either end, and pierce the peritonæum only on one side, bringing the needle out just under the surface of the rectus muscle (supposing we are closing an incision in the median line), pass over the rectus and catch up the aponeurosis. Now lay down needle No. 1 and take up the other and repeat the operation on the opposite side. Now, the peritonæum and aponeurosis are pierced on both sides. The next step is to cross over, taking up the aponeurosis *again* (with needle No. 1), on the opposite side, carrying the needle through the fat and skin at one thrust. Then needle No. 2 is taken across the incision and the aponeurosis pierced as well as the overlying fat and skin on that side. This completes the stitch.

It will now be seen that the aponeurosis is pierced twice on each side, thus ensuring a firm hold upon this important structure, and that each thread as it crosses must draw the edges of the aponeurosis together. This is desirable because upon the close union of its edges depends the exemption from hernia. The peritonæum is easily adjusted, and the fat and skin give little difficulty in the adjustment of the edges of these incisions; but it is difficult to approximate the middle portions closely, and especially the edges of the aponeurosis.

This is, in fact, a sort of figure of eight suture. It is claimed for this method that it has the advantage over the ordinary one that when the wound is healed the whole suture can be removed minimizing the risk of infection; also that it obviates the disadvantage of the through and through suture, which is farthest apart in the middle where the closest approximation is desired.

The author calls attention to the advisability of not including the muscle in the stitch in central incisions; for this induces constant twitching of the fibres, which not only causes pain, but prevents prompt union.

The advantages claimed are these: 1. Uniform tension along the walls of incision. 2. Close approximation of edges of aponeurosis. 3. Complete removal of suture after healing. 4. Simplicity. This procedure may be applied to all deep incisions wherever located.

Dr. Michaux, however, states that after he had devised this stitch he found upon looking up the literature of the subject that Dr. Murphy, of Chicago, had introduced it about three years ago.

Lung Surgery: Historical and Experimental.—Dr. Ricketts ends his paper, of which we have already given an extensive abstract, with the following personal conclusions:

EXPERIMENTAL SURGERY OF THE LUNG. (PERSONAL CONCLUSIONS.)

Pneumonotomy.

1. Emergency surgery precedes elective surgery, and surgery of the lung is not the exception to the rule.

2. One can hardly imagine a pathological condition in the lung that has not been dealt with surgically, with more or less success in emergency cases.

3. This being true, the same methods may be applied in *selected* cases, with even better results, if the more modern surgical principles be employed.

4. Severing one or more of the larger pulmonary blood vessels results in instant death.

5. If death does not result within a few minutes, bleeding will be slow and gradual.

6. If bleeding is slow and gradual it may require hours or days to cause fatal exhaustion.

7. If death does not occur until after the end of the second day following severe bleeding, infection is its cause.

8. All or a part of the escaped blood may pass through the opening in the chest into the bronchus or alimentary tract.

9. The blood may escape into the pleural cavity or cavities, pericardial or peritoneal cavity, or all of them, and thereby become concealed.

10. More definite knowledge of conditions and symptomatology is necessary that surgery of the lung may be perfected and made more aggressive and general.

11. Abnormities, congenital or acquired, must always be considered in dealing surgically with the lungs.

12. *Atelectasis* and *apneumotosis* should be cared for by relieving the compression by removing the cause.

13. The same surgical principles can be applied to the lung as to other organs of the living body.

14. The bony chest may be opened for exploration of the lung with as little danger as opening the abdomen, cranium, articulating capsules, kidney, liver, pancreas, spleen, stomach, gut, or hepatic ducts.

15. Hermetically closing the chest is irrational, unscientific and dangerous.

16. Closing the chest wound by any means does not prevent the escape of blood from injured pulmonary vessels into the pleural cavity.

17. All wounds of the chest wall, whether penetrating or non-penetrating, should be treated antiseptically, and with reference to drainage.

18. No instrument or needle should be made to enter the lung tissue for exploration or the removal of fluid, unless the bony chest has previously been opened.

19. *Foreign bodies* in the bronchi or parenchyma of the lung may be detected with a fine exploratory needle through an open chest with the lung contracted.

20. Foreign bodies in the lung and bronchi when causing serious symptoms should be removed.

21. Some small foreign bodies become encysted and remain harmless.

22. The position of a foreign body in the lung changes with expansion and contraction of the lung.

23. *Hæmorrhage*, when due to pulmonary tuberculosis, should not be allowed to become fatal without opening the bony chest, and the application of pressure by forceps, gauze, or otherwise.

24. *Bleeding* of the lung from any cause will in many cases cease when the lung is allowed to contract upon itself with an open chest.

25. *Blood clots* within the pleural cavity should be removed at the time they are discovered, whether infected or not infected.

26. *Blood clots* in the pleural cavity may become organized with or without adhesions of the parietal and visceral pleura, or they may become infected and cause most serious consequences.

27. *Hæmoptysis* may be absent in the most severe lacerations of the lung.

28. If bleeding from larger pulmonary vessels results, forceps should be applied. If not, gauze should be securely packed in the cavity.

29. Drainage of pulmonary cysts of any character can be done with the same success as in any other organ.

30. Incision for drainage should be done with or without the presence of adhesions. If without adhesions, the opening in the chest should be at the lowest point of the pleural cavity for gravity drainage.

31. Many incisions of the lung may, and should, be made with or without even local anæsthesia.

32. It is probable that but few will necessitate the use of general anæsthesia.

33. *Abscess* of any character and of any location in the lung should be found and opened.

34. *Gangrene* of the lung demands most radical surgical measures, such as opening the chest, drainage, and the removal of all necrotic tissue.

35. *Polypi of the bronchi* seldom necessitate removal, but they may cause conditions which may require surgical intervention.

Pneumonorrhaphy.

1. Silk, silkworm gut, and animal tendons are the most desirable materials for lung surgery.

2. Absorbable sutures and ligatures are, as a rule, not to be relied on as to strength and durability.

3. Silk and silkworm gut may become encysted in the lung and remain harmless.

4. The tug and a combination of the tug and tobacco pouch sutures constitute the most desirable ones to use in the lung.

5. Ligatures and sutures may be dislodged by sudden expansion of the lung due to sudden closing of the opening in the chest wall.

6. The blood vessels, bronchi and lung tissue should be ligated separately, great care being taken not to include too much tissue of any kind in one ligature.

7. Needles to be employed in lung tissue should be round, with a rounded point. They should never have a sharp point, or sharp edges.

8. Not all ruptures, punctures, or lacerations of the lung require suture, or any surgical intervention whatever.

9. *Many lacerations* of the lung without fracture of the bony chest can, and should, be treated by suture, compression with gauze or forceps.

10. *Puncture* of the lung from any cause (such as stab and gun-shot) resulting in hæmorrhage should be treated by opening the chest, and the application of ligature or compression.

11. *Rupture* of the lung should be treated as laceration.

Pneumonectomy.

1. A portion or all of one lobe, or the entire right or left lung may be removed without causing death.

2. *For complete or partial lacerated portions* of

the lung when severe, pneumonectomy is necessary and should be done.

3. *Gangrene* of the lung requires in many cases removal of all necrotic tissue.

4. *Hernia* of the lung, when sudden and of but few hours' duration, should as a rule be amputated, and the stump fixed in the *chest wall* as there is no sac.

5. *Hernia* of the lung coming on gradually has a sac, and should be returned to the pleural cavity, if possible without amputation.

Pneumonoplexy.

1. This is the safest and most rapid way of dealing with the stump of lung tissue in the majority of cases necessitating excision for any cause.

2. Adhesions of the parietal and visceral pleura have without exception taken place, where either has been lacerated or incised, with or without suture.

3. The degree of adhesion corresponds with the degree of injury.

4. Cysts of the lung of any character can best be drained through visceroparietal adhesions. In the absence of adhesions the wall of the cyst may be sutured to the edges of the opening in the chest wall, drainage to be at once accomplished or at some subsequent time.

Veterinary Medicine and Human Medicine.—

S. G. Burkholder, M. D., M. D. V. (*Journal of Comparative Medicine and Veterinary Archives*, March), in an Historical Essay on the Relation of Veterinary Medicine to the Medical Profession, glances briefly at the development of medical science from the earliest times, showing that the earliest physicians practised veterinary as well as human medicine. "About 300 A. D., Vegetius, also a Greek disciple of Chiron, collected and revised all the works on the art of healing animals that had been published up to that time. We find no evidence that the practice of veterinary medicine existed as a distinct science previous to this time, but we do find that those versed in the art of healing who principally confined their efforts to the care and treatment of the horse held honored positions and recognized ranks in the Roman army several centuries before the beginning of the Christian Era. The horse was an indispensable factor in the art of warfare and those who looked after the medical needs of this noble animal had conferred upon them the foremost titles and honors of the land. This appreciation of the services of the veterinarian was not confined to the Roman Empire, but later, the French, the Normans, and the English held them in high esteem and conferred upon them similar titles of honor. The early history of medicine seems to prove that the original pioneers of the healing art and their followers treated all ailments of both man and beast with equal consideration and skill. The two distinct professions as they appear to-day, originated together, grew up together, were advanced and amplified by the same men, and were one and inseparable for a period of at least one thousand years. After the dissection of human bodies by the physicians and their students received legal sanction, and various medical schools were established, the followers of the medical practice confined themselves to the human family more and more completely until finally

the poor beast was apparently dropped from their consideration altogether, so far as investigating and treating their diseases was concerned."

The author reviews the number of important diseases to which man and the beast are alike subject, and lays it down that "the position held by the veterinarian and the duty he should strive to perform should not redound simply to the economic advantages of the stock owner; but his aim should be to annihilate diseases from the lower animals, many of which are transmissible directly to man, thus preventing transmission of contagious and parasitic diseases and protecting human life. This is far more important than the treatment of disease." Dr. Burkholder concludes as follows: "The significance of the veterinarian's position as a preventer of disease among man and animals, and his intimate relation to the medical profession will become more evident year by year until finally history will repeat itself and the two medical sciences so closely related will be merged into one, when all prospective practitioners will be educated in the same school of medicine, the veterinary science simply becoming a branch of general medicine."

A Self-performed Laparotomy.—The (*British Medical Journal* for March 28th quotes from Brantôme the following story of a laparotomy for the removal of a bullet, performed on himself by a Spanish soldier without leaving the field of battle. After operating on himself, he returned to the ranks and continued fighting until put out of action by a wound of the eye.

"The Spaniards have done great deeds in divers parts of the world since they have carried their arms and unfurled their flags almost over the whole earth, for which things they have earned among all nations the renown of an immortal glory. Leaving aside much of what is spoken of in the history books, one action alone of a soldier which has been undeservedly forgotten forces us to acknowledge the courage and valour of the Spaniards. At the time that the Marquis of Pescara was on his way to the obstinate wars of Lombardy, a fight took place between the French and the Spaniards. Louis de la Sena, a Spanish soldier, standing in the rank with his battalion was wounded by a bullet, and, his armour being insufficient, the bullet entered his body. The courageous soldier, feeling the bullet fall downwards into the hollow of the lower part of the belly, stepped a little way out of the rank, and with incomparable fortitude and courage took out a knife, made a small opening in the lower part of his belly, through which (a thing which will sound like a fable) he forced out the bullet, and pushing inwards his bowels with his fingers, with unexampled courage made on one side and the other of his wound divers small holes in the flesh, and, passing a needle through them, with great firmness, sewed up the opening he had made. Returning then to his place, no one perceived from his look the martyrdom which he had inflicted on himself with his own hands. On the contrary, he kept up a bold appearance among the soundest, albeit he was in such evil case, until a short time afterwards he received a shot from an arquebuse on the eyebrow, which destroyed his eye. On this account he had to be removed from his bat-

talion, and, having been dressed with no less diligence than admiration, he came to Valladolid, where was the Emperor Charles, and the monarch, having seen the proof of his valour, gave him by way of reward a perpetual pension of 100 ducats."

The Teeth and Digestion.—Dr. D. D. Smith (*Proceedings of the Philadelphia County Medical Society*, January 31st), in a paper on Mouth Infection Due to Natural Teeth, gives expression to some novel and somewhat iconoclastic views on the connection between the teeth and digestion. He says:

"To return again to the *Lancet*,¹ if my interpretation of the article referred to is correct, it would imply that 'children suffer from impoverished nutrition' because of caries and inability to masticate food; this presentation should be received with caution. The facts are that with modern culinary methods, neither perfect tooth mastication nor mouth insalivation are indispensable parts of the digestive process. True it is that free and comfortable mastication contributes greatly to the pleasures of taste and ingestion, and to that extent favors stomach digestion, but it is an office which can be delegated, as is often done, not only without injury but also with decided benefit. For the maceration of foods in the mouth, water and other customary drinks may be substituted for saliva without appreciable detriment; in many mouth conditions with advantage for the stomach. That saliva in the initial stages of digestion converts starch into sugar might have been a matter of more consideration before sugar entered so largely into foods and drinks, as at present. Now, with a constant over-supply of saccharines, saliva, frequently vitiated and infected as it is poured into the mouth a direct secretion by the salivary glands, might in many mouth conditions, give place to water in some form with advantage. We may regard water, not simply as a food adjuvant and a diluent to the circulation, but as an integral part of nutrition; as necessary to digestion as to tissue replacement and to the maintenance of life. In this connection it seems reasonable to predict that the student of dietetics must soon broaden his field from the consideration of foods in their analytical ultimates, to embrace other and perhaps more important matters in connection with their structural compounds. The demands of tissue building are such that we seem compelled to accept the fact that the real value of typical foods is dependent, not so much on their ultimate chemical elements, as on the value of the substance in its entirety, before the breaking up of the aqueous, vitalized, compound-cells. While fully aware that this may seem in conflict with the accepted physiology of digestion, it is a theory which is found to be in accord with everyday clinical experience and with conditions yet to be considered. The indifference of the stomach to mouth mastication and insalivation is clearly expressed in numberless cases of edentulous mouths; in these the processes of digestion and assimilation go forward regardless of tooth mastication, and with no apparent obstruction or derangement; and the remaining oral tissues in all cases will be found in perfect condition of health. It will yet be demonstrated that the

real cause of general disease emanating from mouth and teeth is due neither to dental caries nor disability of mastication, but to constant and perpetual infection through septic matter in foods and drinks and the inhalation of toxic emanations from the persistent and abiding infection in mouths containing natural teeth."

Dr. Smith concludes that caries is a result of environmental conditions, and recommends a treatment consisting of enforced, radical, and frequent change of environment for the teeth, and perfect sanitation of all mouth conditions. Experience having demonstrated that the most careful and painstaking are unable with the agents commonly employed, as the toothbrush and dentifrice, toothpick and dental floss, soaps, so-called germicidal washes, or other agencies, to effect this end, the plan of forcible, frequently renewed sanitation, by an experienced operator, has been instituted. The process consists of most careful and complete removal of all concretions, all calcic deposits, semisolids, bacterial plaques and inspissated secretions and excretions which gather on the surfaces of the teeth, between them, or at the gum margins; and this to be followed by thorough polishing of all tooth surfaces *by hand methods* (power polishers should never be used); not alone the more exposed labial and buccal surfaces, but the lingual, palatal and proximal surfaces as well, using for this purpose orange wood points in suitable holders, charged with finely ground pumice stone as a polishing material. Treated in this manner the teeth are placed in the most favorable condition to prevent and repel septic accumulations and deposits, and not less to favor all efforts of the patient in the direction of sanitation and cleanliness.

In every instance in which this treatment has been instituted for the deciduous teeth, and in many cases of adults, there has been immunity from decay, and the teeth have shown a marked change in structural composition. Alveolar development in children also has been apparently stimulated and increased, to meet requirements of the erupting teeth. The extreme and unnatural sensitiveness of the gums, attended with purple color, congestion, and tendency to bleed, has in every instance been fully overcome, and there has been quick return to the normal condition of low grade sensibility, to the natural pink tint of the gums with their typical striations and beautiful festoons. It is also apparent that the tissues of the teeth themselves—especially the dentine and enamel—probably through stimulation of the vital forces of the pulp by this treatment, begin a surprising change, for the better; a change which is first and specially noted in improved color and general appearance. Dull, opaque tooth substance often loaded with an offensive "old-ivory" pigment, is transformed into clear, translucent tooth tissue; the teeth assuming the appearance of living organs with an impressive individuality.

In the discussion that ensued, Dr. Smith's views were more or less supported by Dr. John B. Roberts, Dr. A. C. Wood, Dr. J. M. Anders, Dr. J. D. Thomas, and Dr. Charles S. Turnbull. Dr. Savary Pearce "while in sympathy with the idea of the paper" was not quite sure that the author had not exaggerated a great many of the conditions stated.

¹ Editorial in the *Lancet* for November 15, 1902.

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WHOLE No. 1276.

Lectures and Addresses.

THE DUTIES AND RESPONSIBILITIES OF TRUSTEES OF PUBLIC MEDICAL INSTITUTIONS.*

THE PRESIDENTIAL ADDRESS AT THE SIXTH CONGRESS OF AMERICAN PHYSICIANS AND SURGEONS, WASHINGTON, MAY 12, 1903.

By W. W. KEEN, M. D., LL. D., F. R. C. S. (Hon.),
PHILADELPHIA,

PROFESSOR OF THE PRINCIPLES OF SURGERY AND OF CLINICAL SURGERY, JEFFERSON MEDICAL COLLEGE.

The value of occasional and stated gatherings of the principal leaders of medical thought in the various special departments is acknowledged by all. Certainly those who have attended this congress, now held for the sixth time, have felt its broadening influence. We are all apt to become narrow when we are devoted heart and soul to one specialty, be it medicine, surgery, physiology, ophthalmology, or any other. When we meet nearly all of the more prominent men in cognate interrelated branches of medicine in Washington every third year, we are sure to find that there are as interesting and as important questions in other specialties as there are in our own; and, moreover, we are sure to find that there are men of as acute intelligence, wide reading, and original thought in other than our own departments whom it is our pleasure to meet, and whose acquaintance becomes valuable not only for what we find them to be, but because of the stimulus that they give to our own thoughts.

Ordinarily the presidential address has been devoted to some special professional topic. My first idea was to select such a subject for to-night, but as I was absent from the country when I received the very highly appreciated notice of my selection, I asked the members of the executive committee for suggestions, being sure that their united judgment would be better than my own. I was very glad when they proposed the topic upon which I shall address you, partly because it is different from the usual type of such addresses, and partly because it seems to me appropriate to the present time. I shall, therefore, give the time at my disposal to presenting to you some thoughts on The Duties and Re-

sponsibilities of Trustees of Public Medical Institutions.

Before entering upon my topic I beg to state explicitly that what I may say is offered in no spirit of unfriendly criticism, but only by way of friendly suggestion. I have been too long and too intimately associated with scores of such trustees not to know that they are almost without exception generous, self-sacrificing, giving of their time and money and thoughtful care without stint, and often sacrificing personal convenience and comfort for the good of the college or hospital which they so faithfully serve. Anxious to discharge their trust to the best of their ability, I am sure they will accept these suggestions, the fruit of forty years of personal service as a teacher and a hospital surgeon, in the same friendly spirit in which they are offered.

There are two such classes of institutions to be considered: (1) Medical colleges, and (2) hospitals, whether they be connected with medical schools or not.

There is, it is true, a third class of trustees for a wholly new kind of medical institution which has arisen as a modern Minerva Medica, born full-armed for the fray. Of this class we have as yet but a single example—the Rockefeller Institute for Medical Research. Akin to it are laboratories for special investigations, such as the two cancer laboratories in Buffalo and Boston. But the Rockefeller Institute is so recent, and its scope at present necessarily so undetermined, that I would not venture to consider the duties of these trustees, and I am sure their responsibilities are adequately felt by them. Moreover, their admirable selection of a director for the institution is the best pledge of a future wise administration. I heartily congratulate the profession and America upon the establishment of so peculiarly useful an institute. Its founder has wisely left its work unhampered, saving as to its general purpose, and the whole world, and especially the United States, will soon be his debtor for researches and discoveries that will abridge or even abolish some diseases, shorten sickness, prolong life, and add enormously to the sum of human happiness. Could any man of wealth by any possible earthly gift win for himself a higher reward or a happier recollection when he faces the future world?

Though not a medical institution, I cannot refrain also at this point from expressing, not only

* Published from advance sheets of the Sixth Volume of *Transactions of the Congress of American Physicians and Surgeons*, 1903.

for myself, but for you, our hearty appreciation of what the Carnegie Institution has done for medicine in the reestablishment of the *Index Medicus*. This publication is essentially and peculiarly American in origin, but its usefulness is world wide. It aids alike an author in Japan or in India, in Europe or America. It is one of the best and wisest undertakings of this lusty educational giant. But to ensure the permanent publication of the *Index Medicus* the profession must show that it really values this generous gift. Unless the *Index* finds a hearty support in the profession abroad and especially at home, we can hardly expect the continuance of this unique and invaluable publication. May I earnestly ask, therefore, of this audience of the chief medical authors of the United States, that each one will demonstrate his appreciation by an immediate subscription to the *Index Medicus*.

There are some matters common both to the medical college and the hospital, which may be considered together. The most important of all these is the cordial and hearty cooperation of the medical men connected with the college or hospital and the boards of trustees. In order to ensure this the members of each body must be acquainted with each other. I have known of instances in which if a professor in the medical school ventured to suggest any changes as to its management, or even to state his opinion as to the qualifications of a candidate for a vacant professorship, his suggestions were resented as an interference instead of being welcomed as a means of valuable information. I take it for granted that we should not offer such suggestions after the fashion of a partisan, either of a man or a measure, for the advancement of a friend or to the disadvantage of an enemy, but solely for the good of the institution with which we are connected. He who would endeavor to foist a friend upon an institution *because* he is his friend, and in spite of the fact that a rival is the abler man and better fitted for the position, is just as false to his duty, to his college, or to his hospital, as the trustees who would vote for the less desirable man on the ground of personal friendship, or of association in some society, church or other similar body. Of all these influences, that arising from membership in the same religious body is, I fear, the most frequent and yet most absolutely indefensible. What one's theological opinions are has no more to do with his qualifications for a professional or hospital appointment than his opinions on protection as against free trade, or whether Bacon or Shakespeare wrote Hamlet.

I have always honored one of a board of trustees who was an old personal friend of my father's and who had known me from boyhood, yet who in my early professional career, when I asked for his vote for an important hospital appointment, had the

manly courage to tell me that he thought a rival, who was older and more experienced, was the better man for the place and that he should, accordingly vote for him and not for me. I confess it was at the time a bitter disappointment to me, but I never had so high an opinion of my father's friend as after he denied me his vote.

There should be in my opinion but two questions asked in considering the election of either a professor or a hospital physician or surgeon. First, which one of the candidates for the place has the best qualifications from the medical point of view? This should include, not only his scientific knowledge, but his ability practically to impart or to apply that knowledge. Secondly, are his personal qualifications and character such as to make him a desirable incumbent of the position. It must be remembered that a man may be scientifically and practically an extremely able man, but of such a quarrelsome disposition or the unfortunate possessor of some other similar personal disqualification, as to make him a most undesirable member of a staff. The personal equation may be quite as important as the scientific qualification. Of course his personal moral character should be above reproach. To place a drunkard or a libertine in a position of so much responsibility and influence is to abuse a trust. No patient should be confided to the care of such a man, and still more, no such man should be made an instructor of young men, upon whom his influence would be most disastrous.

It is often extremely difficult for a layman to reach a correct conclusion as to the qualifications of medical men for college or hospital appointments, because of the confident, yet conflicting statements of their friends. But there is apt to be a certain clear partisanship in such statements which betrays the purpose of the speaker. Especially will this be so if he advocates the election of A or B on the lower grounds of friendship, social position, or for other similar motives. The man who is advocating the best man because he *is* the best man has the stamp of sincerity upon every word.

Perhaps the most striking example I can adduce of such an unfortunate misjudgment is Dr. S. Weir Mitchell, who was denied a professorship in both the medical institutions of his native city, thus depriving them of the most brilliant medical genius that America has produced within my personal recollection. For him it is now a matter of indifference, and for American literature it has been a gain. But for medicine, and especially for physiology, it was an immense loss. Both of his rivals were estimable, worthy gentlemen, who held an honorable position in the profession, it is true, but Mitchell is a genius. "Eclipse was first; the rest were nowhere."

One of the best methods of bringing the medical board and the board of trustees into more intimate contact would be to have the dean or a committee of the faculty, or, in a hospital, if the staff is not too large, the whole staff, invited to the meetings of the board. Here I can speak from personal experience. At the Orthopædic Hospital and Infirmary for Nervous Diseases in Philadelphia there are three surgeons and three physicians. These members of the medical staff are invited to meet with the board of managers at each monthly meeting, excepting the annual meeting, when the medical staff is elected. They are free to express their opinions on any topic relating to the management of the hospital to which their judgment may contribute something of value, but when a decision is taken they have no vote. It is purely in an advisory capacity and for the purpose of giving and receiving information that they are present. The plan works exceedingly well. When economy is necessary in the hospital the staff is fully acquainted with the fact and can cooperate with the trustees; when expenses have run up from carelessness in the wasteful use of dressings or appliances, a halt is called; when, alas! very rarely, the treasurer is all smiles, and plans for the extension of the hospital or the installation of some new addition to the plant are contemplated, their knowledge as to the necessity, for instance, of a hydrotherapeutic or an x ray plant, or a new operating-room, is of the greatest possible value. Nothing but good, in my opinion, can come from such personal cooperation.

One of the difficult questions which boards of trustees have to face is whether there shall be a fixed age at which a college professor or a hospital physician or surgeon shall retire from the active duties of his post. I firmly believe that they should fix such a retiring age in the interest of the students and the patients. As age advances a man's opinions and his practice become "as petrified as his arteries." He is incapable of constant study, of adding to his knowledge, or of keeping up with the feverish strides of medicine. He ought then to be relieved of his cares and his duties. If no rule exists, he is allowed to continue his inefficient, or even disastrous, work, or by some harsh suggestion is compelled to give place to another more competent man. A rule is a condition accepted when he is appointed, and just as in the army and navy, when an officer reaches sixty-two or sixty-four years of age he is retired on reduced pay, and because it is a rule he does not feel hurt or humiliated; so in a college or a hospital, when time and the rule bring us to the period when we must gracefully retire, no one's reputation is injured or his feelings lacerated.

I have ascertained that the following rules are

in force in some of the larger institutions:

At Harvard, the age when a professor may request to be retired is sixty, provided he has been in the service of the university for twenty years, with a reduced pay ranging from one third to two thirds of his salary. At sixty-six he may be retired by the president and fellows partly or wholly. The details of the plan are admirably arranged.

At Chicago, while no plan is yet in force, largely, I presume, because of its recent establishment on the present basis, such a plan will soon be made operative.

At Columbia the retiring age, after fifteen years of service, is sixty-five, either at the request of the professor, or upon motion of the trustees, and on half pay.

At Yale the retiring age is sixty-five after twenty-five years of service and on half pay, but the retirement is not compulsory. It will probably be made compulsory before long.

At Cornell the retiring age is seventy, but the Pension Fund will not be available until 1914. The retiring pension will then be \$1,500.

At the University of Pennsylvania and at Johns Hopkins no retiring age is fixed.

The only hospitals I know of in which a retiring age is fixed are the Massachusetts General Hospital and the Boston City Hospital. At the former the compulsory retiring age of the surgeons is sixty-three, and of the physicians sixty-five, but the physicians, gynæcologists, and all the other medical officers continue in service indefinitely—a very curious anomaly.

These varying, but in the main identical, provisions, when any exist, show the trend of thought and practice. They generally apply to the medical department, except that in case a professor is engaged in the practice of his profession and so has a private income, the provision for continuing a portion of his salary does not apply. This is right and fair. Of course, in all hospitals where there are no salaries, no provision as to reduced salary would obtain.

The point I wish to emphasize is, however, that the age limit (which in my opinion should be sixty-five, should be *compulsory* and so not be invidious in any given case. It will be objected that not a few men are in full intellectual and physical vigor at sixty-five, and it will be a detriment to the institution to lose their services when their ripe experience and admirable teaching are most desirable. I admit it. But for every one such case of harm done by compelling a man to stop, there are a score of instances of men who are doing vast injury by their inefficiency. Moreover, in the very few cases in which it might be allowable, as boards of trustees make rules they can unmake them, and in special

cases they could pay a graceful compliment and preserve to the institution their exceptional men by extending the limit of age to seventy. In no case can I think it wise to go beyond this limit.

In some of the universities I have quoted, a sabbatical year of rest or study is allowed a professor. He is put upon half pay and his place is filled by a temporary substitute, who receives the other half of his salary. I believe that in present conditions this should not be applied to medical faculties, for nearly all of the professors are in active practice and take sufficiently long summer holidays. These latter are often spent in observation and study abroad—a most useful and remunerative employment of a holiday—and serve the purpose of the sabbatical year for men whose entire time is given to their teaching. In hospitals it certainly should not apply.

One of the recurring questions in hospital and college management is whether there should be a certain number of doctors on the board. I know that there is a wide diversity of opinion upon this point. My own belief is that a small proportion of well chosen medical men is a distinct advantage in such boards of trustees. I have said a "small proportion," for it should not be, I think, larger than probably twenty per cent.; and I have also said "well chosen"; that is, they should be men of large mental calibre and executive ability. It should be distinctly understood, if not indeed absolutely expressed, in institutions in large cities at least, that an physician or surgeon placed upon such a board should never be eligible, even by resignation from the board, for a position on the faculty or the medical staff. In small towns the lack of suitable persons for hospital trustees and members of the hospital staff might make it desirable not to institute such a rule.

Moreover, such medical men should be selected for trustees as by their mental training, social relations, and personal character would be, so far as it is possible for human nature to realize such a position, absolutely free from influences arising from personal jealousy or professional bias. If it were a social club, it would be perfectly proper to vote against a man because he is personally distasteful, but where it is a scientific body responsible for the education of large numbers of young men and for the care of still larger numbers of hospital patients among the poor, even if a candidate were personally unfriendly I should vote for his election if he were the man best fitted for the place.

Turning now to the duties and responsibilities peculiar to trustees of hospitals, let me point out the objects of a hospital.

First, the care and the cure of the sick and in-

jured; secondly, the education of medical men and medical students; and thirdly, the promotion of knowledge, which, in turn, will inure all over the world to the more speedy and certain cure of the sick and injured, and so be of the greatest benefit to humanity.

In order to accomplish these three purposes, it is necessary that the hospital shall have sufficient funds to purchase ground, erect buildings, and provide a thorough material equipment. It is a great pleasure to me, as to you also, to note that throughout the length and breadth of the land the medical and surgical staff never tax the always inadequate resources of hospitals for any remuneration. They serve without pay, they give ungrudgingly and freely day and night, to the poor often for many years, their time and skill, without ever a thought of any money reward. Their reward comes from increased knowledge and skill, and the daily blessing invoked of heaven, often lisped in children's prayers or breathed in mothers' benisons, which pass not unheeded by the recording angel.

But, as I have pointed out elsewhere, instead of receiving any pay, they give to hospitals. The mere money value of this daily gift of the profession to the poor amounts to an enormous sum. The value of the professional services of the staff of the Jefferson Medical College Hospital, a single hospital in a single city, on a moderate basis of fees, I found was more than half a million dollars annually. The millions upon millions of money given in that most self-sacrificing form—personal service—by the entire profession all over the United States, and I might add with still further pride, all over the world, is simply incalculable. The Gideon Grays and Weellum MacLures are not found only in Scotland or at the countryside. They are even more plentiful in the slums of our great cities, giving of their time, their skill, and what is more, their hearts, their lives, themselves, to the service of humanity.

Trustees sometimes seem to take it for granted that their duties are ended when they have done two things: begged or given and safely invested the necessary funds, and then elected the staff. To my mind their duties do not by any means end at this point. They should see to it that the resources of the hospital are utilized to the utmost in doing the largest good.

Let us see now how the objects of a hospital, as I have stated them, can be realized. The first object is the care and cure of the patients. But the cure of any individual patient is not the "be all and the end all" of a hospital. His cure must be a means of larger vision to the doctor, who will thus be better fitted to care for future similar cases. Even his death, if he cannot be cured, should minister to the

increasing knowledge and skill of the doctor so that he may be able to snatch future victory from present defeat.

The second—the training of doctors and students—is frequently carried out, but sometimes even objected to. There are three classes of doctors who are trained by a hospital: first, the staff of the hospital itself. I have lived through the period of the establishment of hospitals in many of the smaller cities and towns, and in some cases even villages, in this country, for it was a rare thing in my early professional life for any except the larger cities to have hospitals. The moment that a hospital is established with its medical and surgical staff, that moment a new era has dawned on the *community* in which the hospital is established. More careful methods are introduced, greater cleanliness is observed, hygienic conditions are bettered, laboratory methods are inevitably introduced in time. Even if the old timers who graduated years before our modern laboratory methods were adopted do not care for them or cannot use them, the young fellows who come fresh from our medical schools and serve as residents, and even the nurses graduated from our training schools, finally shame the older ones into better ways and greater exactness, not only in the hospital, but in their private work as well.

As a consequence of the establishment of these hospitals and the added skill and training of the local physicians and surgeons, the character of the consultations of the physicians and surgeons of our great medical centres has been greatly modified. The really simple cases, such as hydrocele and small tumors (and even large ones), clubfoot, harelip, etc., which used to be sent to city consultants, are now successfully operated on by the local surgeons, and only the more difficult, serious, or complicated cases are sent to the cities. This is a great advantage to the patient, whose good is the first consideration, and to the local medical men; and though seemingly a serious loss to the city consultant, it is in the end an advantage, as he must prove his better metal in the higher scientific fields, and be, as well as seem to be, the better man.

Moreover, the trustees of every hospital should see to it that a good library and laboratory are provided. Insensibly the staff will read more and more. A simple restless progressive spirit, even though it be a young interne, calling attention to this case and to that, in one journal or another, will compel the rest of the staff to read in spite of themselves. It is absolutely clear that a laboratory with modern equipment for bacteriological, pathological, and chemical research in its examination of tumors, of the urine, the sputum, the fæces, the blood, the pus, and other fluids from wounds, etc., is a necessity in every hos-

pital. Even many of our smaller hospitals are equipped with microscope and reagents, if not with a complete bacteriological outfit, which nowadays is inexpensive and imperative. All of this raises the intellectual and professional standard of the staff. I venture to say that no town of 20,000 people can afford to be without its hospital for the sake of its *own citizens*, utterly irrespective of the good it does to the poor who are treated in its wards. It must be established in the interest of the *well-to-do citizens* and their families so that they may secure better equipped doctors for themselves as well as for the patients in their hospital. Self-interest, therefore, will compel every community to establish its hospital, even if charitable motives had no influence.

Again, the trustees of all hospitals of any size should establish a training school for nurses. Only those who, like myself, have lived in the period before such training schools were established, can appreciate the vast improvement effected in a hospital by this change. To replace the former ignorant, untrained attendants by "trained nurses whose jaunty caps and pretty uniforms and often winsome faces almost make one half wish to be sick, and when one is sick, half loath to be well," is not only a boon to the patients but to the doctors as well. The intelligent, well-trained nurse, who is on the alert to observe every important change of symptoms and who will keep accurate bedside notes, is the doctor's right hand. Not a few patients who would otherwise lose heart and hope are, one may say, lured back to health and happiness by the tactful attentions and restful but efficient care of such a nurse. The community of the well-to-do also is benefited, because the hospital provides them with skilled nurses in their homes when they are so unfortunate as to be compelled to remain there instead of going to the hospital.

The old repugnance to entering a hospital when sick or when an operation is demanded is rapidly fading away. The immense advantages of a good hospital over the most luxurious home are now acknowledged on all hands. The poorest patient in a hospital is better cared for, his case more carefully investigated by bacteriological, chemical, and clinical methods in a hospital, than are the well-to-do in their own homes. Indeed, wise surgeons, except in cases of emergency, now very properly refuse to do operations in homes instead of in hospitals. In many instances lives that would be lost in homes are saved in hospitals, where the many and complex modern appliances for every surgical emergency are provided.

The hospitals in direct or indirect connection with medical schools, however, do a far larger work than merely the training of their own staff of doctors.

They train three other classes of doctors: First, the undergraduates who are aspiring to the degree; secondly, graduate physicians who spend a certain amount of time in the hospitals, either as internes, or as temporary students, refurbishing their professional knowledge; and thirdly, experts in certain branches of medicine and surgery.

The undergraduates are taught first in the general clinics, where to some extent they learn both by didactic instruction and by seeing the patients, hearing their histories, and witnessing the institution of proper treatment by prescription, by regimen, or if necessary, by surgical operation. This is of great value, particularly in the more important cases, and especially, for I speak now as a surgeon, in important operations. It is often objected that students see nothing in large clinics. To some extent this holds good; but no student can look on at an operation when the jugular vein or the lateral sinus is torn, the pleural cavity opened, the bowel lacerated, or other of the great emergencies of surgery occur, and fail to be impressed by the coolness of the operator, the carefully explained methods adopted for remedying the mischief, and the various devices used by him to save life, all of which hereafter will be used when similar emergencies may occur.

Yet far more important than the public clinics are the smaller clinics held with classes of from ten to twenty men each, when under an experienced teacher the absolute work of the clinic is divided among the various students in turn, watching the pulse and the respiration, giving an anæsthetic, assisting actively at operations, percussing the chest, palpating the abdomen, determining inequalities of the surface or the varying density of underlying organs. Here is the real forum in which our modern medical student acquires his skill. In many cases, visits in the ward itself are made, and to a small group around the bedside the physician or surgeon will point out the phenomena to be recorded, the need for the examination of the blood, the results of bacteriological cultures, the facts discovered by the microscope, or the chemical reagent. By the Socratic method, also, he will reveal to the student the imperfection of his knowledge, call out—e-ducate—his powers of observation, of reasoning; stimulate his thought, and give him an impetus which will last throughout life. Who that has “walked the hospitals” with a Skoda, a Trousseau, a Nélaton, a Da Costa, or a Mitchell can ever forget their teaching?

It is sometimes objected by those who are not familiar with the actual facts, and especially by trustees, that this method of actual bedside instruction does harm to the sick. I speak after an expe-

rience of nearly forty years as a surgeon to a half dozen hospitals and can confidently say that I have never known a single patient injured or his chances of recovery lessened by such teaching. Of course, the physician or surgeon uses common sense. He would not allow a number of men to palpate the abdomen of a patient with peritonitis or move an acutely inflamed joint, nor would the physician allow a patient with pneumonia to have the chest unduly exposed or a typhoid fever patient to be disturbed if his condition was such that it would be inadvisable. But such cases are the exception. In fact, many of you are familiar with patients who have responded to repeated percussion by members of such a class by prompt recovery, attributed by the patient to the supposed medication of percussion. Moreover, it is by this actual practice only that the student acquires the necessary skill in the use of modern instruments of precision, such as the stethoscope, the laryngoscope, the æsthesiometer, the sphygmomanometer, the various specula. Here he learns when to make blood counts, how to take histories, arrive at the actual facts by skilful cross-questioning, note the varying symptoms and physical signs of a case, determine the need for laboratory investigations, all under the guidance of skilled observers, who will point out his errors, encourage his queries, and stimulate his thought.

Moreover, trustees may overlook one important advantage of a teaching hospital. Who will be least slovenly and careless in his duties, he who prescribes in the solitude of the sick chamber, and operates with two or three assistants only, or he whose every movement is eagerly watched by hundreds of eyes, alert to detect every false step, the omission of an important clinical laboratory investigation, the neglect of the careful examination of the back as well as of the front of the chest, the failure to detect any important physical sign or symptom? Who will be most certain to keep up with the progress of medical science, he who works alone with no one to discover his ignorance; or he who is surrounded by a lot of bright young fellows who have read the last *Lancet*, or the newest *Annals of Surgery*, and can trip him up if he is not abreast of the times? I always feel at the Jefferson Hospital as if I were on the run with a pack of lively dogs at my heels. I cannot afford to have the youngsters familiar with operations, means of investigation, or newer methods of treatment of which I am ignorant. I must perforce study, read, catalogue, and remember; or give place to others who will. Students are the best whip and spur I know.

Of the value of training graduates in post-graduate work I need scarcely speak to this audience at least. The doctor who graduated five, ten,

or fifteen years ago comes to our great centres of medical education and renews his youth at the fountain of knowledge. He learns the use of all the new instruments, sees new methods of operation, new methods of treatment, new means of diagnosis, and goes home an enormously better equipped man.

The trustees should see that the staff does not become fossilized by following the same ancient local methods from year to year, but should encourage them to visit other hospitals, see other men operate, hear other men discourse on the latest methods of investigation, and then import into their own hospitals all the good found elsewhere. I learn a deal by such frequent visits to the clinics of my brother surgeons, and if one who has grown gray in the service can thus learn, surely the younger men can do so. When we are too old to learn we are too old to remain on a hospital staff.

I do not know anything which has more impressed upon me the enormously rapid progress which surgery is making than a recent experience. I was absent from this country for almost a year and a half. In that time circumstances were such that I saw almost no medical journals and but few doctors. I have been home now eight months and even with incessant work I have not yet caught up, so rapid has been the progress of surgery in this short time. Had I been absent for five years, verily I should have been a "back number," and never could have caught up at all.

In his very excellent presidential address before the Association of American Physicians, in 1901, Professor Welch made a plea for hospitals to afford "the requisite opportunities to young men who aim at the higher careers in clinical medicine and surgery." He called attention to the fact that in our bacteriological, pathological, and anatomical laboratories the opportunities, though still too few, were reasonably good, and in a few places exceptionally good, for the training of young men for positions as teachers of anatomy, pathology, and bacteriology. Any young man in these departments who, by good hard work, makes for himself a name is fairly sure, before long, of being called to some important post as professor, director of a laboratory, or some similar position. But the facilities for work in clinical medicine and clinical surgery are far more restricted, since opportunities for both the exercise of their clinical skill are less frequently open to them, and the possibility of combined physiological, pathological, bacteriological and anatomical research along with their clinical work, is but scantily provided for. This plea is reinforced by the recent paper of Sir Michael Foster (*Nineteenth Century*, January, 1901, p. 57). These special graduates, bright young men, determined to devote

themselves to one or another department of medicine or surgery, are the men who bring honor to the school at which they obtain their training, and are invaluable to the community. They are the future Jenners, Pasteurs, Virchows, Listers, DaCostas and Grosses, and our hospitals should provide for these exceptional men exceptional facilities.

The third object of a hospital is the promotion of knowledge, and so, fourthly, the good of humanity. Physicians and surgeons engaged only in private practice do not generally keep notes of their cases, and rarely publish important contributions to knowledge. I find in one hundred books taken consecutively in my library that eighty-five were written by hospital men and only fifteen by authors not connected with any hospital, so far as was indicated on the title page.

In order that proper investigations may go on, trustees should enforce a permanent record of all the cases treated in the hospital, properly indexed, from which the staff may derive their data for papers and books. Each large hospital should have its pathological resident as well as the clinical residents in the various wards, so that post mortem records shall be well kept, pathological, bacteriological, and chemical investigations of the various secretions, or blood counts, etc., shall be properly made and permanently recorded in such a manner as to be accessible.

It is too often the case that trustees, as I have said, regard their duties and responsibilities as at an end when they have taken care of the funds and elected the staff. They may say that, after all, this is their real duty, and that all that I have advocated is medical and surgical, and the responsibility for it should devolve on the staff and not on the trustees. I do not take so narrow a view of the duties of trustees. When they have elected a physician or surgeon, if he neglects his duty, it is their business to displace him and fill his place with another man who will attend to his duty, and the duties that I have indicated pertaining to the increase of knowledge, as well as of its diffusion, are quite as much within their province as it is to see that the funds are invested to the best advantage. The intellectual funds as well as the invested funds must bring in good dividends.

If trustees and staff work together for such a purpose and in such a manner, they will create an ideal hospital which will do more good to the patients than any other type of hospital. It will attract the best physicians and surgeons in every community, will acquire the best reputation, not only local, but it well may be national, and do the most for the good of science and the benefit of humanity.

It may be said that this is an unduly strenuous

view of the duties of trustees, that in our father's day and in our own earlier lives no such conditions existed or were contemplated. "I need hardly ask a body like this," said President Roosevelt, in addressing the Methodists assembled in council, "to remember that the greatness of the fathers becomes to the children a shameful thing if they use it only as an excuse for inaction instead of as a spur to effort for noble aims. . . . The instruments with which, and the surroundings in which, we work have changed immeasurably from what they were in the days when the rough backwoods preachers ministered to the moral and spiritual needs of their rough backwoods congregations. But if we are to succeed, the spirit in which we do our work must be the same as the spirit in which they did theirs."

Moreover, we must remember that "the world-field into which all nations are coming in free competition by the historical movement to which all narrower policies must sooner or later yield, will be commanded by those races which, in addition to native energy and sagacity, bring the resources of scientific investigation and of thorough education." The international race for the leadership of the world is just as strenuous and intense in medicine as it is in commerce. If we are going to join the race and win the prize there must be the highest development of American education at the top. The best men must be pushed to the front, and ample opportunities for growth, for investigation, and for original research must be provided. Never has there been so large an opportunity for the man of large ideas, complete education and indomitable energy and purpose, as there is to-day. The world is waiting, looking, longing for him, and will cry, "Make room" for him when he is found.

In the hands of the trustees of our colleges and hospitals are the money and the opportunity for developing such men. If the right spirit pervades both trustees and medical faculties and hospital staffs, then it will be but a short time before America will lead the world in medicine as well as she now does in commerce.

Will the profession rise to the level of their great opportunity? Yea, verily they will! Never yet have they been wanting when the emergency arose; not only the emergency of labor, but also the emergency of danger.

In Russia the common soldier counts for little. Yet in Vladikavkaz (where the Dariel Pass—the old Portæ Caspiæ of Herodotus—leading from the Caucasus joins the railroad from Baku on the Caspian to Moscow) is a monument to a common soldier. At the last battle in which the Russians won the victory over Schamyl which gave them undisputed sway over the Caucasus, this soldier blew up a

mine and won the day at the cost of his own life. It was ordered that his name should never be erased from the list of the company. At every roll-call when his name is reached, the solemn answer is given "Died in the service of his country."

In our hospitals lurk the deadly breath of diphtheria, the fatal virus of bubonic plague, of cholera, of yellow fever, of typhus fever, and the ever present danger of blood poisoning. I have known of brother physicians who have died victims to each one of these scourges. Yet who has ever known one of our guild to shrink when danger smote him on the right hand and the left, and death barred the way? As brave as the Russian soldier, ready to risk life, and, if need be, to lose it, these martyrs to duty shall never have their names stricken off the honor list, and at the last roll-call the solemn reply shall be, "Died in the service of humanity."

CANCER AND IMMUNITY;

BEING

THE ORATION IN SURGERY.*

By A. F. JONAS, M. D.,

OMAHA.

(Concluded from p. 832.)

What has malignant disease to do with immunity? The entire subject of immunity has to do with infection. It has to do with its nature, mode of action and control. Has cancer any characteristics that pertain to infection? Bacteriologically we have found none. Clinically we have a mass of evidence that would seem to place cancer among the infectious diseases.

In order to have a clear understanding of the modern conception of immunity it is necessary to review as briefly as possible and in barest outlines without comment the most important features of our present knowledge of the subject. Much material that may seem essential to a complete elucidation of this great and important subject, had to be eliminated on account of the limited scope of this dissertation.

More than a century ago we find that John Hunter was familiar with some antiseptic properties of the blood. He found that a small amount of putrefying material could be added to a given quantity of fresh blood without producing putrefaction. Consequently, he advanced his doctrine of "the living principle of the blood." This, as an observation, was almost forgotten and its import was not fully realized until Nuttall, in 1888, began his systematic work in Flugge's laboratory, studying the antibacterial properties of the body fluids, especially the blood serum.

*Delivered at the fifty-fourth annual meeting of the American Medical Association, held in New Orleans, May 5, 6, 7, and 8, 1903.

The greatest impetus to the study of immunity was given by Metchnikoff in calling attention to the participation of the leucocytes and other cells in the process of infection, establishing his well known theory of phagocytosis. His views are so well understood that we need only to call attention to them at this time.

Following Nuttall, Pfeiffer discovered, in 1894, "the extracellular disintegration and solution of cholera spirilla in the peritoneal cavity of immunized guinea pigs."

The greatest attention and interest was aroused by Behring's great discovery of antitoxic immunity. Bacteriologists at once endeavored to elucidate by elaborate researches the exact way in which immunity was established. Chief among these was Ehrlich. It was soon shown, however, that immunity in most bacterial infections did not depend, in the main, on the antitoxic principle.

Pfeiffer's phenomenon afforded a starting point from which Metchnikoff, Bordet, Ehrlich, and Morgenroth began their labors and brought forth a series of discoveries that have been epoch making.

A series of antibodies were differentiated and classified as antitoxines, antienzymes, cytotoxines, agglutinins, precipitins, and coagulins. Antibodies were in turn produced by these, with the exception of the antitoxines.

It was determined that to every cellular group of an animal species there appear to correspond a specific cytotoxine. These various toxines have been termed leucotoxine, neurotoxine, spermotoxine, nephrotoxine, thyreotoxine, etc.

These antibodies have been divided into two groups, first, the antitoxines which are single bodies; second, the cytolytins, whose antagonistic effects require the cooperation of two bodies.

Of these two bodies, the one which actually destroys the foreign cells is normally present in the cells or fluid of the organism, but it seems incapable of action without the intermediation of a body which is distinguished from it by a greater resistance to heat. The two elements composing cytolytins exist quite independently of each other, so that one may be present without the other or be artificially removed without affecting the other.

To demonstrate the mode of action and constitution of the specific antibodies, Ehrlich has propounded the theory of receptors, or side chains. The atomic grouping of the toxine molecule, which affects the union with antitoxine as well as with a particular cell, he has designated as haptophore groups.

In view of the fact that certain molecule groups of the living protoplasm favor the taking up of certain poisons, he has termed them receptors. Ac-

cording to his theory of antitoxic formation, after the introduction of toxines, the receptors are produced in excess and finally are thrown off into the blood as useless ballast. The free circulating receptors are the antitoxines, termed amboceptors, intermediary bodies. The action of antitoxines is explained thus. They take charge of the haptophore groups of the toxine molecules and prevent them from approaching the receptors of the tissues.² There are as many receptors as there are toxines, while almost every day new ones are discovered.

Behring gives the most exact and brief definition of Ehrlich's antitoxine theory: "The same substance which, when incorporated in the cells of the living body, is the prerequisite and condition for an intoxication, becomes the means of cure when it exists in the circulating blood." Every antiserum protects only against substances through which it becomes immunized. Every antiamboceptor protects only against its particular amboceptor.

Ehrlich and Morgenroth found, in experiments with goat's blood, thirteen different new lysins which represent so many receptors. "The receptors are in the cells, not for the purpose of linking poisons to the cells, but to seize certain food stuffs, particularly proteids, and the toxines, bacterial and other foreign cellular substances, if capable of inducing the immunizing reaction, chance to have the requisite combining affinities for the receptors."

The living body possesses bactericidal and cytolytic substances which may protect it by destruction of invaders or may injure it by destruction of its own cells, according to the mates with which they are paired.

In considering the physiological mechanism of the cells we find that they are designed, primarily, for the assimilation of food and, secondarily, to meet pathological conditions, the production of antitoxines, cytolytins, and other similar bodies. The receptors are in the cells for the purpose of taking up foodstuffs, chiefly proteids. The toxines and bacterial cellular substances have combining affinities for the food receptors, if they are capable of inducing an immunizing reaction.

In producing immunization against bacteria, it is the intermediary body (amboceptor) which is generated. It has been found that these antibodies have a specific relation to the substances which caused their formation, as has been shown by the injection of a specific serum into an animal at certain intervals, of toxines, against which an antitoxine is desired.

The specific nature of these antibodies is further shown in their application to serum diagnosis, as

² Ehrlich, *Schlussfolgerungen*, p. 176.

shown by the Widal agglutination test for typhoid fever and the serum test in the diagnosis of *Bacillus dysenteriae* Shiga, an organism shown to be the cause of acute dysenteries by Flexner, Vedder, and Duval.

When Roux and Yersin discovered diphtheria antitoxine and Ehrlich the origin and mode of action of antitoxine, a lasting foundation for the study of immunity was laid. It was positively shown that "soluble toxines enter, as assimilable substances, into combination with constituents of the body cells for which they have an affinity," and are enabled to produce immunity or to exert toxic effects.

The expectation that we should soon be enabled to solve all questions regarding the action of toxines after the discovery of soluble bacterial toxines, has only partly been realized, especially regarding the action of the pyogenic micrococci, which concerns us most as surgeons.

However fruitless, hitherto, the practical results regarding toxines of many pathogenic and especially pyogenic organisms, the principle has been established, and it is only a question of method and time when all body toxines and their antitoxines shall be definitely known.

Pfeiffer directed his attention to the bacteria, and found substances, toxines, in cholera spirilla, which became free only after the bacteria were dead and which were termed intracellular poisons. This was a most important step in advance, but we must acknowledge that we know as yet very little about the action and nature of intracellular bacterial poisons.

It is interesting to note from the result of Flexner's experiments with venom that their action on red blood corpuscles, leucocytes, and nerve cells is like that of duplex cytotoxines, which depend on the combination of intermediary bodies contained in the venom on one hand, with corresponding complements in the cells or fluids acted on. This is shown by the addition of venoms to fresh blood, which brings about the quick destruction of the red blood corpuscles. If the fresh blood has been washed with an isotonic salt solution, so as to remove all the complement, we find that the corpuscles are not dissolved, but agglutinated. It seems that the venom serves chiefly to bring "into necessary relations with constituents of the body cells, poisons we already harbor or may generate, but which are harmless without the intervention of intermediary bodies."

Flexner and Noguchi have shown that the leucotoxic, the neurotoxic, and other cytotoxic properties of venom depend on combinations of venom, intermediary bodies with complements contained in the cells poisoned by venom, or in the fluids bathing

these cells, indicating that the snake venom contains only a part of the complete poison.

Flexner and Noguchi also demonstrated that hæmorrhages in various tissues of the body resulting from poisoning from certain venoms are due to the presence in venom of a cytotoxine which has the power to dissolve endothelial cells, which they termed endotheliolysin (hæmorrhagin). It causes extravasation of blood through its direct solvent action on capillary endothelium.

The hæmolysins have been most extensively studied because of their great pathological significance, and it has been found that many bacteria have hæmolytic power. The secondary anæmias, so constant in streptococcus infections, in pneumonia, typhoid fever, and other diseases, afford a most striking example.

Normal blood serum contains antihæmolysins which protect red blood cells from bacterial hæmolytic agents. Associated with hæmolysins are bacterial hæmagglutinins, possessing the power to clump red corpuscles.³

Heuter and Klebs believed that thrombi were due to the coalescing of red blood corpuscles. Welch calls attention to hyaline thrombi formed by agglutinated red corpuscles. White corpuscles are agglutinated by certain bacteria and also by pus cells.

What is urgently needed is a separation of these poisons and a determination of their source, constitution, mode of action, and degree of specificity.

It will not be out of place here to allude to the studies made of the ductless glands, because of their supposed bearing on immunity. Sajous urges that the adrenal extractives have a decided affinity for oxygen, offering a key to tissue respiration and to the functions of all other organs now classed as the ductless glands. It has been found that the red corpuscles are not the only carriers of oxygen, but that the blood plasma contains and distributes this gas. Schmiedeberg, Jacquet, Claude Bernard, and others demonstrated the existence of an oxidation ferment in the plasma, and these bodies are now entertained as an oxygen-laden secretion. This secretion is believed to permeate nearly all the body elements. The blood also contains a fibrinogen body which combines in certain quantities with fixed portions of the plasma's oxygen. The changes in the temperature of the blood were traced to variations in the amount of the fibrinogen in the plasma. The adrenals have been shown to be connected with the anterior pituitary body by various sympathetic ganglia. The anterior pituitary body is regarded as the governing centre of the adrenal system. Overactivity of this body increases the adrenal secretion, consequently oxidation, therefore vital resistance.

³ Heuter and Klebs, p. 731.

Depression of the activity of the pituitary body causes decreased supply of oxygen, consequently depressed vital processes.

The thyroid secretion, thyreoidin, has been shown to sustain the efficiency of the pituitary body. Excessive thyreoidin production stimulates the pituitary body and produces exophthalmic goitre. Deficient thyreoidin production leads to myxœdema. The adrenals, the pituitary body, and the thyroid gland constitute the adrenal system. According to this line of research, it is believed that toxins act directly on the adrenal system, and, by decreasing or increasing its secretion, decrease or increase the oxidation process. Certain toxalbumins and many drugs stimulate the adrenal secretory powers to a certain limit, and, when exhibited in excessive doses, depress or arrest the functions of this system.

The posterior pituitary body has been shown by Berkley, Andriezen, and others to be the chief functional centre of the nervous system. It is the centre for such emotions as shock, excitement, etc. It governs all organic functions through the nervous system. The secretions of the pancreas and spleen, according to Schiff and later Herzen, unite and change trypsinogen into trypsin, a solvent for the albuminous bodies in the pancreatic juice. This ferment performs an important part in immunizing processes, in that it destroys toxalbumins.

Viewing these labors in the light of Ehrlich's researches, the oxidizing substance represents the amboceptor; the splenopancreatic internal secretion, trypsin, represents his complement. To produce a proteolytic action of trypsin, fibrinogen and the oxidizing substances are required. These views are somewhat at variance with those commonly accepted, but are of sufficient importance to deserve consideration in this connection.

From the foregoing it would seem that the doctrine of phagocytosis plays an unimportant rôle. But we find that the French, or phagocytic, school, at the head of which is Metchnikoff, recognizes the full significance of acquired immunity and the cytolytic principles represented by the cooperative action of intermediary bodies and complements. The German, or humoral, school, led by Ehrlich, recognizes the leucocytes to the fullest extent.

The chief difference between the French and the German schools consists in the belief by the advocates of phagocytosis that the complements reside in the leucocytes, whereas the adherents of the humoral school believe that they exist in the blood plasma.

While, in what has here preceded, we have been concerned in the consideration of chemical problems, we must not overlook the fact that behind all is a governing force which resides in the central nervous system.

The practical outcome of these studies has been found in the production of antitoxic sera, some of which have been proved to have a definite and exact effect under certain conditions. We find these sera divided into two principal groups, (1) those that have an antibacterial action, and (2) those that have a purely antitoxic action. Of all the sera the diphtheritic is best known. According to Welch, the mortality of diphtheria has been reduced from 40 per cent. to 15 per cent. by its use.

Antitetanus serum has been disappointing. Reports coming to us from different sources are conflicting, the mortality ranging from 0 per cent. to 70 per cent. from practically the same methods, which consist in administering the serum by the subcutaneous, intracerebral and the spinal methods. Antityphoid serum has failed to fulfil expectations even more than antitetanus serum. The antistreptococcus serum of Marmorek, while it seems to have exerted a specific effect in purely streptococcic infections, appears to exert no influence in the presence of mixed infections. The antipneumococcic serum has not yet emerged from the experimental stage. Nothing can be said of its effects. The antiplague sera of Haffkine and Yersin demonstrated that, as a preventive, it reduced the number of cases to one twentieth and the mortality in a given number of cases was reduced from 33 per cent. to 13 per cent. (Calmette). The antitubercle serum has been shown to have a specific effect on tuberculous tissue, but remains powerless in the presence of mixed infections. The antivenom serum has been demonstrated to have a positive usefulness in certain snake bites. Calmette's antivenin had been proved to be of undoubted use in leprosy.⁴

Many other sera have been described, but their usefulness thus far has been shown to be of an uncertain nature. Consequently, we will leave them out of consideration at this time.

When we pass in review all that is positively known in relation to the question of immunity, we cannot deny that some of the principles underlying this great question have, in a measure at least, been revealed. The evidence is conclusive that "the same substance which, when incorporated in the cells of the living body, is the prerequisite and condition for an intoxication, becomes the means of cure when it exists in the circulating fluid"⁵

Ehrlich, in his investigations of diphtheria toxins, demonstrated "that soluble toxins enter as assimilable substances into direct combination with constituents of the body cells for which they have an affinity, and only thereby are enabled to bring

⁴ F. A. Packard and Robert M. Wilson, *American Journal of the Medical Sciences*, December, 1900.

⁵ Behring's Definition of Ehrlich's Theory Concerning Antitoxins. Welch.

about immunity or to exert toxic effects." Further, in connection with Metchnikoff, Bordet, Morgenroth, and Ehrlich, it is shown that "the organism possesses a power to produce substances specifically antagonistic to all sorts of foreign cells, cellular products and derivatives. The substances capable of inducing this immunizing reaction appear to be mainly of an assimilable albuminous nature, or at least intimately associated with such material."

The principle of toxines and antitoxines has become as firmly established as any other in medicine or surgery. We have noted that antitoxines from pure cultures have a certain affinity for and possess immunizing power in specific infections, but fail in the presence of mixed infections. We see at once that failure to immunize does not violate the principle, but that the method of application has been at fault. We know that diphtheria antitoxin has a specific effect for the products of the Klebs-Loeffler bacillus, and that it controls and cures in the presence of these, but fails when there is an admixture of other forms of infection. This is shown by the 15 per cent. mortality which still exists. We have noted that antistreptococcus, tuberculous, and plague sera have a specific and a decided effect in pure infections, but that they fail in the presence of other specific germs. We observe with satisfaction the certainty of the action of a given antitoxine in its union with the toxine from which it was produced. It at once becomes apparent that, in the presence of several toxines or a mixed infection, it will require several antitoxic substances, a combination of antitoxic sera, or a serum containing different kinds of amboceptors, so combined as to meet and unite with the several toxines in a given case. Coley endeavored to meet such indications by combining streptococcus and *Bacillus prodigiosus* sera in treating "inoperable" sarcoma.

These observations presage a revolution in therapeutics, which perforce means a refinement in diagnosis beside which what we do now will scarcely bear comparison.

The inferences to be drawn from the foregoing indicate that the future work will be biochemical. It appears that the solution of cell metamorphosis, as it is observed in pathological conditions, will be in the field of chemistry. Ehrlich's theory of the side chains has given us a working hypothesis almost as practical as the atomic theory when applied to chemistry. It is not an idle dream to believe that the revelations of the future will not only consist in a complete exposition of cells and body fluids, or a perfect understanding of the governing brain centres, but may extend to the life principle itself, although life itself may and will ever belong to the unknowable.

Our chief interest, however, will always centre in the cell and its governing influence. Just what influences are responsible for normal cell division may never be known. But it is within the bounds of human possibility to know what influences may be responsible for atypical and excessive cell growth. Excessive cell growth, both in the leucocytes and connective tissue cells in acute infections, we can assume to be due to toxines that are in excess of the amboceptors. The existence of cytolytins and anti-cytolytins is now undisputed. The one destroys, the other protects the cells. We have noted that the chief function of a receptor molecule is to combine with nutrient molecules, a metabolic, a chemical process. The birth and growth of the cell is restricted within certain limitations and is regulated by chemical law. Now the problem depends on our ability to ascertain the exact influence that carries cell division beyond its normal bounds and causes excessive cell growth as we observe it in malignant new growths. That the process is one of localized excessive nutrition is apparent. The localities of predilection are frequently at points where the cellular elements are exposed to frequent insults, where the tissues are damaged, establishing a *locus minoris resistentiæ*, as for example, in the mouth, the gastrointestinal tract, and the female reproductive organs. A point of least resistance, damaged tissue, if you please, always offers a soil for bacterial invasion. Cancer very often develops in tissues that have long been irritated, no doubt liberating a complement that unites with a specific infection when introduced under proper conditions. Such is not always the case, however. In fact, we know that the majority of tissues that sustain irritations and almost constant traumatism for many years never become malignant. The simple traumatism does not develop cancer. A specific toxine must be introduced, probably also an intermediary body to complete the side chain, which increases caryocinetic energy. We have noted in our studies of immunity that the life or death of the cell depends on its intracellular and extracellular composition, so we may say that the whole process, whether it relates to normal or excessive cell growth, is chemical.

An objection may be urged at this point, which consists of the fact that the propositions of immunization thus far considered affect groups of cells extending over a wide range, *i. e.*, the vascular, the muscular, and the glandular or cerebrospinal systems. It has been shown that cancer is always at the outset, and often throughout its entire course, absolutely a local disease. It would not seem rational to attempt immunization of the entire system against a strictly local disturbance. We shall naturally turn our hope toward a method that will en-

able us to affect local immunization.

That local immunization is possible has been demonstrated by P. Römer in the following convincing abrinimmunization experiment. As is well known, abrin, which is the toxalbumin of the jequirity bean, will produce a severe conjunctivitis in animals and men. Ehrlich had demonstrated that rabbit's conjunctivæ became immune after the instillation of abrin. Römer instilled into the right eye of the rabbit weak abrin solutions, the dosage being rapidly increased until immunization was produced. In three weeks the rabbit was killed. It was then shown that if the right conjunctiva, which had undergone severe inflammation, was rubbed and macerated with a certain amount of abrin and injected into a healthy animal, it had no effect. But, if the conjunctiva of the left eye, which had received no instillation, was rubbed and macerated with abrin and injected into an animal, death always followed. Römer concluded from this observation that in conjunctival immunizations a part of the autotoxine existed in the conjunctiva itself. A local antitoxine was produced.

It would seem that these results establish definitely the principle of local immunization in indifferent tissues. These observations have an important bearing on the adaptation of the cells in local affections. That local affections of various forms or general affections with local manifestations can be best managed by the local introduction of exceedingly small doses of the specific remedy, was shown by Professor Bouchard before a recent meeting of the Egyptian congress. He found that articular rheumatism disappeared after the injection *in situ* of small doses of salicylic acid, in some cases only half a grain. We must conclude that local cell metabolism can be influenced by local rather than by general diffusion. The inhibition of excessive cell growth must be accomplished in the same way.

It would seem, then, that the cancer question must be solved along the lines of chemistry. Since we know that contagious or infectious energy does not depend on the bacterium itself, but on its products, which are purely chemical, it would seem that it matters little whether the specific parasite is found or not. Since the cancer germ has thus far successfully eluded the most vigilant search it becomes more and more evident that in the field of chemistry will be found the solution for our problem.

It will be difficult to rid ourselves of time-honored views. Purely theoretical speculation, like the hypothesis of cell proliferation from inclusions of embryonal matrices according to Cohnheim, must give way to the demands of modern science that insist on actual observations and practical demonstrations.

Now, then, will it be unreasonable to hope that when protoplasmic changes are thoroughly understood and when the body sera have given up their secrets and the influences that govern cell growth, we may also find the antibodies which will inhibit cell multiplication beyond natural bounds?

The studies in the field of immunity have, as yet, only assumed the proportions of the initiatory stage. A vast unexplored wilderness lies before us. The pioneers have begun their work well. They have outfitted themselves in a manner that will, in the near future, enable them to throw unexpected light in the pathway of their conquest of discovery. They are only on the verge of this vast domain. What lies beyond the borders we can no more foretell than could Boyer know that in twenty-four years after his death we should have anæsthesia and that in fifty years the world would have antiseptic surgery. And yet, in the light of our present knowledge the hope, amounting to a conviction, arises in us that even in our lifetime, if we are spared a few years more, we shall have an exact biodynamic and biochemical science that will make diagnosis accurate and precise and one that will enable us to treat and control all infections with an exactness not now possible. While the surgeon is now constantly encroaching on the field of the internist, the time is not far distant when the physician may not only reclaim his own, but with it that large group of neoplasms known as malignant growths that from time immemorial has been the exclusive property of the surgeon.

Original Communications.

THE RELATION OF CHOLELITHIASIS TO ACUTE PANCREATITIS.*

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Though known to the profession since 1641, it is only of recent years that the subject of pancreatitis has been given the attention which its importance warrants.

In 1641, Vulpius described an abscess of the pancreas which he had found at an autopsy. In 1673 Greisel described a case of gangrenous pancreatitis. In 1804, Portal reported a case of suppurative, as well as a case of gangrenous pancreatitis. In 1865 the first case of hæmorrhagic pancreatitis was described by Rokitsansky. Balser, in 1882, was the first to call attention to fat necrosis as a symptom of pancreatitis. The brilliant paper of Fitz, in

* Read before the Surgical Section of the Academy of Medicine on April 13, 1903.

1889, was largely instrumental in drawing the attention of the profession in this country to the subject of acute pancreatitis. Of more recent date still is the recognition of the relationship of cholelithiasis to acute pancreatitis.

The pancreatic duct and the common bile duct, as is well known, have a common opening into the duodenum at the papilla of Vater. When a stone at or near this papilla obstructs the common bile duct, it also obstructs the duct of Wirsung. Hence it is but natural that we should often find disease of the pancreas associated with disease of the biliary system. How often do we at operations on the bile ducts feel a hard pancreas? In many cases, surely, this means a chronic pancreatitis. When the common bile duct is obstructed, jaundice results. When the pancreatic duct is obstructed, fat necrosis results. By fat necrosis is meant a splitting up of the fat into its component parts, fatty acids and glycerin. The glycerin is absorbed; but the acids, being insoluble, remain in the cells and unite with calcium salts to form yellowish white patches of varying size in the fat of the pancreas itself, in the fat of the neighboring organs, and even in more distant parts. To produce fat necrosis the disease in the pancreas must be so far advanced that the discharge of the pancreatic fluid into the bowel is interfered with. Some of the pancreatic fluid, with its fat-splitting ferment, then escapes into the surrounding tissues, whence it may be taken up by the lymphatics or blood vessels. Besides fat necrosis, the signs of pancreatic obstruction are the presence of fat and undigested muscle fibres in the stools, lipuria and glycosuria. When present, these symptoms are of great value, but they are unfortunately generally absent. Opie has shown that glycosuria only results when the islands of Langerhans become diseased. According to Mayo Robson, fat in the stools is more common than glycosuria, though often absent, and fat in the urine is still more rarely found. Experiments have shown that the ligation of both pancreatic ducts in the cat is followed by widespread fat necrosis. According to Opie, "when the pancreatic duct is wholly or partly occluded we may readily believe that, though the secretion of the gland cannot enter the intestine, microorganisms may make their way from the duodenum into the dammed-back secretion, and, multiplying, produce inflammatory changes in the gland. The obstructed secretion, moreover, may be forced backward into the gland parenchyma, and, even though microorganisms have not entered, may produce injurious effects upon the substance of the organ." The anatomical peculiarities of the papilla of Vater are such, in some cases, that when a stone becomes impacted in the papilla, the common opening of the bile duct

and duct of Wirsung is occluded. Bile may then enter the pancreas by way of the pancreatic duct, and the pancreas will then become the seat of inflammatory changes, *i. e.*, a pancreatitis develops. Should the stone be so firmly lodged as to obstruct the flow of pancreatic fluid into the duodenum, we should naturally also expect that the flow of bile into the gut would be likewise obstructed, and that jaundice would result. In some cases this has been noted, while in others death has followed so rapidly that the absence of jaundice is not surprising. Moreover, a stone might temporarily occlude the pancreatic duct and thus cause severe injury to the pancreas, but finally, being expelled into the gut, leave no evidence of its former impaction.

Mayo Robson states that in some of his cases gall stones were not found, but only firm adhesions with an antecedent history of attacks of pain followed by jaundice. Further, a moderate inflammation in the head of the pancreas may cause that organ so to enlarge that it exerts pressure on the common duct, and obstructs the flow of both bile and pancreatic fluid into the duodenum. Moreover, it is not even necessary for gall stones to have been present at any time. We know that we frequently find infections of the gall bladder and ducts without the presence of stones. May not such an infection cause so great a swelling of the mucous membrane of the common duct that the papilla of Vater is occluded? We certainly believe that it may. The duct of Wirsung is then also occluded, and we thus have every requisite for the development of a pancreatitis.

Unfortunately, there are no symptoms pathognomonic of acute pancreatitis. Moreover, the symptoms of a gastric or duodenal ulcer, cholecystitis, and appendicitis. According to Deaver, acute pancreatitis is characterized by pain in the epigastrium, colicky in nature, accompanied by prostration and vomits vary greatly in different cases. According to Mayo Robson, a correct diagnosis can only be arrived at by studying the history, mode of onset, and combination of symptoms. In general, it may safely be said that at the onset the symptoms of acute pancreatitis are those of a peritonitis in the epigastric and hypochondriac regions. The differential diagnosis must be made from rupture anxiety. Vomiting, in Deaver's experience, has been an early symptom and has generally been severe. This train of symptoms was almost completely absent in my own case, and in some of the cases collected by Opie. In my case there was absolutely no vomiting, only nausea. The prostration, anxiety, and rapid loss of weight, often considered pathognomonic of pancreatitis, were likewise wanting. The character of the pain is, in my opinion, of some importance. The pain is very se-

vere, almost agonizing, in character, and differs in that respect from the pain of cholecystitis or of appendicitis. However, the train of symptoms in my case, and in several other cases observed in this country, has been strikingly like that of acute appendicitis. Of course if epigastric tenderness and swelling are present the diagnosis becomes easier. But, unfortunately, in many cases these symptoms are either very slightly marked, or entirely absent.

Opie has collected thirty-two cases in which pancreatic lesions and fat necrosis were associated with cholelithiasis. Gall stones were found in the gall bladder or ducts, but at autopsy there was not always conclusive evidence that a stone in the common duct had occluded the pancreatic duct. In one case, that of Dieckhoff, a calculus had found its way into the pancreatic duct and caused a suppurative inflammation. In twenty-six of the thirty-two cases collected by Opie, there was fat necrosis. In three of the six cases in which it was absent, death occurred very soon after the onset of the attack.

Thayer reported the following case in 1889: A man aged sixty had had, during the sixteen months prior to his death, repeated attacks of pain in the upper part of the abdomen, followed by jaundice. Thirty-four hours before his death he had been suddenly seized with severe pain in the left hypochondrium and in the epigastrium. The man went into collapse and died. At the autopsy the thickened gall bladder was found to contain over a hundred stones. The common duct was dilated to the size of the little finger, and in the duodenum a stone as large as a hazel nut was found. The pancreas was large, reddish-brown in color, and the surrounding fat was the seat of necrosis. In this case the stone had evidently occluded the pancreatic duct long enough to cause a fatal pancreatitis.

Day, in 1892, and Cutler, in 1895, each reported a similar fatal case.

Fraenkel, in 1896, reported the case of a woman aged forty-eight years, who for years had suffered from stomach and liver disease. Her fatal illness had begun five days before her death, with vomiting, constipation, and abdominal distention. Jaundice had then supervened. At autopsy the thickened gall bladder was found to contain three large calculi, and the duodenum contained one calculus the size of a cherry. There were foci of fat necrosis in the pancreas, in the greater and lesser omentum, and in the appendices epiploicæ.

Kennan, in 1896, likewise reported a fatal case. A woman aged thirty-eight years had been suddenly seized with vomiting and pain in the upper part of the abdomen, followed by collapse. Death took place forty-eight hours after the onset of the attack. At the autopsy a gall stone the size of a

pea was found projecting from the papilla, and other stones were found in the gall bladder and common duct. The pancreas was enlarged,* intensely congested, and surrounded by a local peritonitis.

Opie reported the following case. Six months before his admission to the hospital, a man aged forty-seven years, had been seized with abdominal pain accompanied by vomiting. This had been followed by jaundice, which persisted three weeks. Eighteen days before his admission, the man had been suddenly seized with violent nausea and vomiting, together with severe cramplike abdominal pain. The vomiting had recurred and the abdominal pain, which had not become localized, remained severe during four or five days. At times there were symptoms of collapse. The abdomen became distended, and the bowels did not move until a purge was given on the fifth day. On the seventh day tenderness and swelling were noticed in the right hypochondrium. Thereafter, irregular rises of temperature, 101° F. to 103° F., were noted, and the man had several chills. After the first few days the abdominal pain and tenderness were not severe, but the abdominal distention gradually increased. There was no jaundice. The leucocytosis was 18,300. The urine contained a trace of albumin but no sugar. Operation was performed under local anæsthesia by Dr. Bloodgood. After incising the gastrocolic omentum an abscess was opened. The patient died four hours after operation, on the twenty-second day of his illness. At the post-mortem examination areas of fat necrosis were found in the omentum. The bile ducts in the liver were slightly dilated. The gall bladder was adherent to the duodenum and stomach. Its walls were thickened and distended, containing viscid yellow bile, and it contained over a hundred faceted brown calculi. The hepatic, cystic and common ducts were all markedly dilated. There was a stone in the common duct 1.5 centimetres from the papilla. There was no distention of the pancreatic duct. The pancreas was large and covered by coagulated blood. The glandular tissue was firm, yellowish-white, and well preserved. The interstitial tissue was hæmorrhagic in places, and contained necrotic areas.

Ehrich published the autopsy findings in the case of an unmarried woman aged forty-eight years. There were fat necrosis and gangrene of the pancreas; fat necrosis in the mesentery and capsule of the kidney; and gall stones in the dilated cystic and common ducts.

Körte, in his exhaustive monograph on *Krankheiten d. Pankreas*, gives the autopsy diagnosis in two cases:

Case I.—A woman, forty years of age. Cholelithiasis, pericholecystitis, pus in the pancreatic duct.

Case II.—A woman, sixty-eight years of age. Cholelithiasis, liver abscess, necrosis of fat of pancreas.

My own case is the following:

Mrs. J. L., forty-one years old, the mother of three children, had never had any previous intra-abdominal disease. On January 26th and 27th she had been perfectly well, with the exception of a slight feeling of discomfort in the region of the stomach.

On the morning of January 28th, after having slept all night, the patient had been suddenly seized by the most violent agonizing pain in the epigastrium. The pain had radiated to the sides and to the back. There had been slight nausea, but no vomiting. The temperature and pulse at the onset were normal. With the exception of a coated tongue and tenderness in the epigastrium nothing abnormal was found. Two injections of morphine gave some relief to the pain. However, during the first two days of the attack the pain was more or less continuous. On January 30th the pain had increased, and had become colicky in character. Constipation, which had previously been present, had been relieved by castor oil. Two soft brown movements were preceded by much griping. There was uniform moderate tenderness over the entire abdomen, and some rigidity over the right rectus. Up to this time the patient had been under the care of her brother, Dr. Joseph Davidson. The pulse rate and the temperature had gradually but steadily increased since the onset of the attack. A colleague, who was called in consultation, concurred in considering acute appendicitis the most likely diagnosis. I saw the patient for the first time on January 30th, at 7 p. m. The tongue was moist and thickly coated. The face was very pale and had an anxious expression. The pulse was somewhat irregular, soft, and compressible, and the rate varied from 120 to 125 beats per minute. The temperature was 102.5° F. There was moderate tenderness in the epigastric and right hypochondriac regions, and some rigidity of the right rectus at the level of the umbilicus. There was some dullness in the right flank, which changed to tympany on turning the patient. In view of the acute onset and the increasing severity of the symptoms, together with the steady increase in pulse rate and in temperature, I recommended an exploratory abdominal incision. I diagnosed an intraabdominal inflammatory process, which was producing a systemic infection and a beginning peritonitis. The gall bladder and the appendix were thought of as the organs most likely to be the seat of such an inflammatory process. The patient was removed to a private room at Mount Sinai Hospital and was operated on at once. An incision two inches long was made along the outer border of the right rectus muscle at the level of the umbilicus. On opening the peritoneal cavity a small amount of clear fluid escaped. The appendix was long and was tightly bound down by old adhesions to the outer side of the cæcum. It was removed in the usual manner. The organ was

three inches long; its mucosa was thickened, and it contained several coproliths.

The transverse colon and the omentum presented in the wound. The omentum was thickly studded with small irregular opaque yellowish white patches, firm to the touch and slightly raised. The size varied from one to three millimetres in diameter. A small piece of omentum, containing several of these white areas, was removed for examination. The gall bladder was palpated and found distended, and there was a large stone in the cystic duct. The abdominal incision was then extended upward to the free border of the ribs. The stone was milked back into the gall bladder, and a cholecystectomy was rapidly performed. The peritonæum at the junction of the liver and gall bladder was incised, and the gall bladder freed by blunt dissection from its peritoneal coat. The ducts were then carefully palpated, but no further stones were found. The head of the pancreas felt hard, but it was not enlarged. The cystic duct was clamped, ligated with heavy catgut, and cut across. The stump of the duct was cauterized with pure carbolic acid. A cigarette drain was introduced down to the stump of the cystic duct, and the ligature left hanging out of the wound. The abdominal wall was closed with layer sutures, and the skin strapped with zinc plaster. The entire operation lasted one hour. Gas and ether were the anesthetics employed. Free hypodermic stimulation had to be resorted to toward the end of the operation. The breathing was poor, the pulse from 140 to 150, and there was considerable cyanosis. The gall bladder was four inches long, its wall somewhat thickened, the mucosa dark, congested, with yellowish punctate areas. It contained a cholesterol stone, oval in shape, half an inch long and not faceted. Dr. Mandlebaum, the pathologist of the hospital, reported the omentum to be the seat of a typical fat necrosis.

On the day following operation the temperature dropped to 100.2° and the pulse to 96. Examination of the urine showed the presence of albumin and indican, and many granular casts.

There was moderate abdominal pain and pain in the right lumbar region. On February 1st, an enema was followed by a large brown fluid stool. The breathing at the base of both lungs posteriorly was diminished, and there was some dullness over these areas on percussion. Temperature 101.4° F., pulse 112, respirations 36. During the following three days the pulmonary signs became more marked. The temperature varied between 100.6° and 101.8°; the pulse between 96 and 112; and the respirations between 28 and 36. On February 5th there were dullness, bronchial voice, and bronchial breathing over both lower lobes posteriorly. The wound was dressed for the first time and was found to have healed by primary union. The cigarette drain was removed and a small strip of gauze was inserted. On February 3rd the urine still contained a trace of albumin, but casts were no longer found. The pulmonary signs remained unchanged until February 10th. On that day I noticed that the dullness, bronchial voice, and breathing had disappeared, and over the affected area crepitant râles were to be heard. Over the left lower lobe the physical signs were unchanged. Temperature 99.2°

to 100.6°; pulse 96 to 100; respirations 24 to 26. On February 12th the right lung had completely cleared up, but the physical signs over the left lung were unchanged. The urine was normal. On February 13th, dulness over the left lower lobe disappeared and crepitant râles were heard. The temperature dropped below 100° F. and remained there. On the 16th there were only a few crepitant râles to be heard at the end of deep inspiration over the base of the left lung. On the following day, eighteen days after operation, the patient was allowed to get out of bed, and four days later she left the hospital with the wound completely healed.

From a careful study of these thirty-three cases of acute pancreatitis associated with cholelithiasis, the conclusion is forced upon us that in many, if not all, the cases, there is a causal relationship between the two conditions. In not a few of the cases positive proof was found at the autopsy that the duct of Wirsung had been occluded by a gall stone. In the case of Dieckhoff a biliary calculus had actually found its way into the pancreatic duct. In Thayer's case we have a history of several attacks of biliary colic followed by jaundice. Then came the fatal attack of acute pancreatitis. At the autopsy the common duct was found enormously dilated, and in the duodenum was found the large calculus which had undoubtedly caused the duct occlusion. The cases of Day and Cutler presented similar features. Is it not fair to assume that in some of the other cases, in which the offending calculus was not found, it had passed further down into the bowel?

The anatomical conditions in some cases certainly predispose to an obstruction of the pancreatic duct at the papilla. Fortunately, the relations of the two ducts are often not favorable to the occlusion of the duct of Wirsung, or else we should have many more deaths to report from acute pancreatitis in our gall stone cases. However, the cases in which pancreatic obstruction does occur in this manner are, we believe, another potent argument in favor of early operation, not only for cholelithiasis, but also for acute pancreatitis. The thirty-two previously reported cases all ended fatally, because, in many of them, operation was too long deferred. We were fortunate in saving our case, not because we made an early diagnosis, but because we advised an early exploratory incision. And this is, we believe, the crux of the whole problem. Many of the foregoing cases could have been saved had an early operation been resorted to. That the diagnosis in the early stages of acute pancreatitis is, in most cases, extremely difficult, has already been mentioned. But it is just in these doubtful cases that we shall achieve our most brilliant results by early resort to the exploratory incision. If this little paper should now and then induce an early operation to be performed

for acute pancreatitis it will not have been written in vain.

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- 1001 MADISON AVENUE.

AN UNUSUALLY LONG (TWENTY WEEKS) CASE OF RELAPSING TYPHOID FEVER.*

By W. L. STOWELL, M. D.,

At various times I have presented the subject of typhoid fever here; once on the treatment in general, once on typhoid in tenements, and again notes on typhoid in children.

The reason for reporting this long case is to record its somewhat unusual features and to relate interesting therapeutical facts and lessons.

The simplest way will be to call attention to these temperature curves with some notes. The full notes consist of 230 pages of large hospital sheets, and would be quite too tedious to bring forward.

This patient was a young married woman about thirty years of age, very spare, but healthy looking, not emaciated. I was called one afternoon, and

* Read at the one hundred and first stated meeting of the Society of the Alumni of the City (Charity) Hospital, October 8, 1902.

found her with a temperature of 104° F.; that was twenty-four hours after she recognized that she was ill. She had been out that morning shopping. The rise of temperature continued during that week, and then began gradually to subside, and in the course of about three weeks got down to normal.

At the first visit I suspected typhoid; the second day I made sure it was typhoid, because I could exclude pretty certainly any other complaint. She was a very nervous patient, so that the nervous symptoms were marked from the beginning. She was irritable during the first week or two, sometimes with delirium, which further on (after the third relapse) was very active, and still later became of a low muttering character, which showed a very low vitality in the patient. The first grave symptom was the finding of albumin in the urine—there not being a very large amount of urine. The rose spots appeared on the abdomen at about the eighth day. When the temperature was at its height the spots were apparent and continued so for two weeks.

The pulse from the beginning was very bad as to quality, always of a very irregular force, and oftentimes irregular in rhythm, so that, throughout the disease, the heart called for more watchfulness and treatment than any other organ or set of symptoms. You see by the chart that the pulse ran generally during the first series in the neighborhood of 100 to 110, and never got very frequent, but its quality was very bad, being weak, compressible, and losing beats. Later on it usually ran to 120 and even 150. The temperature was taken every three hours, both night and day. The most remarkable changes were noticed in the pulse without apparent cause—pulse 120 at one time; the next count might be 150 or 160; rarely above 160. Occasionally the notes would state that the patient slept through the night and was not given stimulants, but every record and every page would be covered with notes regarding this very poor pulse. To make the matter a little more clear and brief, I will say that the first three weeks—the first series—was what might be called normal typhoid, and as she got nearer the normal temperature she felt perfectly well, and was anxious to be moved from her bed to a couch near at hand, and was so moved. She dictated several letters, and received a visit from her mother, who lived out of the city, all of which taxed her strength that afternoon, though the temperature was normal. The following day, the temperature rapidly ran up, and the first relapse was on. After that, the temperature fell rapidly, but not quite to normal. After an interval of six days, it went up again. These fluctuations were more or less irregular, so that it would seem that there were in all about six relapses; each one of these seemed to be shorter and less severe than its predecessor. I lost track of the spots in this later rise of temperature, but during the first and second week they were quite distinct.

As to complications; there seemed to be no definite complication until we got near the eighth week, when she had cystitis. There was a good deal of abdominal distention at times, and there was some pain about the region of the ileocæcal valve. In order to check that and keep the temperature down, I put on ice bags, and, later, an ice coil. It is a question whether the ice coil chilled her and caused

cystitis. This cystitis was definite; she had dysuria and a great deal of pain at all times and voided urine which contained pus. That continued for a fortnight. About this period the bladder had apparently regained its normal tone, but there was distinct pain and induration over the region of the appendix. Typhoid patients are quite apt to have a good deal of tenderness over the ileocæcal region, but there is every reason to suppose clinically that this was actually a catarrhal appendicitis, and I watched day by day to make up my mind whether we would call in a surgeon to operate, if necessary, but it gradually subsided, though pain continued for some little time. Three weeks later there was more or less pain over the appendix.

At times constipation was marked and I ordered calomel triturations. They acted favorably until administered in $\frac{1}{5}$ grain doses in the sixteenth week. At that time she had taken in all two grains and pyalism resulted with great swelling of the face and gums. The lady had for a long time been under the dentist's care for alveolar gingivitis, so that she was probably unusually susceptible to mercury. At all events the patient had had only two grains of calomel.

From there on, the temperature ran irregularly for several weeks more. This simply shows that convalescence was very prolonged, and the temperature did not reach normal or stay normal for twenty weeks. There was considerable anæmia as the convalescence was very slow.

The direct complications seem to be the cystitis and appendicitis. There was a good deal of a nervous affection, which would be called neuritis. In the early stage there was twitching of the legs in particular, and to some extent of the arms, that troubled the patient, actually caused her pain, and disturbed her mind to such an extent that I think she aggravated the condition. Following that, there was stiffness of the knees and ankles, and a long course of massage was necessary to overcome it.

As to therapeutics: I began by giving alcohol and cold water sponge baths when the temperature was above 103° F., but for two weeks, with the baths, the temperature remained at about the same height, and the patient was pretty comfortable during the time. At that point (the fifth week), for some unaccountable reason, the patient went into a state of collapse. From the pulse and the general appearance of the patient, it seemed as though she were dying. The temperature did not rise or fall greatly, but the patient seemed near the point of death; there was one more instance in the ninth week when the temperature fell to 97.3° F., but rose to 103° F. the next day. The treatment was partly as follows: Stimulants, in the form of liquid peptonoids, and later, as the pulse seemed to indicate that she needed more stimulation—whiskey. I used all the cardiac stimulants ordinarily given, as digitalis, sparteine, nitroglycerin, strychnine and caffeine, and camphor hypodermically. The one that seemed most satisfactory, and after which I found the best results marked on the card, was sparteine. Sparteine seemed to hold the pulse best, and it was noticeable that when she had sparteine she did well, and when she did not the pulse was bad.

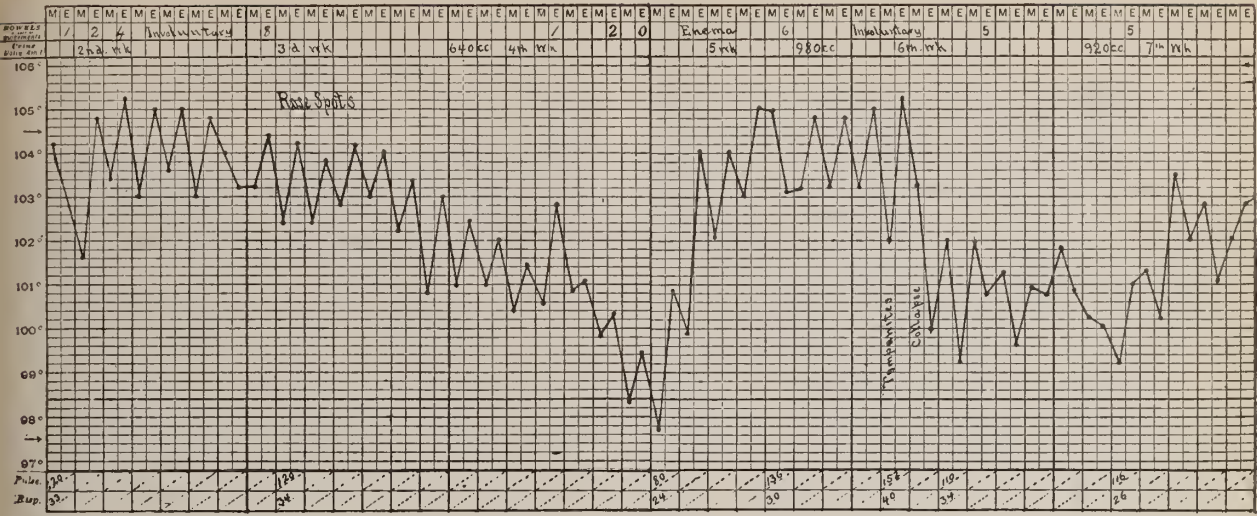


Chart I.—Second to seventh weeks.

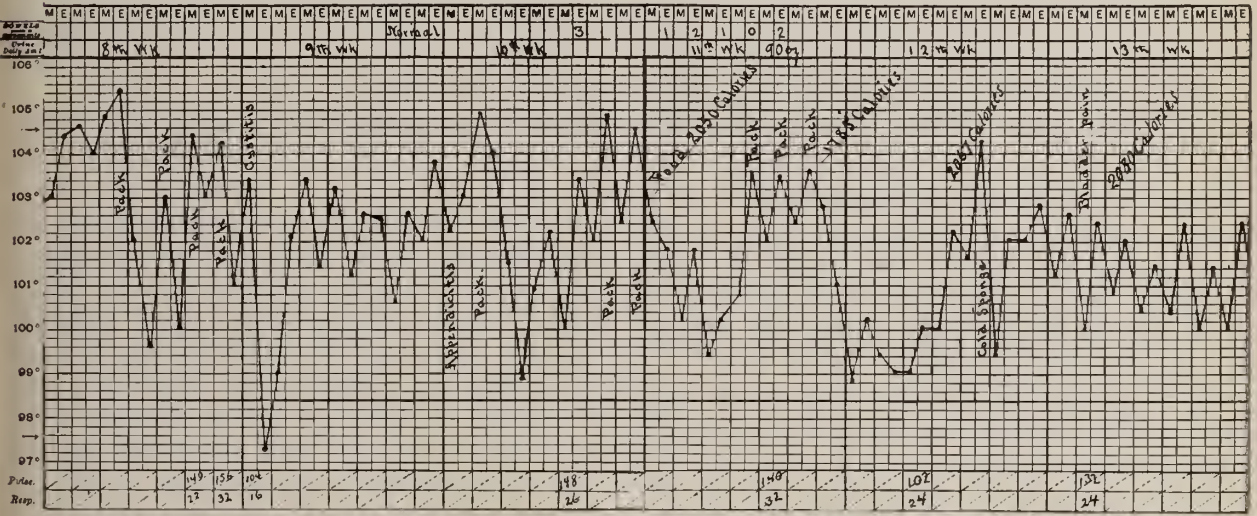


Chart II (Continuation).—Eighth to thirteenth weeks.

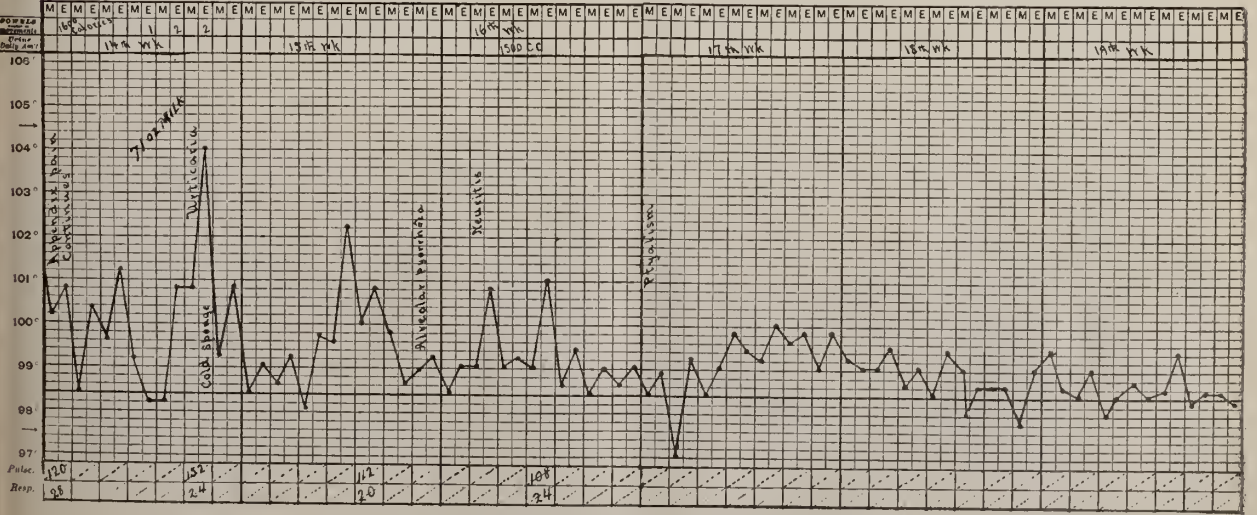


Chart III (Conclusion).—Fourteenth to nineteenth weeks.

Of intestinal antiseptics I gave naphthalin, guaiacol carbonate and salol; most of the time naphthalin. I believe that although the lesions are chiefly in the small intestine, it is wise to keep the rectum clear, and therefore I had irrigations used a good part of the time—lysol $\frac{1}{2}$ per cent. The temperature seemed to be lowered a little thereby. A number of times there was constipation, and the stools were so well formed, or more formed than usual, that it was necessary to give an enema for its cleansing effect as well as for its antiseptic value.

At the end of the first series, the patient felt remarkably well. As it seemed to be a perfectly normal case I began to consider variations in the dietary. The matter of giving liquid food exclusively is open to argument. Milk, though taken as liquid, will in many instances quickly become a hard, offending curd. We have to peptonize it when fever is high and digestive secretions insufficient. Some food taken solid will readily liquefy and undergo digestion, as ice cream, jellies, calf's foot or gelatin. I am in favor of giving other food than milk to many patients whose digestion seems active. At the New York Hospital they give eggs or a chop as soon as the temperature reaches normal (see Keays, in *Medical Record*, December, 1900). This patient felt so well that I allowed her soft boiled egg in the third week, even though the temperature was still at 100° F. During that week she had once a small piece of chicken and several times milk toast. Also oranges and plums. The stools were normal or constipated during that week.

On August 2nd, the beginning of the fourth week, the temperature record was 97.8° F. I ordered baked potato and stewed sweetbread as a meal of pure starch and a delicate meat. The latter is easy of digestion when plainly cooked, but difficult to dispose of if richly dressed.

The temperature began to rise again on the same date, and three days later had again reached 105° F. There was no indigestion, no coating of the tongue, distention of the stomach, or evidence of undigested food until she vomited milk two days after the last solid food. Constipation prevailed until the middle of the fifth week, when the diarrhoea returned and stools were involuntary. Before this the bowels acted normally for twelve days. The temperature remained at about 105° F. for six days, and fell by crisis, at which time it seemed as though the patient would succumb.

The first relapse greatly alarmed the family, who having no knowledge of germs, attributed the attack to the solid food of August 2nd; ignoring the fact that the patient had been eating eggs and milk toast for a week previously. The objections were so strong that the patient was thereafter kept on liquid diet, consisting chiefly of milk with occasional feeding of beef juice, clam broth, or other liquids. Notwithstanding the absolutely liquid diet, she had all these relapses, none of which could be attributed to errors in diet. Dr. J. E. Winters and Dr. W. H. Porter saw the patient at different times and also absolved the diet of responsibility for the relapses. The quantity of nourishment varied, but was generally high. For example, on the first day of the sixth week she took forty-two ounces of milk, four ounces of liquid peptonoids, eight ounces

and a half of whiskey, and three ounces of champagne. Twelve days later the diet consisted of milk, twenty-two ounces; beef juice, four ounces; bouillon, twenty-five ounces; plasmon, half an ounce; one egg, and more than thirty ounces of spring water.

On the sixty-fourth day she took of milk, 38 ounces, peptonoids $3\frac{1}{2}$ ounces, champagne 6 ounces, whiskey $6\frac{1}{2}$, beef juice half an ounce and spring water 20 ounces; in all more than 2,000 calories fuel value. During the eleventh to thirteenth weeks the food computation averaged 2,000 calories, though the whiskey was cut down to four ounces and a half a day. The highest consumption of milk was seventy-one ounces. As a man in health requires about 3,000 calories daily, it will be seen that this sick woman did well in taking 2,000 calories. At this time the urine voided was seventy ounces, one day's record was ninety ounces, but forty seems to have been the average. While the cystitis lasted, the offensive odor and pain in the bladder were overcome by alkalies, chiefly cystogen. A small amount of albumin was present.

The first nurse was not watchful enough and a bed sore developed. This healed under the free use of zinc stearate and boric acid, conjoined with the high feeding.

Concluding remarks.—Here was a patient with a persistently bad pulse without heart lesions—a septic pulse?

Calomel was used early and freely, after the German teaching, and later, antiseptics, such as naphthalin, salol, and guaiacol were given almost continuously. Notwithstanding these drugs, reinfection occurred repeatedly. The lysol enemata seemed to lower temperature slightly, but failed as to infection. As to hydrotherapy; cold sponging did not avail much. The cold pack in the wet sheet was better, as the patient would fall asleep while so enveloped and the temperature would fall, delirium cease, and the thready pulse become stronger.

We have, in the old books, two maxims: One "to feed fevers," another "to starve fevers." This one was fed. Did it increase her temperatures, or did it save her life?

Segregation of Lepers Condemned.—In a statement made by Dr. Alvarez, who was sent to Molokai, as an expert, he severely criticizes Hawaii's system of segregation, stating that out of twenty-one supposed lepers examined by him some time ago, sixteen were entirely free from the disease and should be set at liberty. He further says that the segregation system leads those who have leprosy, and their relatives, to conceal the fact, to avoid being sent to Molokai. Dr. Alvarez approves the Norwegian system of segregation. The executive committee advocates the establishment of a large hospital on the island of Oahu with Dr. Alvarez as physician in charge.

Correspondence.

THE WASHINGTON MEETINGS.

Special Telegraphic Reports of the Congress of
American Physicians and Surgeons and
other National Meetings.

(BY OUR OWN CORRESPONDENT.)

WASHINGTON, May 12, 1903.

THE sixth triennial session of the Congress of American Physicians and Surgeons convened in Washington, this afternoon. A large majority of the 700 medical men in attendance upon the congress and its constituent bodies were present in the Columbia Theatre when Dr. William W. Keen, professor of surgery in the Jefferson Medical College, Philadelphia, called the convention to order as its presiding officer.

The usual formality of welcoming addresses and responses was dispensed with, and after very brief preliminary remarks by Dr. Keen, the congress proceeded to business.

The afternoon's programme consisted of papers by the foremost specialists in the colleges of the country and practitioners of the United States, also a few from Germany. The subject was The Pancreas and Pancreatic Diseases.

Professor Adolf Lorenz, of Vienna, will not be present at any of the sessions of the congress, nor will the patient whom he operated upon in Washington last November be exhibited before the members of the American Orthopædic Association, as had been intended. He had accepted an invitation of the congress and its affiliated societies, but suddenly declined and started from New Orleans on a trip through the mountains of Mexico. Why he changed his intentions no one seems to know. A youth upon whose feet he operated last November was to have been exhibited to-day before the American Orthopædic Association, and the Vienna surgeon was to have been present and explain the operation. But he wrote, at the last moment, to Dr. Louis A. Weigel, of Buffalo, president of the association, that he could not be present, and expressed regret that the exhibit of his surgery was not to be made.

Dr. Weigel was asked concerning the matter. He spoke very frankly. "It is not within the province of a scientific society," he said, "to make an attack upon a man, but nevertheless it always reserves the right to discuss scientifically the theories and systems advanced in the development of a pro-

fession. Personalities and emotion should always be left out." A report had become current that the association would attack Dr. Lorenz and his methods, and by some that is assigned as a reason for his sudden change of mind. No attack will be made on Professor Lorenz, but his methods will be thoroughly discussed on Wednesday by the society, and what the speakers will say is awaited with considerable anxiety. The subject will be introduced in the morning session by Dr. G. G. Davis, of Philadelphia, who will read a paper on The Forcible Reposition of Congenital Luxation of the Hip.

Other papers will be read by Dr. H. Augustus Wilson and Dr. J. Torrance Hugh, of Philadelphia, on Congenital Dislocation of the Hip; Bloodless Reposition. Still others will be The Resistance of the Tissues as a Factor in the Manual Replacement of Congenital Hip Dislocation, by Dr. E. H. Bradford, of Boston; and Peripheral Palsies Following Manual Replacement of the Congenitally Dislocated Hip, by Dr. Henry Ling Taylor, of New York. The discussion of these papers will necessarily bring out the very system which Professor Lorenz is using, even if the writers do not pay their respects to the Viennese surgeon by mentioning his method.

The congress has affiliated with it sixteen societies of specialists, nearly all of which are holding sessions in the city at the present time. These associations send delegates to the executive committee of the congress, who are given seats in the congress itself. During the session of the congress, which will occupy the greater part of three days, papers by eminent authorities will be read on the spread of malaria, yellow fever, and kindred diseases; on the prevention of disease among the employees on the Panama canal; and on the discoveries made by the late Dr. Walter Reed and their value to medical science. Among the prominent physicians in attendance are Professor von Mikulicz-Radecki, and Professor Hans Kerr, of Germany.

On the stage of the theatre on Tuesday, when President Keen called the congress to order, sat all the speakers of the afternoon, representing the leading men who have written and investigated deeply into the subject under consideration, viz., the Pancreas and Pancreatic Diseases. The first speaker was Dr. E. L. Opie, of Baltimore, a professor in Johns Hopkins University. The title of the paper which he read, was On the Anatomy and Histology. The paper was a comprehensive description of the pancreas, the writer entering into the most minute description of the organ and its accessories. During the course of the paper Dr. Opie, who is looked upon as one of the foremost investigators of the organ in this country, referred repeatedly to the cases which had come under his notice.

In the latter portion of the paper he brought out the anatomical peculiarities of the pancreas.

The second speaker was Professor R. H. Chittenden, of New Haven, Conn., a professor of Yale University, whose paper on the Physiology and Physiological Chemistry. He mentioned the three functions of the pancreas and considered especially the dissolution of fats by the secretion thrown into the digestive apparatus. He recited experiments which had been performed on dogs where the action of the organ had been impaired, thus impairing the digestion of fats, and of its removal where more serious results were produced in the blood of the system, due to the metabolism of the carbohydrates.

Dr. Simon Flexner, of Philadelphia, read a paper on the *Ætiology and Pathological Anatomy of the Pancreas*. His remarks were applied to acute inflammation, fat necrosis, and chronic inflammation. He reviewed the advance which had been made along the field of investigation in this line, and complimented Dr. Fitz, who sat on the stage, for the facts he had given to the world. One of the problems he discussed was that of whether the gastric juice entered the organ and caused inflammation. He thought it did not.

Dr. Reginald H. Fitz, of Boston, was next introduced. His subject was *The Symptomatology and Diagnosis of Diseases of the Pancreas*. He stated that the relations of the pancreas to other organs had long been suspected, but recently established. He dwelt for considerable length on the relations of diabetes to pancreatic disease, and on the presence of jaundice when disease seized the pancreas. His paper was the last which dealt with the pancreas as the physician knows it.

The first surgical paper on the organ was read by Professor von Mikulicz-Radecki, of Germany. In introducing him, President Keen paid tribute to the advance the Germans had made in surgery, and spoke of the ability of Professor Mikulicz personally. His paper dealt with the injuries, inflammatory processes, and surgical treatment of the pancreas. The speaker took occasion to return the compliment which had been offered to himself and his country by reciting the names of several Americans who had progressed in the surgery of the pancreas. One point he brought out was that jaundice was not an important factor in determining the presence of disease in the pancreas. He dwelt on the use of different foods in determining the properties of the juices of the pancreas. He considered the different acute and chronic forms of diseases affecting it. At the conclusion of the reading, the audience was so pleased that Professor Mikulicz had to bow his appreciation of the prolonged applause.

The next speaker was Dr. Roswell Park, of Buffalo. His subject was *Tumors, Cysts, etc., of the*

Pancreas. He said that, while there had been a great deal written on the subject of the pancreas, what the profession needed was research. At present practitioners had to be content with relying on the observations of others. In the operation for the removal of cysts, he emphasized the necessity of stopping the flow of pancreatic juice into the abdominal cavity. He said a diagnosis could rarely be made with certainty. He recounted several symptoms which he said were varying, and concluded by saying that there was no treatment except by operation.

The papers were then opened to discussion. Dr. Charles G. Stockton, of Buffalo; Dr. Herbert U. Williams, of Baltimore; Dr. Maurice H. Richardson, of Boston, and Dr. B. S. A. Moynihan, of Leeds, England, spoke on different phases of the subject.

In the evening President Keen delivered his address to the congress, on *The Duties and Responsibilities of Trustees of Medical Institutions* (see page 877). The address was given in St. Matthew's Church. A reception was given to the members in the parlors of the Arlington Hotel, immediately after the address. The reception line was headed by Dr. A. R. Shands, of Washington, chairman of the committee on arrangements.

The American Academy of Medicine adjourned this afternoon, after a very interesting session. The next meeting of that body will be held in Atlantic City, N. J., on June 12, 1904. After adjournment, a reception was given to members of the Academy by Dr. and Mrs. G. N. Acker. The following officers were elected: President, Dr. John B. Roberts, of Philadelphia; vice-presidents, Dr. Thomas D. Davis, of Pittsburgh, Dr. James H. McBride, of Pasadena, Cal., Dr. J. T. Searcy, of Tuscaloosa, Ala., and Dr. S. A. Knopf, of New York; secretary, Dr. Charles McIntyre, of Easton, Pa.; assistant secretary, Dr. Alexander Craig, Jr., of Columbia, Pa.; and treasurer, Dr. E. M. Green, of Easton, Pa.

The American Otological Society, at a meeting this morning, reelected the present officers for another year. Dr. B. Alexander Randall, of Philadelphia, is president; Dr. William H. Carmalt, of New Haven, vice-president, and Dr. Frederick L. Jack, of Boston, secretary and treasurer. The place of holding the next meeting will be decided upon this morning. The business meeting interfered with the original intention of the society to finish its business to-day, and only a few papers were read.

What Ought we to Expect from Cardiac Drugs in Heart Disease? was the subject of a paper read by Dr. Oliver T. Osborne, of New Haven, this morning, at the second day's session of the American Therapeutic Society. This paper was most striking and interesting. Dr. Osborne discussed what

is popularly known as the "strenuous life"; that is to say, the life led by the average business man, overcome by an intense and overweening desire to climb to the top of the summit of wealth, fame, and social precedence, and its direct effect on the heart. After showing the effects of such a life, Dr. Osborne next discussed the remedies used for the purpose of strengthening and stimulating heart action, and, while he failed to declare himself in favor of any particular medicine, he did most emphatically declare that drugs, good or bad, could neither mend nor patch up the cardiac system, once it was broken down by overexertion. Discussing the initial phase of the subject, he said: "One hardly realizes this daily tension, and its effect upon the heart. We rise by an alarm clock, eat breakfast and read the paper by our watches, and within a given time and from that time forward meet office and outside engagements, college appointments, consultations, etc., constantly and carefully predeciding the amount of time that will be required for each, and time the next engagement by the last, reducing each to a minimum. During the day we go up and down stairs on elevators that ascend with a rush and go down with a plunge, in short, our regular daily routine is made up of constant series of nervous shocks."

The American Climatological Association met in its twentieth annual meeting in the palm garden of the New Willard Hotel this morning. Dr. Norman Bridge, of Los Angeles, Cal., presided. The principal subject under discussion was the problem of compulsory sanitation. The sense of the association seemed to be that, while the proposed commitment of consumptives, in particular, was desired, it was not practicable. Dr. Delancey Rochester, of Buffalo, in a paper, discussed the rôle of local sanatoria in preventing the spread of tuberculosis. He advocated compulsory commitment to properly equipped sanatoria of tuberculosis patients for whom satisfactory accommodation could not be secured at home. Considerable objection was raised to this on account of the principle being in violation of the independence of the home.

A number of the constituent bodies will conclude their sessions to-day, but the delegates generally will remain until the conclusion of the congress itself.

(To be continued.)

Therapeutical Notes.

For Hæmatemesis.—The *Semana Médica*, of Buenos Aires, for January 15th, quotes the following from V. Herzen's *Guía formulario de terapéutica*:

- ℞ Ferric chloride.....3 grammes (45 grains);
Rabel water.....2 grammes (30 minims);
(Sulphuric acid mixture, Fr.)
Syrup of opium.....30 grammes (1 ounce);
Water.....120 grammes (4 ounces);
- M. A dessertspoonful every five minutes at first, and later every ten or fifteen minutes.
- ℞ Ferropyrine.....0.60 grammes (11½ grains);
Distilled water.....160 grammes (3⅓ ounces);
Syrup of diacodium.....40 grammes (1⅓ ounce).
(Syrup of opium, Fr.)
- M. A tablespoonful to be taken every half hour.
- ℞ Ergotin.....4 grammes (60 grains);
Gallic acid.....0.50 gramme (7½ grains);
Extract of opium.....0.10 gramme (1½ grain);
Syrup of turpentine.....30 grammes (1 ounce);
Tilia water.....120 grammes (4 ounces).
- M. A dessertspoonful every two hours.
- ℞ Ergotin.....
Fluid extract of } of each 3 grammes (45 grains);
hydrastis.....}
Distilled water.....120 grammes (4 ounces);
Syrup of rhatany.....20 grammes (⅔ ounce).
- M. A dessertspoonful every quarter of an hour, and later, every half hour or hour.
- ℞ Ergotin.....2.50 grammes (37½ grains);
Sterilized water.....10 grammes (⅓ ounce).
- M. Two or three Pravaz syringefuls to be injected hypodermically daily.

Tin as a Tæniacide.—Dortschewsky (*Medicinskoe Obosrenie*, No. 24, 1902; *Revue médicale de Normandie*, March 10, 1903) finds that galvanically (electrically) precipitated tin forms an excellent remedy in tænia. He has used this preparation in cachets, each containing 0.60 gramme (9 grains), giving altogether five or six cachets at intervals of a quarter of an hour, and after the last cachet three tablespoonfuls of infusion of senna or two tablespoonfuls of castor oil. It is important at the outset of the treatment thoroughly to cleanse the intestinal canal by some good mineral water; and, further, for the two or three days preceding the administration of the tin, the patients must be subjected to a diet that will afford a minimum of fæcal matter. Of thirty-eight patients thus treated, the tænia was expelled the first time in twenty-six cases; in seven instances the treatment had to be repeated; but in five cases, even after repeated treatment, the tænia was not expelled.

Ammonium and Rubidium Bromide in Epilepsy.—*Progrès médical* for March 7th ascribes the following to Laufener:

- ℞ Double bromide of ammonium and rubidium,
6 grammes (90 grains);
Distilled water.....100 grammes (3⅓ ounces);
Syrup of citron.....20 grammes (⅔ ounce).
- M. Each tablespoonful contains 11¼ grains of the drug.
The dose is from 4 to 7 grammes of the mixture.

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THE NEW YORK MEDICAL JOURNAL.

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THE NEW ORLEANS MEETING.

The annual meeting of the American Medical Association which was held in New Orleans last week will, we venture to predict, be held memorable rather for the unexpected that happened than for the features to which everybody looked forward. It was not doubted that the registration would be large, and so it was. It was felt that the hospitality of the great Crescent City would be graceful as well as bountiful, and so it was. Every visitor who took part in the meeting left New Orleans, we feel confident, with regret that it was over. The few who were able to linger for a glance at the lovely resorts on the Mississippi coast esteemed themselves singularly fortunate. Every aspect of the meeting will be remembered with satisfaction.

But the most important of the unexpected things that happened was the disposition made of the report on ethics, presented by Dr. Harris, of New York, and the substitute prepared by Dr. Reed, of Cincinnati. It had generally been feared that serious disagreement would follow upon the presentation of those two documents. It was, therefore, with a thrill of surprise which burst forth into enthusiastic acclaim that their assimilation into a declaration of ethical principles satisfactory to men of all shades of opinion was received. This, of course, was the work of a few wise men having the welfare of the entire profession at heart. Though their names may not all appear in the records, their labors will continue to be appreciated.

If hereafter the Medical Society of the State of

New York is denied representation in the association, it will not be because the society dissents from the association's ethical declarations. In precisely what way actual representation will be restored it seems now impossible to forecast; indeed, the restoration may yet take time, since the two organizations covering the State of New York are at a deadlock over consolidation. But it is none the less a subject for congratulation that no question of ethics now stands in the way.

ATLANTIC CITY FOR NEXT YEAR'S MEETING.

Not the least of the unexpected things that happened in New Orleans last week was the American Medical Association's decision to hold its next annual meeting in Atlantic City. Milwaukee had been much talked of, and there was certainly a strong sentiment in favor of going to that interesting and progressive city, but as the time drew nigh for a conclusion to be reached, it seems, there arose the conviction that the hotel accommodations to be found in the metropolis of Wisconsin would prove inadequate. Whenever such an impression gains a foothold, no matter if it is not very well founded, it is apt to settle the question; and this is not to be wondered at in view of certain of the association's experiences.

The curious feature of the resolve to hold next year's meeting in Atlantic City lies in the fact that the association met there only three years ago, and it is not much given to holding two meetings at the same place within a short time. We must infer therefore that Atlantic City has impressed the members as a particularly suitable place of meeting. Such, indeed, it is, with its numerous large and well appointed hotels and its facilities for the general sessions and for the meetings of sections. There are many opportunities for diversion, and the air, barring the occasional prevalence of a land breeze, is delightful. The ever present possibility of a fearfully destructive conflagration adds the element of danger to heighten the zest of the venturesome. All things considered, Atlantic City seems to be an ideal place for a convention, and we have no doubt that next year's meeting there will be largely attended and keenly enjoyed.

THE GERM OF SMALLPOX.

In cases of smallpox and vaccinia certain minute parasites have been found by various observers to be present not only in the pock, but also in the tissues surrounding it. On account of their evolution in cycles, they have been taken to be protozoa and conjectured to be the pathogenic germ of the disease. They have recently been made the subject of special study by Dr. William T. Councilman, of Boston, who published an account of his investigations in the last number of the *Journal of Medical Research*, and on Wednesday of this week presented before the American Association of Pathologists and Bacteriologists a paper entitled *The Ætiological Factor in Variola*.

Dr. Councilman has added materially to our knowledge of the cyclical evolution of these bodies and of its modification by varying circumstances, chiefly the character of the animal organism in which it is implanted. The title of his paper would indicate his belief that these protozoa are the pathogenic germs of smallpox, though we do not understand him to state that this has been actually demonstrated. No generic or specific name has yet been given to the protozoon. Its identity with the organism observed by several other investigators is, we presume, not to be doubted.

The ubiquitous newspaper reporter has—quite as much to Dr. Councilman's annoyance, we doubt not, as to that of the medical reader—heralded the observations as constituting a great discovery and as settling beyond peradventure the question of the pathogenesis of smallpox. The newspapers lay stress on Dr. Councilman's having found these protozoa in the tissues adjoining the pock, and attribute the assumed failure of others to find them to the fact of their looking for them only in the pock itself. Now, to the best of our information, others, too, have found them elsewhere than in the pock. However, the prominence given to this aspect of the matter by the newspapers serves to suggest an explanation of the fact that, in the "caption" of vaccine lymph from the calf, compression of the skin around the pock causes active lymph to flow long after the original contents of the pock are exhausted—a fact that, in our opinion, ought to go far toward showing that the so called "pulp" of the vaccine pock is not the sole or even the chief storage place

of the virulent material. Dr. Councilman has done a distinct service, albeit he may only have somewhat extended the path that is ultimately to lead us to an exact knowledge of the germ of smallpox. *

A BACTERIAL LAMP.

For many years past men have been engaged in throwing light on bacteria; now according to report, the turn of the bacteria has come. Dr. Henry Leffman, of Philadelphia, recently described at the Franklin Institute in that city, the "bacterial lamp" invented by Hans Molisch, of Prague. This lamp is a flask-shaped glass filled with gelatin to which is added a spoonful of a culture of the *Micrococcus phosphorescens*. This organism grows very rapidly and emits a pale blue phosphorescence that persists for about a fortnight or three weeks. It is alleged that the light thus obtained is sufficient to render it of service as a lamp in places where light without heat is desired, as in mines, powder magazines, and so forth. Should the process prove to be really practicable, it may yet come to be the accepted means of illuminating the interior parts of the human body, thus obviating the dangers and inconveniences that at times accompany the use of the electric light, as in the cystoscope, etc. Another possible field of usefulness is the night light, in which capacity it may prove of service in protracted sickness and in night nurseries, in consequence of its freedom from danger, and doubtless, also, in course of time, from its inexpensiveness. The light afforded is said to be sufficient for the recognition of a man's countenance at a distance of about four feet.

OVERTASKING IN SCHOOLS.

We are glad that this subject was taken up at the recent meeting of the American Medical Association in the way of a formal discussion opened by so eminent a neurologist as Dr. F. Savary Pearce, of Philadelphia, and continued by Dr. Hermann H. Hoppe, of Cincinnati, and Dr. William J. Herdman, of Ann Arbor. At the close of the discussion, Dr. Herdman introduced certain resolutions calculated to lead to an exhaustive investigation of the subject. Certainly there are few points on which the physician could instruct the public to better advantage than that of forced study on the part of students, not only those who are advanced, but also the little school children. We believe that Dr. Herdman will be found to have done a great public service in this matter.

News Items.

Society Meetings for the Coming Week:

MONDAY, May 18th.—New York Academy of Medicine (Section in Ophthalmology); New York County Medical Association; Hartford, Conn., Medical Society; Chicago Medical Society.

TUESDAY, May 19th.—New York Academy of Medicine (Section in General Medicine); Buffalo Academy of Medicine (Section in Pathology); Ogdensburg, N. Y., Medical Association; Syracuse, N. Y., Academy of Medicine; Medical Society of the County of Kings, N. Y.; Baltimore Academy of Medicine.

WEDNESDAY, May 20th.—Woman's Medical Association (N. Y. Academy of Medicine); Medico-legal Society, New York; Northwestern Medical and Surgical Society of New York (private); New Jersey Academy of Medicine (Newark); New York Society of Dermatology and Genitourinary Surgery (private); New York Academy of Medicine (Section in Genitourinary Diseases).

THURSDAY, May 21st.—New York Academy of Medicine; Brooklyn Surgical Society; New Bedford, Mass., Society for Medical Improvement (private); Medical Society of City Hospital Alumni, St. Louis; Atlanta Society of Medicine.

FRIDAY, May 22d.—New York Clinical Society (private); New York Society of German Physicians; Yorkville Medical Association, New York (private); Philadelphia Clinical Society; Philadelphia Laryngological Society.

SATURDAY, May 23d.—New York Medical and Surgical Society (private); Harvard Medical Society, New York (private).

The Orange County Medical Society.—This society held its ninety-eighth annual session on May 4th, at Goshen, N. Y.

Detroit College of Medicine.—The Detroit College of Medicine held its thirty-fifth annual commencement on April 30th.

The Manhattan State Hospital.—Dr Frank Hinckley, of Brooklyn, has been appointed junior physician at Manhattan State Hospital.

A New Maternity Hospital in West Philadelphia.—The West Philadelphia Hospital for Women has opened its new Maternity Hospital and Nurses' Home.

Meeting of the Alumni Association of the Albany Medical College.—The thirteenth meeting of this association was held on May 5th, at the Ten Eyck Hotel, Albany.

Garfield Hospital.—A deed has been placed on file by Louis A. Schneider and others, in Washington, D. C., conveying to Garfield Memorial Hospital a lot at the corner of Eleventh Street and Florida Avenue, N. W. The purchase price is \$50,000.

Overcrowding in Hospitals.—From Chicago come reports of the condition of Cook County Hospital, which have caused a great deal of comment. The accommodation appears to be altogether inadequate and the overcrowding and lack of sufficient isolation wards render the place a positive menace to health. Chicago is surely rich enough to see to it that such a condition shall be remedied without delay.

A Health Ordinance in Rensselaer.—A bill has been passed in Albany compelling the abolition in Rensselaer of all vaults, sinks, or cesspools before May 1st, under penalty of a fine of \$5 a day for all those who fail to obey the ordinance on or before that date.

Fifty Thousand Dollars to St. John's Hospital, Yonkers.—Among the bequests mentioned in the will of the late Warren B. Smith, the millionaire carpet manufacturer, of Yonkers, who recently died in Algiers, is one of \$50,000 to St. John's Hospital, Yonkers.

A Post-office Doctor Resigns.—Dr. Henry T. Dice has resigned his position as physician to the St. Louis, Mo., post-office. This place will not be filled until Postmaster General Payne can look up the law and ascertain if this city is entitled to a post-office physician.

An Investigation of Leprosy.—A soldier suffering from leprosy at Fort Stevens, Ga., is under investigation by the medical department of the army. The surgeons are unable to discover the origin of the disease, as the man has not been in the Philippines, and was only a few weeks in Cuba.

Mortality of the Ithaca Typhoid Epidemic.—In a report by Dr. George Sover, of the State board of health, the number of cases of typhoid in Ithaca was given as 95.5, of which 64 proved fatal, thus making the Ithaca epidemic among the worst in modern times in this part of the world.

Report of the Baltimore Eye and Ear Charity Hospital.—The twenty-first annual report of the Baltimore Eye, Ear and Throat Charity Hospital has just been issued. It shows that the aggregate attendance in the dispensary department was 18,781, and the total number of surgical operations performed was 664.

Inspection of School Children.—An ordinance is in preparation in Louisville, Ky., at the instance of Health Officer Allen, which provides for the periodical examination of school children by competent physicians, in order to ascertain if a child is in the incipient stage of any disease, so that it may be sent home before any danger of infection arises.

Medical Journals and the Post-office Regulations.—At the first annual meeting of medical editors held in New Orleans recently, a committee was appointed to draft resolutions condemning the action of Third Assistant Postmaster Madden relative to a recent ruling made by him regulating second-class mail and affecting the medical journals.

Connecticut Medical Society.—The Connecticut Medical Society will hold its next examination on the second Tuesday in July, 1903, at the City Hall, New Haven, Conn. Candidates must make formal application to the secretary, Charles Alling Tuttle, M. D., at least five days before the date of examination.

A Supervisor of Dietetics for New York Hospitals.—Mr. Homer Folk, the commissioner of public charities, has appointed a woman, Miss Florence Corbett, as supervisor of dietetics in the city hospitals of New York. This will ensure a more varied and carefully chosen diet for patients and invalids in these establishments, a change much to be desired.

The Rockefeller Institute for Medical Research.—Work will be begun on the first building of the Rockefeller Institute, on August 1st, at the northwestern corner of Sixty-second Street and Avenue A. This will be the main building and the institute when completed will occupy the blocks bounded by Sixty-fourth and Sixty-seventh Streets, Avenue A, and the East River.

Appeal against the Goodsell-Bedell Bill.—The committee on the prevention of tuberculosis of the Charity Organization Society of New York City, has sent a letter to Governor Odell, requesting him to veto the Goodsell-Bedell bill, which put certain restraints on the erection of sanatoria for consumptives, practically prohibiting them in many desirable localities throughout the State.

Mt. Sinai Hospital Fifty Years Old.—The fiftieth annual report of Mt. Sinai Hospital shows that the increase in membership is 230 over last year. The prevalent idea that Mt. Sinai is amply provided for is an erroneous one, and the erection of the new hospital will deplete the permanent fund—the accumulated savings of fifty years, which should have been kept intact to produce income for support.

Erratum.—In the leading editorial on The Therapeutic Possibilities of Ergot, in our issue for May 9th, three lines from the bottom of the left-hand column on page 856, the proportion of chloroform added by Dr. Livingston as a preservative to his solution of ergot is stated as two minims to each drachm of the solution. As will be obvious to everyone, this should be two minims to each ounce of the solution.

Hospital for Contagious Diseases in Albany.—The plans have been completed for a two story building, to be used as a hospital for contagious diseases, at Albany. The style of architecture will be very similar to that of the other buildings of the Albany Hospital, and the hospital itself will be fitted up according to the most modern ideas. The building will cost about \$40,000 and, it is hoped, will be ready for occupancy by January 1, 1904.

Are Nursing Mothers Growing Scarce?—A statement was made at the opening session of the Illinois State Medical Society recently, that eleven out of twelve infants were now raised on the bottle and patent foods, and that, on the average, only one mother in twelve was able to nurse her child. Dr. Colton, who made the statement, urged that physicians make this condition an object of special investigation, as no food for infants could take the place of that provided by Nature.

Milwaukee Isolation Hospital Bill Passed.—A bill has been passed providing for the establishment of an isolation hospital in Milwaukee, an amendment having been previously added, by which owners of property affected by the proposed building are entitled to recover the amount of actual damages to their property, if any, sustained by the establishment of the proposed hospital.

Heart Failure on the Increase in Boston.—According to Boston health statistics, there were 1,033 deaths from heart disease in Boston during the past year, showing an increase of 7 per cent. in fifty-two years. The strenuous life is probably responsible for this increase in mortality, for consumption has slightly decreased in fatality in the Hub, and the sad thing about it is that we are daily becoming more strenuous.

Bad Sidewalks more Fatal than Trolley.—According to William C. Redfield, commissioner of public works, in an address before the Women's Health Protective Association of Brooklyn recently, more people are killed and injured in Brooklyn by bad sidewalks than by trolleys or any other cause whatever. The city has no power to repair the sidewalks and yet is held liable for damages in the case of injuries resulting from defective walks. An anomalous condition, truly.

A Physician Gets Damages from a Trolley Company.—Dr. Justin Herold, of New York, recently got a verdict for \$12,000 damages against the Metropolitan Street Railway Company, in an action before the Supreme Court, for the crushing of his foot four years ago in a collision between two cars. The company's negligence was conceded; the only question for the jury, therefore, being the amount of damages due. The computation was based upon the loss sustained by Dr. Herold in his practice in consequence of the injury.

American Congress of Tuberculosis.—This congress, which will probably be one of the most important meetings of its kind in the history of the world, will convene in St. Louis, in July, 1904. There will be about sixty delegates from each State and Territory, making an aggregate of about three thousand official representatives. In addition to these physicians, hundreds of students and others interested in the subject to be discussed will swell the attendance, making the convention one of the largest ever held in the interest of medical research.

The American Laryngological, Rhinological and Otological Society.—The following officers were elected at the ninth annual meeting of the American Laryngological, Rhinological and Otological Society, held in Lexington, Ky., on May 2nd: President, Dr. Norval H. Pierce, of Chicago; vice-president, Dr. George L. Richardson, of Fall River, Mass.; Dr. Chevalier Jackson, of Pittsburgh; Dr. Redmond W. Payne, of San Francisco; and Dr. John T. Woodward, of Norfolk, Va.; treasurer, Dr. Ewing W. Day, of Pittsburgh; secretary, Dr. Wendell C. Phillips, of New York.

Long Island College Hospital.—The twenty-third annual meeting of the Alumni Association was held in the Pouch mansion, on May 9th. Dr. Joshua M. Van Cott presided.

New York Central Railway Appointment.—Dr. John McAllister, formerly of Albany, has been appointed surgeon to the New York Central Railway, on the Hudson River division at New York.

Examination of Physicians for Civil Service Medical Appointments.—A plan is on foot in Washington, D. C., to prepare competitive examinations for applicants for appointments as medical inspectors to public schools and as physicians to the poor.

A New York Nurse Promoted.—Miss Agnes S. Brennan, superintendent of nurses in Bellevue for twenty years, has accepted the position of superintendent of the Memorial Hospital in Richmond, Va. The hospital is said to be the handsomest and most complete in that State.

Hospital Corps Regulations.—A board of army officers has been ordered to meet in Washington on May 18th in order to revise that part of the army regulations relating to the hospital corps. The board is instructed to outline rules for first aid, and also to draw up a scheme and course of instruction for members of the hospital corps, and to consider the advisability of a side arm for members of the corps.

A State Tent Hospital.—In accordance with the recommendations of the State tuberculosis commission, the Columbus, Ohio, State Hospital has pitched a large tent on a knoll in the hospital grounds, where all the consumptive patients at the institution will be placed, that they may receive the benefit of the open air for twenty-four hours a day. Precautions will be taken to protect them from extreme cold.

Professor Ewald in the City.—Professor A. O. Ewald, of the faculty of Berlin University, specialist on stomach diseases, is the guest of three of his pupils, Dr. Frank I. Knapp, Dr. Max Einhorn, and Dr. Morris Manges. Dr. Ewald lectured on May 14th before the American Gastro-Enterological Association at its sixth annual meeting, held at the Shoreham Hotel, Washington, D. C. On May 6th Dr. Ewald lectured on the Gastric Crisis, before the members of the German Medical Society, at New York.

A Monument to Benjamin Rush.—The sum of \$15,000 has, after thirty-four years of untiring effort, been raised to erect a fitting monument to the memory of Benjamin Rush. The movement was set on foot in 1879, at the meeting of the American Medical Association in New Orleans. Of the three boards of trustees in charge of the movement, Dr. Henry D. Holton, of Vermont, who has served on the three boards, is now the only surviving member of the first two boards. Dr. Holton is president of the American Health Association.

Overtasking in Schools.—At the close of a discussion on The Relation of Neuroses and Psychoses to Educational Methods, held in the Section in Nervous and Mental Diseases at the New Orleans meeting of the American Medical Association, Dr. William J. Herdman, of Ann Arbor, Mich., presented the following resolutions:

Resolved, That we, the members of the Section in Nervous and Mental Diseases of the American Medical Association, are deeply conscious of the vital importance of the methods of education and school environment in the development of youth, and are of the opinion that the time has arrived for the harmonious and helpful cooperation of educators and physicians in the work of education. In view of this belief on our part, be it further

Resolved, That we appoint a committee from our membership at this meeting whose duty it shall be: 1. To collect during the coming year such exact information as may be accumulated, both in this country and in Europe, upon the school methods in their relation to the physical and mental welfare of youth. 2. To confer with leading educators everywhere with the view of eliciting information and opinions upon the subject and of securing cooperation in efforts for improvement of methods. 3. To report to the section at its next annual meeting the results of their investigations and formulate a plan for future and vigorous prosecution of such reforms as we may decide from their report are clearly needed.

The resolutions were carried, and the committee was appointed as follows: Dr. W. J. Herdman (chairman), Ann Arbor, Mich.; Dr. J. A. Williams, Texas; Dr. J. H. McBride, Pasadena, Cal.; Dr. Hugh T. Patrick, Chicago; Dr. F. Savary Pearce, Philadelphia.

The Goodsell-Bedell Bill: Resolutions upon at the New York Academy of Medicine.—At the last regular meeting of the New York Academy of Medicine, held on May 7th, the first vice-president, Dr. Charles L. Dana, presiding, the following resolutions offered by Dr. S. A. Knopf, and seconded by Dr. A. Jacobi, were unanimously adopted:

Whereas, There has been recently passed by the Legislature of the State of New York an act to amend the public health law in relation to the establishment of public sanatoria, hospitals, or camps for the treatment of tuberculosis, which act reads as follows: "A hospital, camp, or other establishment for the treatment of patients suffering from the disease known as pulmonary tuberculosis shall not be established in any town, by any person, association, corporation, or municipality, unless the board of supervisors of the county and the town board of the town shall each adopt a resolution authorizing the establishment thereof, and describing the limits of the locality in which the same may be established," and

Whereas, The effect of this bill, if it becomes a law, will make it impossible for any city in the State, or any fraternal order, charitable society, or philanthropic individual, to establish a hospital, camp, or other establishment for the treatment of consumptives, outside the city limits, except under conditions which are practically prohibitive, and

Whereas, By Chapter 327 of the Laws of 1900, cities of the first class, are authorized to erect sanatoria outside of the city limits, such action and the selection of a site to

be subject to the approval of the State Board of Health, and by the same law, hospitals and institutions, now, or hereafter established or maintained, are made subject to the approval of the local board of health, and

Whereas, Private property rights are sufficiently protected by general laws, and the process of injunction is open, in case it can be positively shown that unwarranted injury would be inflicted by the establishment of a hospital on a particular site, and the necessity of obtaining the consent of the State Board of Health being an ample guarantee that a site shall not be selected which will threaten or unduly expose the health of any particular neighborhood, and

Whereas, It has been demonstrated in this country and in Europe that properly conducted sanatoria, hospitals, and camps for consumptives are not a danger to the neighborhood, and that such institutions are places where the consumptive poor receive a hygienic education and have the best possible chance to be cured and become again useful citizens and supporters of families, and

Whereas, There is at present a great deficiency of hospital accommodation in New York State for this class of patients, be it

Resolved, That the New York Academy of Medicine deeply deploras the passage of the above bill, and urgently requests His Excellency the Governor to withhold his signature to the act, which, in case it became a law, would involve the loss of thousands of lives and increase the spread of tuberculosis within the crowded districts of our cities and towns, and would have to be considered an act of the greatest injustice and inhumanity.

Official News.

Infectious Diseases in New York:

We are indebted to the Sanitary Bureau of the Health Department for the following statement of cases and deaths reported for the two weeks ending May 9, 1903:

DISEASES.	Week end'g May 2.		Week end'g May 9.	
	Cases.	Deaths.	Cases.	Deaths.
Measles	286	20	314	19
Diphtheria and Croup.....	367	45	405	51
Scarlet fever.....	359	30	323	18
Small-pox	0	0	0	0
Chicken-pox.....	66	0	108	0
Tuberculosis	338	18	293	175
Typhoid fever	43	16	25	5
Cerebro-spinal meningitis.....	0	0	0	0

Public Health and Marine Hospital Service:

Official List of Changes of Station and Duties of Commissioned and Non-commissioned Officers of the Public Health and Marine-Hospital Service, for the Seven Days ending May 7, 1903:

- NYDEGGER, J. A., Passed Assistant Surgeon. Bureau order of April 21, 1903, directing Passed Assistant Surgeon Nydegger to proceed to Gulf Quarantine and assume command of the service at that port, is revoked.
- FOSTER, M. H., Passed Assistant Surgeon. Granted leave of absence for two days.
- KERR, J. W., Assistant Surgeon. Granted leave of absence for two days, from May 7th.
- BALLARD, J. C., Acting Assistant Surgeon. Granted leave of absence for twenty days, from April 23rd.
- FRARY, T. C., Acting Assistant Surgeon. Granted leave of absence for one day.
- GRACE, J. G., Acting Assistant Surgeon. Granted leave of absence for nine weeks.
- MARR, H., Acting Assistant Surgeon. Granted leave of absence for thirty days, from May 10th.

WOODS, C. H., Pharmacist. Department letter granting Pharmacist Woods leave of absence for twenty days, amended so as to be for nineteen days.

HOLT, E. M., Pharmacist. Granted leave of absence for thirty days, from May 5th.

Promotion.

C. W. STEPHENSON, Pharmacist of the third class, is promoted to be Pharmacist of the second class, effective from April 1, 1903.

Board Convened.

A board is convened to meet at the Marine-Hospital, San Francisco, Cal., May 2, 1903, for the physical examination of an officer of the Revenue Cutter Service. Detail for the board: Assistant Surgeon CARL RAMUS, chairman; Assistant Surgeon C. W. VOGEL, recorder.

Naval Intelligence:

Official List of Changes in the Medical Corps of the United States Navy for the Week ending May 9, 1903:

- ARNOLD, W. F., Surgeon. Detached from Port Isabella, P. I., and ordered to the Naval Hospital, Yokohama, Japan.
 - BACKUS, J. W., Assistant Surgeon. Detached from the Princeton and ordered to the Helena.
 - BERRYHILL, T. A., Surgeon. Detached from the Navy Yard, Pensacola, Fla., and ordered to the Baltimore.
 - COOKE, P. L., Acting Assistant Surgeon. Detached from the Naval Academy and ordered to the Chesapeake.
 - DUNN, H. A., Assistant Surgeon. Detached from the Naval Station, Cavite, P. I., and ordered to the Naval Station, Olongapo.
 - HOYT, R. W., Assistant Surgeon. Ordered to the Texas.
 - JENNESS, B. T., Assistant Surgeon. Ordered to the Indiana.
 - LEWIS, D. O., Surgeon. Detached from the Pensacola, and granted sick leave for three months.
 - McCLANAHAN, R. K., Assistant Surgeon. Detached from the Naval Station, Polloc, P. I., and ordered to the Oregon.
 - MICHEL, R. H., Assistant Surgeon. Ordered to the Wisconsin.
 - SHAW, H., Assistant Surgeon. Ordered to the Yankee.
- The following Assistant Surgeons have been ordered to the Asiatic Station, via Solace, on May 15th: R. A. BACHMAN, F. M. MUNSON, J. L. NEILSON, P. J. TRAYNOR, H. F. STRINE.

Army Intelligence:

Official List of Changes in the Stations and Duties of Officers serving in the Medical Department of the United States Army for the Week ending May 9, 1903:

- BANISTER, JOHN M., Major and Surgeon. Detailed as a member of the examining board of medical officers to meet in Manila.
- CLAYTON, JERE B., Captain and Assistant Surgeon. Relieved from duty at Vancouver Barracks, and will proceed to Fort Egbert, Alaska, to relieve Contract Surgeon C. A. Treuholtz, who will proceed to Vancouver Barracks for temporary duty.
- CRAMPTON, LOUIS W., Major and Surgeon. Relieved from duty at Fort Adams, R. I., and will proceed to St. Louis, Mo., and assume charge of the Medical Supply Depot in that city.
- DAVIS, WILLIAM T., First Lieutenant and Assistant Surgeon. Ordered to duty on the transport Logan.
- HARVEY, PHILIP F., Lieutenant-Colonel and Deputy Surgeon-General. Granted leave of absence for one month, from May 1st.
- MORSE, CHARLES F., First Lieutenant and Assistant Surgeon. Ordered to Fort McIntosh, Texas, to accompany the Fourth Infantry to the Philippine Islands.
- PERLEY, HARRY O., Major and Surgeon. Granted leave of absence for four months, to take effect on or about June 1st, with permission to go beyond the sea.
- TORNEY, GEORGE H., Major and Surgeon. Detailed as a member of the examining board of medical officers to meet in Manila.

Public Health and Marine-Hospital Service Health Reports:

The following cases of smallpox, yellow fever, cholera and plague, have been reported to the surgeon-general, Public Health and Marine-Hospital Service, during the week ending May 9, 1903:

Smallpox—United States.

Place.	Date.	Cases.	Deaths.
Alabama—Mobile	Apr. 25-May 2 ..	4	
California—San Francisco	Apr. 19-26	8	
District of Columbia—Washington	Apr. 25-May 2 ..	1	
Illinois—Belleville	Apr. 24-May 1 ..	15	
Illinois—Chicago	Apr. 25-May 2 ..	15	2
Illinois—Galesburg	Apr. 25-May 2 ..	4	
Illinois—Joliet	Dec. 29-Mar. 2 ..	30	2
Indiana—Elwood	Apr. 26-May 3 ..	7	
Indiana—Indianapolis	Apr. 27-May 2 ..	5	2
Indiana—Kokomo	Apr. 27-May 2 ..	1	
Iowa—Des Moines	Apr. 27-May 4 ..	2	
Iowa—Dubuque	Apr. 26-May 2 ..	1	
Kentucky—Lexington	Apr. 26-May 2 ..	1	
Kentucky—Louisville	Apr. 1-30	55	
Louisiana—New Orleans	Apr. 18-May 2 ..	14, 2 imp't'd	
Maine—Biddeford	Apr. 26-May 2 ..	1	
Maine—Franklin County	May 7	20	
Maine—Rumford Falls	May 3	1	
Maryland—Baltimore	Apr. 26-May 2 ..	2	
Massachusetts—Fall River	Apr. 26-May 2 ..	2	
Michigan—Detroit	Apr. 26-May 2 ..	12	
Michigan—Flint	Apr. 26-May 2 ..	1	
Michigan—Grand Rapids	Apr. 26-May 2 ..	2	
Michigan—Port Huron	Apr. 26-May 2 ..	2	
Minnesota—Winona	Apr. 26-May 2 ..	1	
Nebraska—Omaha	Apr. 26-May 2 ..	1	
Nebraska—South Omaha	Apr. 1-30	7	
New Hampshire—Manchester	Apr. 25-May 2 ..	11	
New Hampshire—Nashua	Apr. 25-May 2 ..	3	
New York—Buffalo	Apr. 25-May 2 ..	1	
New York—Elmira	Apr. 25-May 2 ..	1 imported.	
Ohio—Cincinnati	Apr. 24-May 1 ..	5	
Ohio—Cleveland	Apr. 25-May 2 ..	1	
Ohio—Dayton	Apr. 25-May 2 ..	3	2
Pennsylvania—Carbondale	Apr. 23-30	1	
Pennsylvania—Dunmore	Apr. 1-30	5	
Pennsylvania—McKeesport	Apr. 25-May 2 ..	6	
Pennsylvania—Philadelphia	Apr. 25-May 2 ..	16	4
Pennsylvania—Pittsburgh	Apr. 11-18	24	7
Pennsylvania—Pittsburgh	Apr. 25-May 2 ..	5	
Pennsylvania—Pottsville	Apr. 1-30	2	
South Carolina—Charleston	Apr. 25-May 2 ..	4	
Tennessee—Memphis	Apr. 25-May 2 ..	2	
Utah—Salt Lake City	Apr. 25-May 2 ..	11	
Wisconsin—Green Bay	Apr. 26-May 3 ..	1	
Wisconsin—Milwaukee	Apr. 25-May 2 ..	3	

Smallpox—Foreign.

Austria—Prague	Apr. 4-18	8	
Belgium—Brussels	Apr. 11-18	5	
Canada—Halifax	Apr. 25-May 2 ..	1	
Canada—Owen Sound	April 29 present.		
Canada—Quebec	Apr. 25-May 2 ..	1	
China—Hong Kong	Mar. 14-21	1	1
Colombia—Barranquilla	Apr. 19-26	1	
France—Marseilles	Mar. 1-31	32	
Great Britain—Birmingham	Apr. 11-18	50	
Great Britain—Bristol	Apr. 11-18	2	
Great Britain—Dublin	Apr. 4-18	34	2
Great Britain—Dundee	Apr. 11-18	2	
Great Britain—Leeds	Apr. 18-25	19	
Great Britain—Leith	Apr. 4-11	1	
Great Britain—Liverpool	Apr. 11-18	94	7
Great Britain—London	Apr. 4-11	5	
Great Britain—Manchester	Apr. 11-18	5	1
Great Britain—Newcastle-on-Tyne	Apr. 11-18	4	
Great Britain—Nottingham	Apr. 11-18	6	
Great Britain—Sheffield	Apr. 4-18	2	
Great Britain—South Shields	Apr. 11-18	2	
India—Bombay	Mar. 31-Apr. 7 ..	89	1
Netherlands—Amsterdam	Apr. 18-25	1	
Netherlands—Rotterdam	Apr. 18-25	1	
Russia—St. Petersburg	Mar. 27-Apr. 11 ..	43	7
Russia—Warsaw	Mar. 28-Apr. 4 ..	3	

Yellow Fever.

Colombia—Panama	Apr. 23-30	2	1
Ecuador—Guayaquil	Apr. 4-11	2	2
Mexico—Tampico	May 4	1	1
Mexico—Vera Cruz	Apr. 25-May 2 ..	9	3

Cholera—Insular.

Philippines—Manila	Mar. 14-21	4	3
Philippines—Provinces	Mar. 14-21	203	130
Philippines—Not previously reported		421	231

Plague.

China—Hong Kong	Mar. 14-21	28	28
India—Bombay	Mar. 31-Apr. 7 ..	1827	1827
India—Karachi	Mar. 22-29	192	152

Births, Marriages, and Deaths.

Married.

CHALARON—DUCROS.—In New Orleans, Louisiana, on Thursday, April 30th, Dr. Frank Chalaron and Miss Emile Ducros.

HARTWELL—DRAKE.—In St. Louis, Missouri, on Thursday, April 30th, Dr. Dausa D. Hartwell and Miss Rita Drake.

HERBST—SNYDER.—In Philadelphia, Pennsylvania, on Thursday, April 30th, Dr. William Tobias Herbst and Mrs. Catherine Snyder.

LEONARD—BLAKE.—In Kansas City, Missouri, on Wednesday, April 29th, Dr. Arthur C. Leonard and Miss Gertrude Blake.

MADDERN—HOWARD.—In Brooklyn, N. Y., on Monday, May 4th, Dr. William Harvey Maddern, of Baltimore, and Miss Howard.

ROWELL—THOMPSON.—In Stamford, Connecticut, on Tuesday, May 12th, Dr. Edward E. Rowell, Jr., and Miss Ruth Fullerton.

STUCK—HEATH.—In Heathsville, Maryland, on Wednesday, May 6th, Dr. Howard W. Stuck, of Baltimore, and Miss Nettie Taylor.

VAN ORDEN—BAIRD.—In Spring Valley, N. Y., on Wednesday, May 6th, Dr. Frank M. Van Orden, of New York City, and Miss Mabelle Albert Baird.

WATSON—CARR.—In Baltimore, Maryland, on Wednesday, April 29th, Dr. David Robert Watson and Miss Leah Carr.

Died.

CHAMBERLAIN.—In Lyons, N. Y., on Tuesday, May 12th, Dr. Dwight S. Chamberlain, in the sixty-fifth year of his age.

CUTLER.—In Cleveland, Ohio, on Tuesday, April 28th, Dr. Eben J. Cutler, in the sixty-fifth year of his age.

DEARBORN.—In Nashua, New Hampshire, on Friday, May 8th, Dr. Samuel G. Dearborn, in the seventy-sixth year of his age.

GLENNON.—In New Haven, Connecticut, on Sunday, May 10th, Dr. J. J. Glennon.

DE LA GRANJA.—In Boston, Mass., on Saturday, May 9th, Dr. Edward De La Granja, in the seventy-third year of his age.

LATHAM.—In Lynchburg, Virginia, on Monday, May 4th, Dr. H. Grey Latham, in the seventy-second year of his age.

MASON.—In New York City, on Monday, May 12th, Dr. Rufus Osgood Mason, in the seventy-third year of his age.

RICE.—In Memphis, Tennessee, on Wednesday, May 6th, Dr. Stephen Rice, in the thirtieth year of his age.

SMITH.—In Baltimore, Maryland, on Monday, May 4th, Dr. Allen R. Smith, in the fifty-seventh year of his age.

TAYLOR.—In Somerville, N. J., on Monday, May 11th, Dr. Archibald Taylor, in the forty-second year of his age.

OBITUARY NOTES.

DR. R. OSGOOD MASON died at his home, in New York, on May 11th, in his seventy-third year. He was a native of Sullivan, N. H. He took his A. M. degree at Dartmouth College in 1854. Four years later he became a doctor of medicine, having graduated at the College of Physicians and Surgeons, New York. He served as an assistant surgeon during the Civil War. Dr. Mason, who was a fellow of the New York Academy of Medicine, was much interested in psychical research, and the more transcendental sides of medical science telepathy, suggestion, etc. upon which he wrote largely. Two of his best known works are *Telepathy and the Subliminal Self*, and *Hypnotism and Suggestion in Therapeutics*.

Pith of Current Literature.

PRACTICE OF MEDICINE.

Cardiotuberculous Cirrhosis.—The knowledge of this form of cirrhosis, especially in children, is of recent date, writes M. E. Benites (*La Semana Médica*, March 12th). According to Immerwohl, the name cardiotuberculous cirrhosis (given to the condition by Hotinel, who believed it to be the most common form of cirrhosis in the child) should be replaced by pericardiotuberculous cirrhosis. He bases this opinion on the ground that most of the cases thus far observed, have originated in a latent tuberculosis of the pericardium, which gave rise to various cardiac affections; and these, like the rheumatic affections, induced grave disturbances of the general and hepatic circulation; the "cardiac liver" with the sclerosis ensuing in that organ, favoring the development of hepatic tuberculosis. Benites is inclined to agree with this conception of the pathogenesis of the affection, and holds that this form of tuberculosis in the child has failed of earlier recognition because the primary lesion—tuberculous pericarditis—remains latent, and the functional and circulatory disturbances to which it gives rise are masked by other clinical manifestations. A case of this kind has come under his observation. The patient, a child aged nine years, was greatly emaciated and suffered from dyspnoea, cough, and extreme prostration. Cervical and inguinal adenitis was found, and percussion revealed some dulness in the right pulmonary apex. The heart was fixed by pericardial adhesions, and the abdomen was enormously distended. Upon withdrawal of the ascitic fluid, hypertrophy of the liver was found, that organ extending below the false ribs and occupying a large part of the epigastric and right hypochondriac region. The author gives a very complete scheme for diagnosis between the various forms of ascites whereby the diagnosis of this condition might be made by exclusion. This is, however, too lengthy to be given within the limits of an abstract.

The Results of Serumtherapy in Anthrax.—

Dr. Garzia Aluserindo (*Gazzetta degli ospedali e delle cliniche*, March 8th) reports two cases in which he has employed Sclavo's antianthrax serum with success. The first patient was a girl, aged ten years, who had a malignant pustule on the forearm, accompanied by swelling of the part and tumefaction of the lymphnodes of the elbow and axilla. A crucial incision was made, and the pustule cauterized with powdered corrosive sublimate. The part was then dressed with a wet dressing of Van Swieten's liquid. In spite of these local surgical measures, the oedema extended to the chest and abdomen in a few hours; the temperature rose, and the patient became comatose. Twenty cubic centimetres of Sclavo's antianthrax serum were then injected subcutaneously. The injection was repeated on the next day and the wet compresses were continued. Two days later a third injection was given, as the patient continued delirious and with a high temperature and pulse. On the following day these symptoms continued, but the author thought that

the fever was due to the reaction to the serum. On the next day the temperature sank to normal, the pulse to 85, and the general condition of the patient rapidly improved. The patient was discharged cured eight days later. In the second case, a similar course of events was observed in a boy aged nine years. No bacteriological examination was made in the first case, but in the second the bacillus of anthrax was found in the pus of the pustule. The author thinks, however, that there could have been no doubt as to the diagnosis of the first case, on account of the malignancy of the disease and the characteristic appearance of the lesion. He attributes the recovery of both patients entirely to the action of Sclavo's serum.

The Apyretic Form of Malignant Endocarditis.

—Dr. G. Fazio (*Gazzetta degli ospedali e delle cliniche*, March 8th) reports a case of malignant endocarditis, noteworthy for the apyretic course which it ran. The patient was a soldier in an infantry regiment, apparently in the best of health until the present illness. On examination he was found to present a marked palpitation of the heart over the cardiac area. The vibration was diffuse, as though the entire left side of the chest was shaken. The apex beat reached to the mammary line and was felt in the sixth intercostal space. The carotids were found to beat violently and very rapidly, and the capillary pulse of Quincke was observed in the nail beds. Palpation revealed a marked diastolic fremitus, more apparent at the base than at the apex of the heart. The radial pulse was full, tense, and bounding. The cardiac dulness was increased. On the right side it projected beyond the sternum; on the left it reached the mammary line, and at the apex it reached the sixth intercostal space. At the second left intercostal space there was a marked blowing diastolic murmur, which was audible over the upper half of the sternum. The same murmur, but with less intensity, was also heard at the other points of auscultation of the heart. A loud murmur transmitted from the aortic orifice was audible over the carotids, and at the femoral artery the phenomenon of Burozier was observed, namely two murmurs were heard on compressing the artery with the stethoscope at the site of auscultation or on compressing it with the fingers at some distance from that point. The patient was very pale and complained of a sense of precordial oppression and anxiety, and at one time had an attack of veritable angina pectoris, with excruciating pain radiating from the heart, intense dyspnoea, a sense of impending death, and tumultuous contractions of the heart. The patient grew rapidly worse, in spite of all treatment, and died of heart failure. At no time did he have any febrile temperature. On autopsy the heart was found the seat of a malignant endocarditis of a pronounced character. The pericardium was "enormously distended" and contained a small quantity of serous fluid. The heart was found enlarged in all directions but the myocardium was unchanged. The dilated chambers contained a large amount of clotted blood. The right side was chiefly affected, and the seat of the endocardial lesions was about the aortic

orifice. The valves were partly destroyed and the closure was insufficient. The right cusp of the mitral valve was the seat of a perforating ulcer. No cause could be assigned for the affection, as there was no history of any infectious disease, and the only possible source of endocardial infection was a bronchitis from which the patient had been suffering some weeks previously. The author calls attention to the difficulty of diagnosing such apyretic cases of malignant endocarditis, and urges the necessity of a bacteriological study of the disease, so as to combat the infection, if possible, by means of serumtherapy.

Infective Endocarditis Mainly in its Clinical Aspects. By Dr. T. R. Glynn. (*Lancet*, April 11th, 18th, and 25th).—In the Lumleian lectures the author brings out the following points concerning infective endocarditis. He divides it into two classes: Rheumatic, due to the septic organisms of rheumatism; and septic, due to pyococci. In the former the temperature may be elevated, the spleen enlarged, and petechial and retinal hæmorrhages may occur. The lesions tend to become fibrous tissue, losing their infective character. In true malignant endocarditis, due to the pus cocci, the infection tends to become diffused throughout the body. In most cases the onset of the disease is preceded by some debilitating condition, such as anæmia, etc. Bright's disease predisposes to infective endocarditis. In over half his cases there was a history of rheumatism, and chronic cardiac disease was found at autopsy in 83 per cent.

Anomalous forms of the disease may run a fatal course with little or not fever. Excessive sweating is common, as is diarrhœa. Vomiting, sometimes of an obstinate character, may occur. Anæmia may be very marked, leading to a cachexia suggestive of pernicious anæmia. Albuminuria and hæmaturia are common, the kidneys being usually large, firm, and congested. The spleen is almost invariably enlarged. The endocardial murmurs heard are in many cases not due to the recent endocarditis nor are they modified by it.

Most of the cases are of a chronic type, the symptoms lasting for months. The first symptoms noted are usually night sweats and diarrhœa; rigors are not common. Death may be due to cachexia, to pneumonia, or to cerebral embolism or hæmorrhage. When infective endocarditis develops in apparently healthy individuals, the septicæmic symptoms dominate over those of endocarditis. When it is a complication of heart disease with failing compensation, the symptoms are ill-pronounced and masked by those of the original disorder. Recovery is a rare event; the more acute the disease the worse the prognosis. The author has had no success with antistreptococcus serum.

An Analysis of 220 Cases of Sudanese Leprosy. By T. J. Tonkin, L. R. C. P. (*Lancet*, April 18th).—Among the points brought out by the author in his analysis of the above-mentioned cases, are the following: 86 per cent. of the cases showed patches only, against 11 per cent. which were characterized by tubercles, showing that the macular form of the disease predominates in the Sudan. The expecta-

tion of life is about twice as long in a macular, as it is in a tubercular case. Fifty-six per cent. of the cases occurred in men. The most common age of onset was from the sixth to the twenty-fifth year, leprosy most commonly attacking the individual during the period of growth and development. The earliest signs of leprosy appeared before the tenth year in over 20 per cent. of the cases. The face, the outer surfaces of the extremities, the scapular region, and the buttocks, seemed to be the localities most frequently affected by the primary lesions.

The evidence afforded is against the supposition that the spread of the disorder is even remotely affected by the hereditary transmission of the disease. Whatever may be the source of the predisposition to the disease, assuming its existence, it is most certainly not specific, not always due to the leprosy of an ancestor. Persons with severe grades of leprosy, far from transmitting the disease to their offspring, are apt to have no offspring at all. As regards diet, the author holds that in the Sudan the most frequently operating factor, not in causing the disease but in assisting to determine its incidence, is that of a badly balanced and therefore inefficient diet. The communistic way in which unwashed clothes are handed about has a direct influence on the spread of the disease also.

The Ætiology of Sleeping Sickness. By A. Bettencourt, A. Kopke, G. de Resende, and C. Mendes. (*British Medical Journal*, April 18th).—In this article the authors demonstrate to their satisfaction that the streptococcus described by them as the cause of sleeping sickness is identical with the organism described by Castellani in connection with the same disease. They gave it the name of the hypnococcus, and thought it a transition between Fraenkel's diplococcus and the streptococcus. As their work was done in June, 1901, and Castellani published his observations in March, 1903, they claim the credit of priority of discovery.

An Example of Direct Infection in Typhoid Fever. By Dr. P. Horton-Smith. (*Lancet*, April 11th).—The author reports a very striking instance of direct infection in typhoid fever in the shape of a family epidemic of the disease. The family consisted of father, mother, three daughters and two sons. They occupied three rooms—one living room and two bedrooms. The first case, that of a daughter aged fifteen years, was not diagnosticated, being thought to be tuberculosis of the intestine. She died after having been ill a month. No attempt was made at isolation and no precautions were taken to prevent the spread of the disease. A few days before the death of the first patient, her sister, aged eight years, was stricken with the disease and was taken to the hospital, where the case was recognized as one of typhoid. At the same time, the mother, aged thirty-five years, and a brother, aged eleven years, began to sicken, and later they also entered the hospital. The next person attacked was an aunt who had lived in the house when the first case of illness occurred; she entered the hospital two weeks after the others. Two days later, the father was affected, and he also entered the hospital. The sec-

ond son, aged eight years, who had been sent away, a cousin aged thirteen years, and the third daughter aged a year and four months, also developed typhoid fever, the last mentioned patient dying during the fourth week of her illness. It may be assumed that the second daughter, the mother, the son, and the aunt were all infected through the first patient, no attempt at isolation having been made, and the aunt having emptied the evacuations, washed the soiled linen, and cooked the food. In every case (except the first, of course) the blood of the patients gave Vidal's reaction.

Gastric Hyperacidity (Hyperchlorhydria); Its Nature, Diagnosis and Treatment. By Dr. W. Russell. (*British Medical Journal*, April 18th).—The author believes that hydrochloric acid excess is a very common cause of dyspepsia, and ultimately of gastric dilatation. Twenty-five per cent. of all dyspeptic cases come under this category. The sequence of events is as follows—meals, intervals of relief, and recurrence of pain. The pain may be of the most varying character, and is usually referred to the epigastrium, but may be felt almost anywhere in the chest. The measure and site of the pain depend upon the duration and severity of the condition, more than upon any neuropathic tendency in the individual. Any tenderness is usually quite superficial. The eructation of gas or of a small quantity of acrid fluid often gives the most marked relief. Other symptoms referred to the stomach are flatulent distention, gaseous and acid eructations, and heart burn. The bowels are usually constipated. Paroxysmal pyrosis also occurs, which the author thinks is a pyloric phenomenon.

The symptoms of gastric superacidity are explained as follows: When food is taken there is an excess of hydrochloric acid in the gastric juice excreted. In consequence the proteid elements of the food are rapidly digested and pass out of the stomach; but starchy foods are unaltered, not digested, and remain in the stomach. Being thus delayed, it continues to stimulate the gastric secretion, and there being no more proteid with which to combine, the secretion accumulates and leads to superacidity. The over secretion is more a chemical and diathetic error than a neurosis. The retention in the stomach of superacid residuum gives rise further to catarrh and to atonic dilatation. Treatment depends on the severity of the condition. Alkalies taken before food or just when distress begins, often give relief. Acids are rarely of service. In some cases the prohibition of starches works well, in others the patients must be put on a pure proteid diet. In the severest cases the removal of the gastric residuum furnishes the speediest means of temporary relief. The considerations determining the dietary are: (1) The proteids should be reduced to a physiological minimum; (2) the starches should be as much altered as possible; (3) the quantity of food should not exceed the physiological limits.

SURGERY AND ANATOMY.

Nerve Suture and Nerve Regeneration. By Dr. P. B. Henriksen. (*Lancet*, April 11th and 18th).—The author's conclusions, based on animal experiments, are as follows: When a nerve is divided it

loses its motor conductivity only after the lapse of some time—from one to four days. Regeneration begins immediately after the division of the nerve and takes place hand in hand with degeneration. There is complete correspondence between the clinical symptoms and the state of affairs in the divided nerve. Sensation seems to be better immediately after suture than it is after the lapse of some days, and then it recovers again more or less slowly. This is due to the rapidly increasing degeneration that diminishes the power of conduction that can only by and by be replaced by the slowly proceeding regeneration. The injured nerve is a bad conductor; the longer the piece of nerve that is hurt, the greater the resistance that has been introduced in the conduction, and thus a higher degree of regeneration is necessary before a motor impulse will cause movement. From this it follows that the further from the periphery a nerve is hurt the longer time it will take before motor power will be affected and the slower will be the recovery. A divided nerve unites equally rapidly, whether it is sutured or not. Thus, suture is not in all cases necessary, but it should not be omitted, for the reason that sometimes circumstances occur which may prevent the union and function of the nerve. In this respect infection of the wound is of fatal significance, leading to the formation of dense scar tissue. Again, in cases of fracture or violent interruption of the soft tissues, the ends of the nerve may be dislocated. If union of the nerve has not occurred or if it is incomplete, examination of sensation gives means of determining when interference is required. Full functional union may only be expected for a certain time. After three or four weeks the ends of the nerve become converted into dense scar tissue. The time that may elapse before operation is done without the risk of slow and incomplete recovery, is not more than about one month. The new nerve fibres grow out in the first few weeks. If sensation does not return, it means that serious obstacles to union are present, and that operation is necessary.

Secondary suture may, however, be performed with good results after the lapse of a long time. Here it is necessary that all scar tissue be removed and the outermost part of the end of the nerve be cut off, the fibres being buried in dense scar tissue. Asepsis is an essential point.

On the Influence of Innervation upon the Healing of Fractures.—Dr. Rodolfo Penzo (*Gazzetta degli ospedali e delle cliniche*, March 29th), after an experimental study of the influence of innervation upon the process of healing in fractured bones, found that, in experimental fractures of the zygomatic arch in rabbits, the vasoconstrictor nerves of the sympathetic system played the most important part in the formation of a callus. The active hyperæmia which followed the destruction of these fibres favors and accelerates the formation of the callus, by increasing the proliferation of the cellular elements. This indirect favorable effect of the paralysis of the vasomotor nerves in fractured bones, explains why some authors report that they have obtained quicker healing in bones of subjects sustaining injuries of the nerves of

the part coincidentally with fractures. The abolition of the motor and sensory nerve functions of a part does not seem to effect this increased rate of proliferation under the stimulus of a hyperæmia, for severing the fifth nerve which supplied the bone experimented upon, did not produce this result.

On the Frequent Coexistence of Hernia and Hydrocele.—Dr. Vittorio Remedi, (*Gazzetta degli ospedali e delle cliniche*, March 8th) has studied the relationship of hydrocele to oblique inguinal hernia. In 1900, he reported fourteen cases in which there was an incomplete obliteration of the vaginal process of the peritonæum and a hydrocele of the tunica vaginalis of the testicle. In these cases, a small hernial sac was found at the internal inguinal ring during the operation, in spite of the fact that nothing in the history of the case or in the physical examination of the patient pointed to the presence of a hernia. The hernial sac referred to was situated in the nonobliterated portion of the vaginal process of the peritonæum. Since 1900, the author has continued his studies on the relations of hydrocele to hernia, and now reports eleven additional cases that are calculated to throw light upon the question in which he is interested. Only in three of the eleven cases here reported did he not find any hernial protrusion and no peritoneal diverticulum into the internal inguinal ring. Of the remaining eight cases, of which one was a hydrocele of the canal of Nuck, only two showed the coexistence of a hernia with the hydrocele upon careful examination. In a total of twenty-five cases, in which the relation of hydrocele to inguinal hernia had been studied by the author, only three patients did not show the presence of a hernia into the vaginal process of the peritonæum, at the level of the internal inguinal ring. The author's researches, therefore, enable him now to correct the too sweeping conclusion which he made in his first study, to the effect that there exists a constant relationship between hydrocele and the incomplete obliteration of the vaginal process of the peritonæum. There is, it is true, a very frequent coincidence of the absence of obliteration in the upper part of this process, and of hydrocele of the tunica vaginalis of the testicle, and therefore a coincidence of hernia with hydrocele. As regards the percentage of frequency of this coincidence, the author does not feel justified, from the comparatively small number of cases which he had at his command, in determining any exact figure, but he believes that the subject is of sufficient importance to attract the attention of other surgeons, so that a more complete statistical study of this relation of hydrocele and hernia may be made in the future. For this purpose, it is necessary that the surgeon should extend his incision, in a radical operation for hydrocele, toward the inguinal canal, in order to determine the presence of an obliterated vaginal process of the peritonæum, and if this is found, to excise the process and to prevent the occurrence of a possible external oblique interstitial inguinal hernia.

A Case of Trephining for Traumatic Effusion of Blood under the Dura Mater.—Dr. B. K. Finkelstein (*Roussky Vrach*, March 15th) reports the

case of a man, aged twenty years, who was admitted with the typical symptoms of motor aphasia, clonic contractions of the right upper extremity, and the right side of the face, slow pulse, and partial loss of consciousness due to a subdural hæmorrhage following a blow upon the left temple. A horse-shoe shaped flap of skin, muscle, and bone was outlined and raised over the injured area. The base of the flap corresponded to a line 6 centimetres long, half a centimetre above, and parallel to, the left zygoma. Its height was about 8 centimetres, its anterior border 2 centimetres behind the edge of the orbit, its posterior margin 0.5 centimetres in front of a line prolonged from the anterior border of the mastoid process. The dura mater was found distended with a subjacent hæmatoma, was incised, and the blood and clots were evacuated. The flap was replaced, making allowance for drainage and the patient made a good recovery, with an entire disappearance of his aphasia and contractions. In commenting on this case the author emphasizes the difficulty of making a diagnosis between a hæmorrhage over the dura from one under this membrane. As yet clinical experience has not established sufficient diagnostic points to make such a distinction possible. The surgeon should be satisfied for the present if he can distinguish the location of the hæmorrhage with reference to the cerebral areas. It is interesting to note that, according to Tillman, who has experimented on animals and studied the effects of cerebral hæmorrhages in various parts of the brain, it is the weight of the clots that produces the symptoms, and not the increase of intracranial pressure alone. This explains why such small clots can give rise to so marked a train of symptoms. The specific weight of clotted blood is higher than that of cerebral tissue. Tillman also suggested an ingenious theory which explains the differences in effect between hæmorrhages of the base and hæmorrhages of the hemispheres. He cited the case of a man in whom a hæmorrhage was found under the dura mater. When the patient sat up or stood up he lost consciousness, but when he lay down he regained his senses. Tillman thinks that when he sat up the clot pressed upon the hemisphere, and when he lay down, it pressed obliquely on the wall of the cranium, thus giving the brain rest from pressure, the force of gravitation being responsible, therefore, for the change in the patient's condition. Tillman also notes that patients with hæmorrhage from the middle cerebral artery lie on the side where there is hæmorrhage, as in this position the pressure on the brain is less intense. While the prognosis of cases of hæmorrhage under the dura is very serious, yet in five cases recently reported, including the author's own case, the results were very satisfactory. The best operation in the treatment of such cases is the temporary resection by means of the skin-muscle-bone flap.

A Contribution to the Study of Cancer of the Breast.—Dr. Luigi Baldassari (*Gazzetta degli ospedali e delle cliniche*, March 29th) makes some comments in connection with a report of two cases of cancer of the breast, bearing upon the ætiology of the affection. He calls attention to the fact that in certain localities, small towns, and villages, there

are streets, and even houses, that seem to be particularly the seat of cancer, *i. e.*, in which at short intervals or simultaneously a number of persons are affected with this form of new growths. He cites two cases in women living in the same house, not related to each other, one fifty years, the other twenty-three years old. Both had mammary cancers, which were removed and examined microscopically, proving to be what they had been taken for clinically. Strange to say, both women, although of different ages, had given "a completely negative sexual history," and neither of the two had been married. In the house where they lived the greater part of their domestic life had been passed on the lower story, level with the ground, in damp, ill lighted, and ill ventilated rooms. In this room and in the adjoining court there were constantly a number of domestic animals, particularly hens and pigeons. The author suggests that possibly the pathogenic agent of cancer, whatever it may be, was transmitted to these women by the animals under the unfavorable hygienic conditions depicted.

OBSTETRICS AND DISEASES OF WOMEN.

Can Anything Special be Done by the Medical Practitioner to Diminish the Frequency and Lessen the Mortality of Cancer of the Uterus?—Dr. J. K. Kelly (*Glasgow Medical Journal*, April) deplors the want of an educated public opinion in regard to cancer. The public—the female public—are not well enough informed as to the symptoms of cancer to lead them to consult their physician in time. All sorts of irregular hæmorrhages are regarded as the monthly discharge, and the average woman looks upon an increase in flow, both in frequency and amount, with much less dread than upon the complete absence or diminution of the flow. As for the doctor's attitude, the author asserts that in no other region of the body should we think of treating hæmorrhage with a bottle of ergot without ascertaining the cause of the bleeding; and the idea that ergot has some special action on uterine hæmorrhage is responsible for more harm, perhaps, than all the good ergot has ever done. When there has been long-continued hæmorrhage, when there has been severe pain, when cachexia has set in, the cancer is beyond the early stage and is probably too late for cure. The bleeding most significant of cancer is that which occurs after the menopause. Pain is often a very late symptom and when severe pain occurs early in the course of cancer it indicates a rapidly advancing form. Fœtid discharge occurs sometimes from other causes than cancer, but a copious, offensive discharge, even at an early age, generally indicates cancer, and cancer, too, that has passed beyond the early stage. These last three symptoms, therefore, are to be considered as urgent symptoms, and indicate the need for immediate search after their cause. Whenever there is pelvic trouble an examination of the pelvis should be made. We are not to expect a tumor in early cancer. In the early stage, cancer occurs either in the form of a small hard patch, or of a small ulcer usually at the edge of the os externum. If we have an actual

ulceration of the cervix it is hardly ever anything else but cancer. The tuberculous ulcer, the syphilitic ulcer are very rare; the decubitus ulcer of prolapse is easy enough to account for and to heal. If there is the slightest suggestion of ulceration of the cervix, either to digital examination or to examination by the speculum, a part of the suspected cervix should be removed for microscopical examination. When we ourselves realize the important facts in a diagnosis, our knowledge gradually filters through to those who are tending our patients and to the patients themselves. If we ourselves, then, believe the treatment of cancer to be hopeful when we diagnose it early, and if we continually strive after such early diagnosis, the opportunities for early recognition of the disease will become more frequent. Public opinion will soon come to our aid, and we shall have good ground to hope for a lessening of the ravages of this disease.

Births After Symphysiotomy.—Dr. Otto Ihl (*Münchener medizinische Wochenschrift*, April 7th) reports three cases of parturition which he observed some years after a previous symphysiotomy had been performed. In all the cases, the births were spontaneous and unusually easy. A loosened pubic joint could be demonstrated in each patient, and the author believes that the failure of the symphysis to reunite by bony union was of advantage to both mother and child. The author considers the methods of union after the performance of a symphysiotomy and concludes, in opposition to the views of Varnier and Pinard, that the usual result of the operation is a permanent widening of the pelvis with a failure of bony union. The operation is therefore one which offers a good prognosis in subsequent confinements for mother and child, and in many cases greatly facilitates the entrance of the head into the pelvis.

Retention of the Ovum after Rupture of the Pregnant Uterus.—Dr. Lajos Goth (*Zentralblatt für Gynäkologie*, April 4th) reports the case of a twenty-nine year old multipara, who was butted in the abdomen during her pregnancy by a calf. There were no symptoms at first, but three months later, pains set in and there was a rise of temperature. A macerated fœtus in the seventh month was found, and the anterior lip of the cervix was the seat of a wide tear. The placenta was not in evidence.

On Impregnation.—Dr. E. Toff (*Zentralblatt für Gynäkologie*, April 4th) has written an interesting, if somewhat bizarre article, the gist of which is that coitus, but especially pregnancy, involves the transmission into the organism of the woman of certain juices from the man which have a beneficial effect upon the former. In multipara, it is the semen which has the influence, in pregnant women, it is the fœtal fluids, especially the fœtal blood, "half of which comes from the father." The author tries to prove his contention by the beneficial effect of marriage upon weak and anæmic girls, even without conception. He explains the enlargement of the uterus by his theory, also the irritation which evokes the lacteal secretion, as well as the "latent"

syphilis of the mother pregnant by a syphilitic man, who does not herself become syphilitic. Weakly and sickly men, on the other hand, do not have so favorable an influence upon their wives.

Glycosuria Gravidarum. By William Ruoff, M. D. (*American Medicine*, April 25th).—Glycosuria gravidarum does not differ essentially from glycosuria in the non-gravid patient. It is not such an uncommon affection as is generally supposed, although, owing to the neglect of most obstetricians to examine the urine carefully, it is frequently unrecognized. Diabetes insipidus and physiological diabetes must not be confused with true glycosuria gravidarum. A positive Fehling reaction is not absolute proof of glycosuria, since phloroglucin, which is found in many cases, will give a positive reaction. The treatment of glycosuria gravidarum does not differ essentially from the treatment of glycosuria when occurring in a nongravid subject. It consists of diet, massage, exercise and the general treatment of the cause, if this can be determined. From his study of the subject the author concludes: (1) Glycosuria gravidarum may arise at any stage of pregnancy. It is not so serious as when diabetes antedates pregnancy. (2) It may appear in one pregnancy and disappear in another, and end fatally after successive attacks. It frequently arises during parturition, but is of no great importance. (3) Labor is not materially affected, other conditions being equal. (4) Pregnancy is most likely to be interrupted. (5) It is very destructive to the foetus, more so than syphilis. (6) The maternal mortality is nearly 50 per cent. (7) Diabetics should not marry. (8) Death is usually by coma, no case of eclampsia has ever occurred in a diabetic.

MATERIA MEDICA, PHARMACY, AND THERAPEUTICS.

Dry Hot Air as a Therapeutic Agent, with Demonstration of the Body Treatment. By Clarence Edward Skinner, M. D., LL. D. (*Boston Medical and Surgical Journal*, April 9th).—The author believes dry hot air to be of great value in the treatment of a large number of diseases. The best results are obtained in the treatment of the following conditions: (1) *Rheumatism*. The dry hot air treatment should always be combined with the free administration of the salicylates. If this is done it will be found that rheumatism will yield to treatment as easily as malaria. One should be certain that the diagnosis has been correctly made. Three fourths of the cases that have come under the author's observation with a diagnosis of rheumatism have not been rheumatism at all. The cures obtained are permanent, though, of course, patients may get new attacks. The chief advantages of the hot air treatment of rheumatism are: the immediate relief of the pain, the shortening of the duration of the disease, the lessening of the liability of cardiac involvement, and the freedom from vicious after effects. (2) *Sprains*. If treated by hot air within four or five hours after their occurrence, they can be cured in from two to four days, instead of the usual six or eight weeks that is not infrequently needed by any other method. (3) *Arthritis defor-*

mans. A considerable number of cases of this affection can be cured by means of hot air alone. The majority of the victims of this disease can be restored to comfortable and useful lives if, combined with hot air, one uses static electricity and other rational therapeutic measures. The author gives a list of twenty-eight additional diseases in which dry hot air has proved of service. The effect of the hot air treatment on the patient, during the application, is described at length, and attention is called to the changes that occur in the composition of the blood and in the quantity and quality of the various secretions. The method of giving the baths is fully considered and criticisms of the method are answered. There are two methods by which hot air applications may be given: (a) by "local treatment"; and (b) by "general or body treatment." The author recommends that the apparatus used for local treatment be one which is capable of producing a temperature of at least 400° F. in twenty minutes, and of maintaining it steadily at that point for an indefinite time. The body apparatus should be capable of generating a temperature of at least 350° F. in half an hour, and maintaining it at that point for an indefinite time.

NERVOUS AND MENTAL DISEASES.

The Syphilitic Nature of Tabes and General Paralysis. By Dr. Leredde, of Paris, France. (*Philadelphia Medical Journal*, April 18th).—The author writes, principally, to insist upon the active syphilitic nature of tabes and general paralysis. He opposes the old theory of Fournier, of the parasymphilitic affections. From a practical point of view his beliefs are important if true, since, if these diseases are active syphilis, they should be amenable to active antisymphilitic treatment. The author believes this to be the case, and he cites in all twenty-six cases of these affections in which recovery has taken place following the exhibition of mercury. Dr. Leredde asserts that there can be no question as to either the correctness of the diagnosis or the efficiency of the cures, since the cases he cites are from the reported cases of such well known men as Leduc, Lemoine, Devay, and Cassaët. By cure and recovery the author means simply arrest of the disease, he does not allege that destructive changes, when they have once occurred, can be modified. Syphilitic pseudotabes and syphilitic pseudo general paralysis do not, in the author's opinion, exist as real entities. With regard to the new terms, abortive tabes and abortive general paralysis, the author has this to say: "But if you look over the cases reported, you realize that the term abortive tabes is unsuitable, and it is useless to insist upon it Concerning abortive general paralysis I have but little to say. This morbid type is not as yet known;" The author believes that the time has arrived for insisting upon a change in our notions of the nature of the affections known as tabes and general paralysis. These conditions have now been shown to be frequently, and without doubt wholly, curable if the proper therapeutic measures are instituted in time. These diseases must no longer be regarded as consisting merely of symptoms and lesions of a past disease,

but they must be regarded as one of the phases of active syphilis. It is therefore important to make an early diagnosis and begin at once an active anti-syphilitic treatment. Mercury alone is the true specific. The reason for the failures in treatment that have been so frequently reported, lies in the fact that it is so often improperly given. The best way to give mercury is by injection, using $\frac{1}{2}$ to $\frac{3}{4}$ grain of either mercury benzoate or mercury biniodide. These doses must be increased if the patient is able to stand them. By following certain precautions, which the author outlines, the tolerance for the drug will be materially increased. In patients with tabes, mercurial treatment is not dangerous. . . . Very rarely in general paralysis do high doses of mercury seem able to accelerate the progress of the disease. But here, too, we have no other means of bringing about recovery; . . ."

Treatment of Trigeminal Neuralgia.—M. E. Zimmern (*Presse médicale*, April 11th) says that cases in which the origin is beyond doubt, as in malaria, specific treatment is indicated. In mild cases, simple remedies may be tried with ultimate recourse to electricity. In severe cases, electricity is to be tried for a considerable period to test its efficacy—at least three months—rather than to subject the patient to the danger of acquiring the opium habit. If electricity is perfectly useless, surgical measures must be suggested, the removal of the Gasserian ganglion being the measure which offers the most likely method of cure.

GENITO-URINARY DISEASES.

Methods Preventing the Spread of Syphilis.—Dr. M. I. Pokrovskaya (*Roussky Vrach*, March 29th) studies the question of sexual and non-sexual syphilitic infection and the measures for preventing the same. She found, on examining statistics on the subject, that in Russia non-sexual infection was more common than sexual in villages, while the opposite held good in cities. The close contact of the Russian peasants to each other, sleeping, as they do, a whole family upon a single bed, and eating with the same wooden spoon out of a common bowl, favors the propagation of syphilis by non-sexual routes. On the other hand, the author believes that non-sexual infection is much more frequent in cities than is generally supposed, and that many cases in which the chancre is never seen are attributed to sexual contact, while in reality they are acquired in the family, from friends, or from eating utensils in public restaurants, from surgical instruments, etc. The author pleads for women who are accused of transmitting syphilis. The periods of incubations of chancre and other circumstances connected with the development of the primary lesion are so variable that it is impossible for a man to say in the great majority of instances that a certain woman has infected him. In Russia, Draconic laws regulate the question of preventing the spread of syphilis. Thus, a man who is infected is required by law to designate the woman who infected him (*Circular of the Ministry of the Interior*, January 17, and May 24, 1844).

According to this information, and "according to the social status of the woman" she is searched for by the police and a medical examination is made. Of course, it is obvious that frequently men conceal the names of women who infected them, and plead ignorance or forgetfulness as an excuse. Soldiers are invariably required to "denounce" to the authorities the women who infected them with syphilis. In some provinces they are even punished for not furnishing this information. Naturally, as soldiers often have sexual intercourse while in a state of intoxication, and for the most part "make use of" wandering women whose names they either forget to ask, or never know (as the women give assumed names), their "denouncement" has little value. Altogether the law requiring this information is both unpopular and ineffective.

As regards the frequency of infection from different classes of prostitutes, Fedoroff found that 15 per cent. of cases came from licensed houses of prostitution, 22.9 per cent. from public women living alone, and 61.8 per cent. from unknown prostitutes, *i. e.*, women not registered as such. The author pleads strongly for an unbiased consideration of actual figures, and believes that in large cities such a study would bring out the fact that, contrary to the belief of the majority of the profession and the public, there is a large proportion of non-sexual infections, and that the prostitutes of a city should not be held responsible for the whole number of cases arising in it. Thus, Fournier estimates that from 15 per cent. to 23 per cent. of the population of Paris are syphilitic, in other words there are from 450,000 to 690,000 syphilitics amongst 3,000,000 inhabitants. There are 5,000 registered prostitutes in Paris, who are by no means all syphilitic. Can infection be prevented in thousands of cases by any measures taken against these prostitutes? In St. Petersburg there are 1,500,000 inhabitants, of whom 5 per cent. are estimated to be syphilitic, *i. e.*, 75,000 persons. There are 5,000 registered prostitutes in St. Petersburg, and even if one half of these were syphilitic, the measures taken against these 2,500 would in no wise limit infection from the other 2,500. The author finally cites statistics from Norway, Holland, and Denmark, to show that syphilis not only is endemic, but that it increases and decreases in waves, or occasionally in epidemics, independently of the licensing and medical surveillance of prostitution.

LARYNGOLOGY, RHINOLOGY, AND OTOTOLOGY.

The Prolapse of Morgagni's Ventricle.—Dr. P. V. Ilyine (*Chirurgia*, January) reports two cases of so called prolapse of Morgagni's ventricle, which he makes a text for a discussion of this rare condition. The lesions of the mucosa lining Morgagni's ventricle are rarely diagnosed by means of the laryngoscope. The patients, in cases where there is an inflammation of this part, often complain of pain in the throat, of a hoarse cough, and even of aphonia, but no objective signs seem to account for this condition. Only after a while, when these symptoms become worse, the laryngeal mirror reveals the presence of a so called eversion

or prolapse of the Morgagnian ventricle. This condition is manifested objectively by the appearance of a swelling which partly or entirely covers the true vocal cords, and which is continuous with the ventricle. Some authors, *e. g.*, Grünwald, think that this tumor is not a prolapse but a hypertrophy of the lining of the ventricle. Krieg calls it a pachydermia, or thickening, of the lining membrane of the ventricle. The first case of this affection was shown in London by Maxon post mortem in 1868, and Lefferts was the first to report a case of this kind in a living subject, in 1876. In many cases there is a coexistent chronic inflammation of the larynx, or a specific disease of the organ, as syphilis, tuberculosis, or cancer. In some patients the aphonia came on suddenly after an attack of cough and the affection bore the characters of a traumatic one. Fraenkel denies the possibility of a prolapse of the mucosa of the ventricle after such traumatism, without the rupture of some vessels, and says that the sudden aphonia is due to the compression of the fold of membrane projecting from the ventricle, rendering it oedematous and allowing it to intervene between the cords, thus interfering with phonation. The treatment of this affection consists of rest for the voice, the relief of cough, the specific treatment of any accompanying disease, *e. g.*, syphilis, and the destruction of the tumor, if small, by galvanocautery, or if large, by excision.

PHYSIOLOGY AND PATHOLOGY.

The Formula of Renal Function. Its Significance in Diseases of the Kidney.—Dr. Stefano Mircoli (*Gazzetta degli ospedali e delle cliniche*, March 29th) discusses the diagnostic and prognostic value of cryoscopy (the freezing-point test) in renal affections, and emphasizes the value of a study of the density of urine and its variations in twenty-four hours, with a view of working out a formula for the functional activity of the kidney. He found, after a series of experiments, that the variations in density might be considerable in the same subject from hour to hour, according to the conditions of life. The work of the kidney for a given length of time may be obtained by multiplying the specific gravity of the urine collected during that time expressed in terms of 1 cubic centimetre by the number of cubic centimetres of urine eliminated during that time, and dividing the product by the number of hours of observation. Thus the formula for renal work would be: $\text{Density} \times \text{N (c.c.)} \div \text{Hours} = \text{Work}$. The modulations of renal work may then be traced upon a chart, expressing in a curve the frequency of urination during twenty-four hours, the relation of urinary secretion to meals, exercise, and sleep, the limits of variations of the renal function, and the rate of elimination of the solids and water ingested. Tracings of this kind, taken upon healthy persons, showed that there were certain points of similarity between the curves of each day, although the diet and habits of the patient varied. For example, on arising in the morning, and at about ten o'clock at night, the curves were about equal in the different days of observation for the same patient. During meals there was a short descent of the curve, which again began to rise about an hour later. During

sleep the activity of the kidney diminished, so that the kidneys also seemed to sleep in a sense. By studying the curve indicating the elimination of water in connection with the first curve indicating the total work of the kidney, the author found that the healthy kidney eliminated a certain amount of water for a given amount of solids, and that these two quantities were kept parallel. He concludes that there is a balance or parallelism between the work of the glomeruli and the canaliculi (the former, in general terms, secreting the water and sodium chloride, the latter the urea, etc.). This parallelism is lost in nephritis, inasmuch as there is no normal balance between the glomeruli and the tubules of the kidney. The curve, moreover, shows in nephritis, greater activity than normal during sleep, and shows variations which are capricious, and the organ may be functionally compared to a heart that beats fast for one quarter of the day and slowly for three quarters of the time. With improvement, the renal curve tends to return to the normal. The author believes that by this new method some facts that have been hitherto unknown may be discovered about the work of the kidney and may find application in clinical work. Cryoscopy shows a vacillating coefficient if the urine is frozen at various intervals during the day, the variations usually coinciding with variations in density.

Variations in the Composition of Human Milk.

By Philip P. Sharpless and Eugene A. Darling. M. D. (*Boston Medical and Surgical Journal*, April 16th).—The authors give the methods by which the analyses were made and, in a number of charts and tables, show in detail the results they have obtained. They draw the following conclusions from their work. (1) The average composition of human milk, as shown by 117 analyses, is: Fat, 2.91; sugar, 7.01; proteids, 1.34; ash, 0.13; total solids, 11.39; solids not fat, 8.48. (2) There are wide variations from the average in milk from the same individual at different times. (3) There are marked variations in the average composition of milk from different individuals. (4) The average composition of human milk does not vary to any marked extent at different periods of lactation. (5) During the first lactation the milk, on the average, is weaker in fat and proteids but stronger in sugar than in subsequent lactations. These differences may or may not be due to age.

Quantitative Determination of Urinary Pigment and Its Diagnostic Value.—Professor G. Klemperer (*Berliner klinische Wochenschrift*, April 6th) describes a useful instrument for the quantitative determination of urinary pigment. He points out that the pigment represents a part of the function of the renal epithelium and its quantitative determination gives valuable conclusions as to the functional ability of the kidney. The test depends upon a comparison with a standard normal color.

Klemperer gives some examples of the value of his test. In cases of ascites, where the scanty urine is dark, as is known, the color shows that the kidney still retains functional activity; if the quantity of urine becomes less and simultaneously its color becomes lighter, it is an indication of renal insufficiency. In general, the lighter the urine, the more severely diseased is the kidney.

Proceedings of Societies.

SOCIETY OF THE ALUMNI OF THE CITY (CHARITY) HOSPITAL.

*One Hundred and First Stated Meeting,
October 8, 1902.*

The President, Dr. GEORGE H. MALLET, in the chair.

A Case of Fracture of Astragalus: Exhibition of the Radiograph.—This paper was read by Dr. W. P. McMANNIS. During the reading of the paper Dr. McMannis passed around two negatives illustrating a simple fracture of the astragalus. He presented the negatives because they showed the fracture even better than did the photographs. The negatives, through the kindness of Dr. Buller, were taken at the Orthopædic Hospital, in East Fifty-ninth Street. The accident occurred on October 16, 1901. One of these negatives showed the leg and foot enveloped in plaster of Paris, and the other without the plaster. The patient was seen on the day of the accident by a member of this society, Dr. D. E. Walker.

Dr. F. L. TAYLOR had seen at least two cases that he had diagnosed as fracture of astragalus. The history of one of them he did not remember very distinctly, but the other one was a compound fracture due to great violence. This was in a boy about four years old, whose foot was run over by a street car. The car did not pass entirely over the foot, but pinched it in such a way that he had a wound about four inches long, extending from the external malleolus up the leg. There was posterior drop, the malleoli were intact, and there was crepitus between the os calcis and the ankle joint. The foot was put up at right angles and slightly imperfect. There was complete restoration of function, but slight thickening persisted about the ankle.

Dr. McMANNIS stated that a diagnosis of fracture of the fibula was made. Until a skiagraph was made they did not know that they had to deal with a fracture of the astragalus. The instep and leg were tremendously swollen and there was a large patch of ecchymosis extending up the leg. The peculiar thing about it was that the patient referred the pain to a point above the malleolus and over the ecchymosis. He now had a pretty good result, but there was still pain. The patient was a plumber, and when he was required to go upstairs frequently, he suffered pain in the foot.

Dr. J. H. WATERMAN called attention to the fact that there was some limitation of adduction and suggested that the shoe should be built up a quarter of an inch on the outer side, to throw the foot over. The condition of spasm was the same as after dislocation of the astragalus.

An Unusually Long (Twenty Weeks) Case of Relapsing Typoid Fever.—Dr. W. L. STOWELL read a paper with this title, which appears in this issue of the *Journal*.

Dr. J. F. TERRIBERRY thought that Dr. Stowell had done good service in keeping such a full account of the case and presenting it in its various aspects in such a clear way. There were many

things in handling a case of typhoid that it was a very good thing to know: the matter of bowel antisepsis—whether it was of any service or not—required a great deal of observation, and Dr. Stowell seemed to have followed that up very well here with the conclusion that practically it did not amount to anything. The matter of diet was one that everybody talked about; almost every one had his own particular views about it. It was evident that Dr. Stowell gave his patient about what he thought he could digest, without reference to teachings and writings, and that his patient got well. Altogether he considered the contribution a very valuable one, even though it referred to only a single case.

Dr. R. C. NEWTON said that, so far as he knew, this was a record case. The speaker had been connected with a case that ran eleven weeks, with two distinct relapses, and had reported it to this society some years ago. Speaking of diet, in a hospital case of typhoid (not the speaker's own) the patient was convalescing nicely when his physician allowed him to eat a baked potato, and immediately his temperature ran up. At the same time, in private practice, a little girl convalescing from typhoid also had a baked potato, and her temperature immediately went up to 104° or 105° F., but came down in two or three days and convalescence proceeded without further mishap, whereas the man had a distinct relapse lasting two or three weeks; whether the potato caused it could not be positively decided; but it was fair to infer that the same agent might have given rise to an attack of indigestion in one case and to a relapse in the other. Dr. Newton had a typhoid patient aged thirteen years now almost in convalescence, the temperature being normal in the morning, and elevated in the evening. After he had taken an ice cream his temperature went up. Then he was permitted to have soup and every time he had soup his temperature went up. The day before yesterday they had given him ice cream again, and his temperature went up to 104° F. There must be some connection between these variations in his diet and the increase in temperature that followed them. The speaker had noticed the same thing in other cases. If patients were getting along well on milk he believed in keeping them on milk, even though good observers were sure that it curdled and fermented in the intestines and afforded an incomparable culture medium for the typhoid and other bacilli. His experience with this disease led him to adhere strictly to the milk diet.

Dr. J. H. KENNEDY wished to emphasize what Dr. Newton had said. He had had exactly the same experience a number of times after giving solid food, and in future was determined to stick to the milk diet. As to the value of intestinal antiseptics, notwithstanding the rigid use of them, Dr. Stowell's case seemed to have run a pretty long course.

Dr. STOWELL, in closing, said that there were a good many peculiar points about the case. It began in the patient's own house, near where very extensive building was going on; there was a good deal of noise, and that disturbed the patient. He laid considerable emphasis on the milk diet, allow-

ing food and a liquid diet afterward, because had the case stopped there without any further relapse, he would have thought that he had a very strong argument. He would have felt, with the family, that the temperature might have been caused by the food, but in the light of all the succeeding relapses for fifteen weeks, they certainly could not be laid to solid food, nor at any time could they be laid directly to indigestion, although at times there was a good deal of tympanites. Even indigestion did not cause typhoid fever. On account of the albumin in the urine and the bad pulse he was thoroughly alarmed as to the final outcome, and had had a consultation two or three times with Dr. William H. Porter, because he thought him to be quite an expert on matters of nutrition, and also with Dr. Winters in reference to the general condition. Both had declared without any reservation, that the food had nothing whatever to do with the relapses. The patient had very excellent nurses, and one of them persisted in declaring that beef juice would cause a rise in temperature. One time after taking beef juice the temperature went up and seemed to support her argument, but as weeks went on the temperature fell more times than it went up. In high fever it was natural that the tissues of the body should be burned up, but if the patient was taking enough food, that would be burned up before formed structures. This patient took plenty of nutrition. He thought that the patient was well fed and succeeded in assimilating food, and it was barely possible that that was one reason why the temperature kept up; it was certainly one reason why the patient lived. Only a few days ago she had returned from Canada, from camp, where she had been hunting and fishing.

Book Notices.

Diseases of the Bronchi, Lungs, and Pleura. By Professor Dr. FRIEDRICH A. HOFFMANN, Professor of Medicine in the University of Leipzig; Professor Dr. O. ROSENBACH, Chief of Clinical Medicine in the Magdeburg-Alstadt City Hospital. Edited with Additions by JOHN H. MUSSER, M. D., Professor of Clinical Medicine in the University of Pennsylvania. Authorized Translation from the German under the Editorial Supervision of ALFRED STENGEL, M. D., Professor of Clinical Medicine in the University of Pennsylvania. Philadelphia and London: W. B. Saunders & Company, 1902. Pp. 7 to 1029. (Price, \$5.)

Dr. Musser, the editor of this volume of Nothnagel's *System*, has brought to his task of reproducing the original in English, a large and varied personal experience in the diseases the description of which is contained in this volume. The subjects considered are the diseases of the bronchi, of the pleura and of the lungs. While the additions to the original have not been very numerous, the value of the German edition has been enhanced, because the editor has added personal views and has amplified the literature by adding references to the more recent contributions to the subjects contained in the volume. While the views of the editor are at vari-

ance with those of Dr. Aufrecht in the consideration of the subject of pneumonia, Dr. Musser's position is well maintained by adequate argument.

It may well be mentioned that the material added to the original German relates to some new matter on the anatomy and physiology of the bronchi; on foreign bodies in those tubes, on the pathology, bacteriology and treatment of bronchitis. Likewise, additions have been made to the subjects of bronchiectasis; the article on fibrinous bronchitis contains the more recent researches; and eosinophilia in asthma and Fränkel's researches in asthma have also been incorporated. In fact, all the articles have been brought up to date especially the portions devoted to bacteriology and pathology. We also note the consideration of cell work in pleural exudates, in which Widal was a pioneer.

Mechanical Vibratory Stimulation. Its Theory and Application in the Treatment of Disease. By MAURICE F. PILGRIM, M. D., Professor of Psychiatry in the New York School of Physical Therapeutics, etc. New York: The Metropolitan Publishing Company, 1903. Pp. 5 to 152.

The subject of mechanical vibration is probably destined to assume greater importance as fitter machines for its application are devised, and as the physiological and therapeutic results are more scientifically studied.

The brochure before us gives some account of the therapeutic uses of vibration, but fails to acquaint us with any experimental study of its physiological effects. This will no doubt appear in due time, as the field is a promising one and seems on the eve of further development.

Malarial Fever: Its Cause, Prevention and Treatment. Containing Full Details for the Use of Travellers, Sportsmen, Soldiers, and Residents in Malarious Places. By RONALD ROSS, D. P. H., F. R. S., Walter Myers, Lecturer, Liverpool School of Tropical Medicine. Ninth Edition, Revised and Enlarged. New York, London, and Bombay: Longmans, Green & Company, 1903. Pp. viii-68. (Price, 75 cents.)

This little book popularizes our knowledge of malarial fever and is practically an enlarged edition of the author's former essay entitled *Instructions for the Prevention of Malarial Fever*. It was intended for the use of people who are called upon to live in malarious countries. It is thoroughly practical, clear, concise, and sufficiently full of details.

BOOKS, ETC., RECEIVED.

The Practitioner's Guide. By J. Walter Carr, M. D. (Lond.), F. R. C. P., Physician to the Royal Free Hospital, etc.; T. Pickering Pick, F. R. C. S., Consulting Surgeon to St. George's Hospital, etc.; Alban H. G. Doran, F. R. C. S., Surgeon to the Samaritan Free Hospital, and Andrew Duncan, M. D., B. S. (Lond.), F. R. C. S., M. R. C. P., Physician to the Branch Hospital, Seamen's Hospital Society, etc. London, New York, and Bombay: Longmans, Green & Company, 1903. Pp. vi-1107.

Success in Dental Practice. A Few Suggestions relative to the most Approved Methods of Conducting a Practice. By C. N. Johnson, M. A., L. D. S., D. D. S., Professor of Operative Dentistry in the Chicago College of Dental Sur-

gery, etc. Philadelphia & London: J. B. Lippincott Company, 1903. Pp. 11 to 159.

A Pocket Book of Infant and Childhood Dietetics, with Directions for the Home Modification of Milk. By A. B. Spach, A. M., M. D., Instructor in Medicine, Medical Department of the University of Illinois. Chicago: E. H. Colegrove, 1903. (Price, 50 cents.)

Erste Ärztliche Hilfe bei plötzlichen Erkrankungen und Unfällen. Bearbeitet und herausgegeben von Professor Dr. George Meyer, in Berlin. Mit 5 Abbildungen im Text. Berlin: August Hirschwald, 1903. Pp. xvi-438.

Vaccinazione, Immunità e Sieroterapia contro lo Pneumococco del Fränkel. Ricerche Sperimentali. Prof. Guido Tizzoni e Dott. Luigi Panichi. Bologna: Gamberini e Parmeggiani, 1903. Pp. 56.

Proceedings of the Academy of Natural Sciences of Philadelphia. Volume LIV. Part III. September, October, November, December.

Transactions of the College of Physicians of Philadelphia. Third Series. Volume the Twenty-fourth.

Transactions of the New Hampshire Medical Society at the One Hundred and Eleventh Anniversary held in Concord, May 15 and 16, 1902.

Twenty-sixth Annual Report of the Board of Health of the State of New Jersey. 1902.

Twenty-ninth Annual Report of the Secretary of the State Board of Health of the State of Michigan for the Fiscal Year ending June 30, 1901.

Thirty-first Annual Report of Roosevelt Hospital, New York, from January 1, 1902, to December 31, 1902.

Transactions of the Luzerne County Medical Society for the Year ending December 31, 1902.

Miscellany.

The Advertisement of a Physician of the Seventeenth Century.—We have already in our issue for March 25th, p. 771, in a Miscellany note on Touching as a Mode of Healing, given a short account of *Athenian Mercury* or *Gazette*, published in England between 1690 and 1697. Here is a specimen of a physician's advertisement that appeared in that periodical for August 29, 1691: "In Plow-Yard in Gray's-Inn-Lane lives Dr. Thomas Kirleus, a Collegiate Physician, and Sworn Physician to Charles II. until his death, who with a Drink and Pill (hindering no business) undertakes to cure any ulcers, sores, swellings in the nose, face, or other parts; scabs, itch, scurfs, leprosy, and venereal disease, expecting nothing until the cure be finished. Of the last he hath cured many hundreds in this city; many of them after Fluxing, which carries the Evil from the lower parts to the head and so destroys many. The Drink is 3s. the Quart, the Pill 1s. a Box, with directions, a better purger than which was never given, for they cleanse the body of all impurities, which are the causes of dropsies, gouts, scurvy, stone or gravel, pains in the head and other parts; with another Drink, at 1s. 6d. a Quart, he cures all fevers and hot distempers without bleeding, except in few bodies. He gives his opinion to all that writes or comes for nothing."

A Worm in the Heart.—Another very curious item, culled from the same source as the preceding paragraph, viz., the *Athenian Mercury* or *Gazette*, in pursuance of its self-imposed task of "resolving weekly all the most nice and curious

questions propos'd by the ingenious," as the following: "Q. A Chyrurgeon at *Westminster* was sent for to the opening and embalming of a Gentlewoman who had been dead at least Eight and Forty Hours; when he had opened and disembowelled her, her Heart leaped upon the Table, as all the Spectators saw; at which the Chyrurgeon struck his instrument into it, opened it, and out of it he took a large Worm, as long as a Man's little Finger, as thick as an Arrow: It had Two Heads, the one like a Serpent's: He kept it two Days alive. If ye doubt the Truth of the Relation, ye may be satisfied of it at Mr. *Stubb's*, at the *Chyrurgeon's Arms* in *Stretton Ground* in *Westminster*. Pray, how do you think it could get thither?"

"A. There have been many Instances of this Nature in Anatomical Observations, as well as in other Histories. *Howel*, in his Letters, gives us one, the *German Virtuosi* another, with the Picture, and full description of the worm, or Snake, call it what you please, found in the left Ventricle of the Heart of a Dissected Body. The difficulty is, how it should get thither; for Equivocal Generation is now laughed at as much as the wise Epicureans, who defended it. It must then have past by the Blood into the Heart, while 'twas only in Seed, and there have grown to such a bigness. The difficulty still, and almost impossible to resolve, will be, how the Seed of any living thing could submit in the Form, in its passage through the *Chyle*, etc., into Blood, without being quite destroyed, or altered? But when anybody will resolve us, how the Seeds of Mites are preserved through Milk, Curds and Cheese; for they must owe their Original either to what has been licked up by the Cow, or to the Rennet, and we'll then resolve 'em this Question. Though it seems Nature has wrought the Contextures of Creatures so very fine, and curious, that they pass untouched through her Ordinary Operations, as well as they may, many of 'em, flee the finest sight and sense of man, unless he's assisted by Art, there being some of those Animals, as those who have observed 'em, assure us, an hundred thousand times less than the Eye of a Louse. After all, 'twill still be asked, whence the Seed of any such Creature should be gotten, this being described with Two Heads, and many denying there's any such thing in *rerum Natura*; however no such in our country; therefore mayn't it seem more probable that 'twas bred out of Corruption there, than so much as in its seed conveyed thither. We answer, first, If there's no such thing in Nature, neither can this be so; and indeed we are apt to believe, that there's a mistake in the Relation, and that which is called another Head, is only a Tail, a little Thicker and broader than some other parts of the Body. Monsters of two Heads we grant there have sometimes been, as well as with two Bodies; but then it's plain Nature intended two distinct Bodies, only it happened otherwise through defect of the matter, or other Accidents."

A Plea for Exploratory Operations.—At the recent meeting of the American Medical Association, at New Orleans, in the Section of Surgery and Anatomy, the chairman, Dr. James E. Moore, of Minneapolis, in his address, said that an explora-

tory operation for the purpose of diagnosis should not be made until all other means had been exhausted, but in doubtful cases should always be done before placing it under the inoperable group, as even if a radical operation could not be done, a palliative one might give relief. In suspected ectopic pregnancy, an exploratory operation should always be made, and when there had been a traumatism with symptoms which indicated rupture of the bladder, it should also be employed; and the author accounted for the great reduction in the mortality of these cases from 65 per cent. to 25 per cent. during the last ten years by this fact and the fact that the mucous membrane was not included in the stitches. In appendicitis, where the disease began as a chronic condition, as well as in pancreatic disease, exploratory operation was recommended and often formed the only hope of early diagnosis. The exploratory operation was particularly valuable in cases of intestinal perforation. When malignant disease had advanced so far that positive diagnosis could be made without exploration, radical operation was almost hopeless, and even palliative operation was scarcely worth doing. Typhoid perforations should be treated in the same way as those caused by malignant disease, and the author believed that there were many patients suffering from peritoneal adhesions (non-tuberculous) who could be restored to health by an exploratory operation. Many of these patients had never suffered from an acute abdominal inflammation.

The Surgery of the Heart. By Benjamin Merrill Ricketts, Ph. B., M. D.—In a paper on this subject delivered before the St. Louis Medical Society, on January 17th, Dr. Ricketts goes into the subject most exhaustively. It is our intention to publish in this column from time to time, as space allows, the author's abstract, feeling sure that the immense amount of data collected will be of service for reference.

Dr. Ricketts's abstract is as follows:

HISTORICAL AND EXPERIMENTAL.

In considering the surgery of the heart it is necessary to make various classifications not only of the surgery of the heart itself, but of all the causes that may produce surgical conditions.

THE ANATOMY OF THE HEART

must of necessity be studied from a comparative point of view, from both the embryonic and mature stages; then, too, the physiology of the heart must be likewise considered. This is especially true as the experimental work pertaining to the heart and its functions has not been confined to mammals.

The heart of the human embryo corresponds to that of the invertebrates.

The subdivision of the aorta into four or five arches resembles the entrance of the gill cavities of the cartilaginous fish. This form of circulatory apparatus is common to all vertebrates in the earliest stage of their development. The plan of circulation is altogether changed in higher vertebrates, because of the formation of new cavities in the heart and the formation of vessels.

The ventricles of the heart are imperfectly divided in reptiles, except the crocodilian group, in which

they are completely divided. In some of the chelonians the communication between the auricles is permanent. In the batrachians, which have but a single ventricle, the root of the aorta is dilated into a bulbous aorta or bulbus arteriosus. The heart of a lancelet consists of but a simple tube. The apex of the heart of the dugong is deeply notched. The hearts of birds are more elongated than the human heart, while that of the chelonian is shorter and broader. Sharks have seven distinct branchial arches on each side, while the lepidosirens and ceratodes have five branchial arches on each side. The perch has but four aortic arches.

The crocodile has two aortic arches, each ventricle giving off one. The two common carotids and the right subclavian originate in one trunk in the lion. The hedgehog has two innominate arteries. Birds have two common carotids in close juxtaposition; though sometimes there is but one. In the ox the internal carotid breaks up inside the skull into a network of small arteries (*rete mirabile*).

All air-breathing vertebrates possess two circulations; that is, part of the blood is returned to the heart before being distributed to the body generally. In batrachians the venous and arterial blood becomes mixed in the heart, hence the blood in the aortic arches is impure.

Pericardium is constant in mammalian life.

Blood Supply of the Human Heart.—Numerous arteries and veins are upon the surface of the heart, and they are of ordinary structure. The larger veins in the walls of the heart have three coats. The smaller ones have a single layer only of endothelium, the same as capillaries. The arteries in the walls of the heart have three coats.

The number of efferent capillaries is greater than the number of afferent. The capillaries run in all directions among the muscular fibres; they not only enter the muscular fibres, but actually penetrate to their very centres.

It is highly probable that more or less blood passes through the endocardium to nourish the myocardium.

Nerve Supply of the Human Heart.—The superior, middle, and inferior cervical ganglia form the cerebrospinal nerves of the heart. The cardiac ganglia are numerous, scattered over the surface of the heart, and deep in its structures, and intimately connected. The more powerful of these lie in the auricular septum, the paralysis of which by opium will cause a reversion of the cardiac contraction. The intracardiac ganglia are never microscopic; they are composed of scattered unipolar cells; a few may be bipolar.

ENERGY OF MAN'S HEART.

Houghton says that the mechanical energy expended by the heart in twenty-four hours equals one hundred and twenty-four foot tons. A man seventy years old would have expended three million one hundred and twenty-four thousand and eight hundred foot tons of energy in his life; force enough to move a train of fifty loaded cars (twenty tons each) half a mile.

There have been sixty-one or more contributions to this subject.

EXPERIMENTAL WORK.

Little had been done experimentally pertaining to the surgery of the heart until Block (1882) sutured the ventricular wall of a rabbit. Much, however, had been done in experimental physiology.

Hering was probably the first to ascertain the rapidity of the circulation, by introducing potassium cyanide into one part of the circulatory system and drawing blood from another.

Legallos (1813) experimented to determine the actual motion of the heart.

Wittbank (1824) experimented to determine the cause of the action of the heart.

Kronecker and Schmey (1884) produced death in rabbits by needle puncture at a certain point in the septum between the ventricles.

Senn (1885) made an experimental and clinical study of air embolism (with thirty-nine experiments on dogs), to show that air could be removed from the chambers of the heart by the aspirating needle without fatal results.

Phillipson (1886) sutured wounds of the heart, as also did Del Vecchio, in 1895.

Elsberg (1890) made a most exhaustive report on his experiments in surgery upon the hearts of dogs.

There have been forty-six contributions to this subject.

CARDIOMORPHIA: ABNORMALITIES AND MALFORMATIONS. 1675—1903.

Malformations of the heart and its chambers are frequent, of many varieties, most interesting, and many times contribute to difficult surgery.

The heart may be abnormally small, as in chlorotic persons, or the hæmophilic, or it may be greatly hypertrophied. Two or more imperfect hearts may be found in the same chest. The openings between the ventricles may be congenital or acquired, of many varieties, degrees, and locations.

Bertody (1845) reports a case of a communication between the ventricles of the heart, the aorta originating from both ventricles. In the case of Parker (1846) the aperture was in the septum of a heart having considerable contraction of the pulmonary orifice with the aorta arising entirely from the right ventricle. Hutchinson (1853) mentions a case of a child in which there was an imperfect ventricular septum, and a rudimentary right ventricle, which had been divided into two chambers by a fleshy septum between its sinus and its infundibular portion. Solomon (1898) records a case of patent foramen ovale and extra coronary artery, aorta and pulmonary artery.

Reid (1835) records a case of obliteration of the vena cava superior at its entrance into the heart.

Transposition of obliteration of the pulmonary artery is quite common, it may open into any one or all of the cavities of the heart, as may the aorta also. Indeed the pulmonary artery may connect with the aorta directly.

In the case of Bertody (1835) [1845?] not only did the aorta originate from both ventricles, but there was a communication between them. In the diseased heart reported by Dalrymple (1846) the root of the aorta had an opening common to the ventricles. In that of Parker (1846) the aorta arose entirely from

the right ventricle. Cheever (1846) reports a case illustrating the earliest stage of malformation, usually known as distribution of the descending aorta from the pulmonary artery. In the case of Canlon (1847) there was complete obliteration of origin of the aorta. Ward's case (1850) showed transposition of the aorta and pulmonary artery. Greig (1852) records a case in which the pulmonary artery was given off from the descending aorta and pulmonary artery. Green (1867) reports a case of abscess [absence?] of the pulmonary artery and the aorta springing from the right ventricle. Crook (1881) records a case in which the aorta arched over the right bronchus and the pulmonary artery closed about the semilunar valves. Stuertz (1894) records a case of obliteration of the aorta.

There have been four hundred and twenty-eight contributions to this subject.

Cavities of the Heart.—The human heart may consist of two, three, four, five, or even six cavities. Foster's case (1846) had only two cavities. Hutchinson's case (1853) had five chambers.

Ectocardia.—Displacement and malposition of the heart may be congenital or acquired, sudden or gradual, due to fluid, new growth, or change in shape of the chest.

The heart may occupy any portion of the thoracic cavity of man. It has in two cases been found in man's abdominal cavity. It may protrude through the chest wall. Report of such a case was made by Abernethy (1793). Smith (1808) records a case in which the heart was on the right side without transposition of other viscera. In Lippington's case (1834) there was transposition of the heart with complete obliteration of the gall bladder. Dalton (1898) reported a case of dextrocardia with left superior vena cava. Fitzgerald's case was one in which the apex beat was below the right scapula.

There have been one hundred and seventy-five contributions to this subject.

The Ætiology of Acne.—T. Caspar Gilchrist M. R. C. S., clinical professor of dermatology at Johns Hopkins University (*Journal of Cutaneous Diseases*, March) gives an account of previous investigations, and describes in detail his own work in the pathological laboratory of the Johns Hopkins Hospital. The following summary of results obtained by the author, including those of his previous investigations, closes the article:

1. Definite bacilli, which the author has already named *Bacillus acnes*, were present in all smears taken from 240 typical acne lesions from 86 patients.

2. Pure cultures of *Bacillus acnes* were obtained from 62 lesions (chiefly acne nodules) from 29 patients, 82 cultures being sterile (about 70 of these were sterile because the proper media were not used) and the remainder showed either a growth of *Bacillus acnes* mixed with *Staphylococcus pyogenes* or *Staphylococcus epidermidis albus* or the latter organism was in pure culture.

3. Sections of an excised comedo, of an early acne papule, of an acne pustule and of five acne nodules from six patients demonstrated the stages of the disease. The sections from the acne nodules showed quite profound changes extending deep into

the corium surrounding in some nodules a magnified and markedly hypertrophied follicle. The lesion was made up of masses of cells, many giant cells, plasma cells, which were very numerous in some nodules, but not in others, their place being taken by lymphoid cells or connective tissue cells. Very many multinuclear cells were also present and were massed in some sections so as to form miliary abscesses; numerous phagocytes were seen and also many pigment cells, especially in one nodule where they were in large numbers. The blood vessels were numerous and dilated. In one section a large group of *Bacilli acnes* were situated deep in the corium beneath the follicle, but in most of the section only a few small clumps or scattered bacilli were found. Some of the giant cells contained bacilli.

4. *Bacilli acnes* have been shown to be pathogenic in mice and guinea pigs.

5. *Bacillus acnes* is present as a short thick bacillus in the smears, but in culture it often becomes much longer and thicker, and in old cultures assumes distinct branching forms. It grows when planted *en masse* on acid glycerin agar and forms a pultaceous easily movable mass.

6. By the clumping of *Bacillus acnes* by the sera of patients affected with acne vulgaris it is to be inferred that a specific toxic body derived from the presence of the bacilli in the tissues is absorbed by the blood, resulting in the production of a specific agglutinin.

The author asks what deductions can be made from all these results.

It seems to be now definitely proved that this microorganism, *Bacillus acnes*, is the primary cause of acne vulgaris. The organism is always present in the lesions; pure cultures have been obtained direct from the lesions many times (62), it is pathogenic in animals, and it has been demonstrated that the blood serum of acne patients agglutinates these bacilli.

It has occurred to him to ask whether we are not taking a wrong view in considering the anæmia, constipation, headache, coated tongue, etc., as always predisposing causes of acne vulgaris, whereas, these symptoms may be the result of the continued absorption of toxins from the enormous numbers of bacilli present in all the lesions. As far as the principle is concerned the disease can be compared with erysipelas. In erysipelas the *Streptococcus pyogenes* invades the skin, an acute local inflammatory process is set up, and the toxine is absorbed rapidly into the blood, which causes the constitutional symptoms, viz., fever, headache, coated tongue, constipation, loss of appetite, etc. We do not say that these symptoms are the predisposing causes of erysipelas, but that they are the result of the disease. So, from analogy, although we are dealing with a much more chronic disease in acne vulgaris, it is not too much to infer that the accompanying symptoms may result from the continued absorption of toxine produced by the innumerable number of bacilli present in the acne lesions.

The author does not deny that there are still predisposing causes such as age, diet, etc.; yet we know that patients who carry out all that is advised as to diet, regular bowels, appropriate internal and

external treatment, sometimes do not get cured for months or even years. The disease will persist and it often relapses. Acne vulgaris in its severer forms is a profound disease. He does not mean that it is a dangerous disease, but it is a disease which affects the whole system of young adults. Acne vulgaris must, therefore, be treated with respect and it must be handled with care and attention to all details therapeutically.

Previously to his first communication *Bacillus acnes* had not been obtained in pure culture from acne lesions, neither had it been proved to be pathogenic in animals, nor had the agglutination test been done before.

While these later investigations were being concluded, Sabouraud published (1902) an extended monograph on Seborrhée, Acnes, Calvitie. As far as the acne question is concerned he repeats his former statements. He improves on his previous technique and is now able to obtain a pure culture of his microbacillus direct from the sebum plug, by placing it on a sterile glass slide and then planting on his special media. He does not describe any branching forms in the culture of his organism. Gilchrist has seen a pure culture of Sabouraud's microbacillus, and to the naked eye it looks like the former's *Bacillus acnes*, but he considers it curious that Sabouraud has not observed any branching forms. Sabouraud did not obtain a pure culture direct from the acne lesions, either pustules or nodules. In fact, he still asserts that these lesions are due to secondary infection by ordinary staphylococci (albus). He suspects that some acne lesions are caused by the microbacilli, but he could never prove it and he never found the bacilli to be a pus producer. Sabouraud believes that the comedo is caused by his microbacillus, which he says is the same as Unna's acne bacillus. Sabouraud also fully believes that his organism is the cause of seborrhœa and of the alopecia following this disease. He describes the pathology of acne lesions as well as the comedo, and acne indurata he explains as being due to the invasion into the deeper structures of the *Staphylococcus albus*. He also asserts that acne necrotica is due to the invasion of staphylococci. Sabouraud believes that the alopecia following seborrhœa is caused by the toxins of his microbacillus. He apparently demonstrates this by inoculating rabbits, a sheep, and a horse, with a quantity of the toxine and causing the hair to fall out in fairly large areas. Sabouraud makes no mention of Gilchrist's investigations on acne vulgaris, published two years previously to his publication.

In comparing their respective results Sabouraud asserts that his bacillus is the cause of seborrhœa, comedones and alopecia (seborrhœic), and that acne lesions are due to secondary infection by the *Staphylococcus albus*, whereas Gilchrist considers he has demonstrated that the *Bacillus acnes* is the cause of acne vulgaris by its constant presence in acne lesions (240), and by the obtaining of pure cultures of the bacilli from 62 indurated acne lesions, by its pathogenicity in animals, by its presence deep in the acne lesions (indurate), and lastly by the power of the blood serum of acne patients to agglutinate the bacillus acnes in dilutions of 1-100.

The article is illustrated.

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WHOLE No. 1277.

Original Communications.

IN THE HEMISPHERE OF X RAY ACTIVITY.

By J. RUDIS-JICINSKY, A. M., M. D., M. E.,
CEDAR RAPIDS, IOWA.

The point of origin for the Röntgen ray or the x ray in the Crookes's tube is a most interesting study. In skiagraphy and therapy this point seems to be the only proper guide to proper results. But statements that the greatest intensity of the rays is only at the point where the hemisphere of x ray activity ends and the dark hemisphere begins, or that the x rays produced in a vacuum tube with the help of a static machine do not "burn," and further that the coil is better in this kind of work than a static machine, or that paraffin, vaseline, and what not, may be used in protection of healthy tissues in the treatment of malignant growths, lupus, tuberculosis of the joints, glands, tuberculosis pulmonalis, some chronic lesions of the skin, sinuses, etc., are statements which will not and cannot stand the tests of actual experiments and the results thereof.

The best skiagraphs, and the best results in the treatment with the unknown ray of Professor Röntgen were obtained in the hemisphere of x ray activity, or the field of the best rays of penetrating properties. These hemispheres or fields of activity or non-activity of the x rays in a Crookes's tube may be seen and made out better fluoroscopically and determined photographically, if we wish to. Within the limits of this hemisphere of activity, an object opaque to the x rays will cast a shadow, easily detected with the help of the fluoroscope or by the image it produces upon the photographic plate, but to know and to find out exactly the best point of the best rays of x ray order, is the main part in the new art of proper diagnosis and treatment in medicine and surgery. When the point is known to us, it is comparatively easy to secure proper illumination and position of our subject in skiagraphy, and in therapy the most astonishing results. It is a matter of fact, and any one of us may satisfy himself by experiment, that the x rays are projected in all directions from that side of the reflector opposite to the cathode. When the tube—a focus tube—is very low, the electrical force behind very small, we may observe a peculiar cathode stream, in the form of a pencil of violet color, strike

the middle of our reflector in the tube, forming a little later two sharp lines of violet color on both sides of the anode exactly where, on increasing the force behind, the line of demarcation between the two hemispheres will appear and give us the peculiar green field of the x rays; the point where the cathode rays strike first, first get hot during our work, and that seems to be the best proof where to look for the most beautiful x rays altogether. From this point, an imaginary line drawn perpendicularly at right angles through the tube will show us where the maximum therapeutic field in x ray treatment of any lesion may be found, or where the subject skia-graphed has to be, to give us the proper and best picture without distortion on short exposure. This point must and most assuredly will depend upon the form of the tube, the form of the cathode and the anode, with or without a separate reflector, and upon all the individualities of the tube itself. It is therefore necessary to find out the source and the proper point of the x ray in each individual tube, before we can repeat the best photographic features of others or expect any results in therapy.

We know that a body is heated by having the motion of its molecules quickened, and cooled by parting with some of its molecular motion. One body is hotter than another when the average kinetic energy of each molecule in it is greater than in the other. The heating of the anode in our tube is the best proof of it, and shows, not only that the rays are anticathodic—the x rays we mean—but that there a real bombardment takes place. The particles of gas in a Crookes's tube, and also those occluded in the terminals, become electrically charged and carry their charge from one terminal to the other when the tube is in action. The stream goes from the cathode to the anode. We know that the movement of particles causes repulsion of unlike sign attraction, so that the particle, being repelled from the cathode and attracted to the anode, strikes the latter with great force. The greater the quantity of charge imparted to the particle, the greater will be its repulsion and the force of the bombardment. This breaking up of the particles produces the x ray; therefore the more particles we have in action, the greater will be the quantity and quality of the rays. To have a great contrast in our photographic work, to picture not only the shadow, but the substance also, the internal structure of the bones with beau-

tiful depth and perspective, and to get good results in therapy, we must have a good source of electricity and certain intensity of bombardment to each particle in our Crookes's tube; and to make short exposures for the protection of our patients, we must have a great quantity of rays of the best quality coming directly from the best point or the middle of the most beautiful green radiance, and not from the end of the same or at the line of demarcation of the hemisphere of x ray activity and a dark hemisphere in which practically no x rays will be found. It will readily be called to the mind of every thoughtful x ray worker, that a good x ray tube is the secret of the success in x ray diagnosis and therapy. No matter how well your static machine or coil does its

successful skiagraphy. If we preclude the diffused x rays, remembering the proportionate loss of right angle shadows at different distances horizontal to the perpendicular axis, and shorten the exposures from minutes to seconds with the employment of tungstate of calcium intensifying screens against the film of our photographic plates, we may get most excellent results (see *New York Medical Journal*, March 22, 1902, A Skiagraphic Study and Researches in the Direction of Obtaining Pictures which are both Shadow and Substance of Bones, Muscle and Ligaments).

Just to show the difference in illumination on one and the same plate and the same subject, to demonstrate the point of the best x rays coming from the

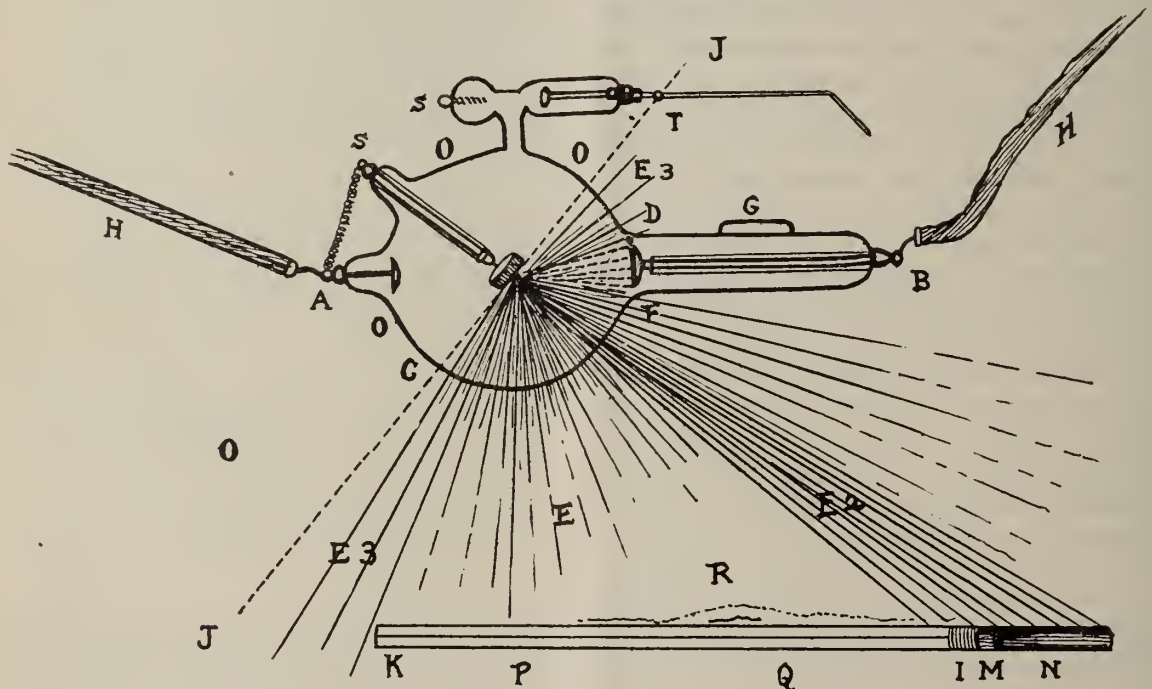


FIG. 1.—A, Positive. B, Negative. C, Anode. S, Auxiliary anode of R. F, Universal regulating tube. D, Cathode. T, Auxiliary cathode. E, Hemisphere of x ray activity. E2, Hemisphere of x ray activity, most intense radiation and penetration. The metacarpal bones of the hand cast hardly any shadow at the end of the plate, being under the greatest intensity of the best rays. Three different shadows showing the degree of overillumination. The bones with the lesion proper (R), lying in the triangular field of the radiation from P to N, cast shadows of which correspond exactly with the radiation from the platinum disk of the anode as a source. No intensifying screen used. Usual developing. Short exposure. Distance of the tube eight inches. F, Cathode stream-violet, seen in the beginning of the bombardment, and two lines of the same color at J. G, Tube Holder. H, Connecting wires in rubber tubing. J, J2, The end of the hemisphere of x ray activity. K, Dry plate in two envelopes, orange and dark. L, The effect of the x light radiation from the anode focus point on the plate strong. M, Stronger, see the skiagraph. N, Most intense, with great amount of penetration. Overillumination. Between Q and P, shadows showing proper illumination on short exposure, but not the internal structure of the bones so good as at L and M. O, Dark hemisphere with practically no x rays. P, Lower part of the plate. Q, Upper part. E3, De-parted rays.

work, you will never get good results unless you use a good tube with the proper source of electricity behind; and it makes no difference whether it is a static or a coil, the tube with both being equally dangerous in unnecessarily prolonged exposures and in unskilful hands. We have to remember that the vacuum of a Crookes's tube is a constantly changing quantity and should not be relied on to remain constant; it differs in different tubes, and sometimes in one and the same tube. We therefore have always to watch our tube. To know our tube, the resistance of the same, and especially the proper technique in illumination, is the main key to suc-

cessful skiagraphy. If we preclude the diffused x rays, remembering the proportionate loss of right angle shadows at different distances horizontal to the perpendicular axis, and shorten the exposures from minutes to seconds with the employment of tungstate of calcium intensifying screens against the film of our photographic plates, we may get most excellent results (see *New York Medical Journal*, March 22, 1902, A Skiagraphic Study and Researches in the Direction of Obtaining Pictures which are both Shadow and Substance of Bones, Muscle and Ligaments).

Just to show the difference in illumination on one and the same plate and the same subject, to demonstrate the point of the best x rays coming from the

middle of our heated reflector, or better, say, from the middle of the disk of platinum at the anode, I made, a few years ago, a skiagraph of a hand with excessive callus formation after Colles's fracture (without screen). The picture shows the radius and ulna, and the excessive callus formation plainly, but the bones of the metacarpus and carpus, at certain points give different shadows, and at one special line hardly any shadow at all, this being lost at a certain line of demarcation, seeming as if it were the astral form of the bones we see depicted. These findings in relation to the density of shadows in connection with proper illumination can only be appre-

ciated by an examination of the negative itself. The simple fact, that the best x rays from the proper point radiating in perpendicular line from the middle of our anode attacked the film of our dry plate first, and that the chemical process which took place there on the film shows the difference of radiation on one side, and, on the other that the photographic emulsion is altered chemically by the rearrangement of the atomic structure of the molecules more at the point of the best penetration, gives us the best proof of the action of the x ray and its character. The regulating tube used in the experiment was a small focus tube having a cathode at one end, and a double anode near the other end, with a flat disk of platinum in the middle of a reflector, placed at an angle of 45 degrees. The tube was placed over a dry plate in envelopes in such a manner, that the best illumination and the greatest penetration was at the upper part of the plate, the lower part receiving a smaller amount of the best rays, coming from the focus point of the reflector of the anode. A few brilliant flashes of the x ray, as shown by the fluoroscope, produced in a few seconds effects upon the sensitive plate that hours of exposure at the end of the anode, lying with the tube horizontally, as in our case, would fail to accomplish.

The skiagraph resulting from the arrangement of the platinum disk in our tube, as stated above, is reproduced in Fig. 2, which shows in print, but not so well as in the negative itself, that the metacarpal bones of the hand give about three different shadows, much lighter, but with little more detail in the substance of the bones, and at the end of the plate no shadow at all, showing that the upper part of the plate was therefore directly under the point of greatest intensity of the x rays. The parts so exposed, the metacarpal bones, were directly in the perpendicular line from the middle of the platinum disk or the middle anode focus point. The other bones, especially the lesion proper in the radius, cast shadows which correspond exactly with the radiation from the anode in the hemisphere of the x ray activity, showing the results of the same length of exposure, but with difference in penetration.

CASE—F. S. Taken February, 1901. Very short exposure. Excessive callus formation after extra-articular fracture of the radius of the left hand. Fragments not close together; displacement to the right side, impacted. Disturbance in function. Agglutination of the fragments in displaced position. Colles's fracture showing bayonet-shaped deformity, posterior view. The case was diagnosed and treated for intraarticular fracture of the radius and ulna. Injury occurred in December, 1900.

When the static machine—which may be replaced by an induction coil just as well—was excited, and the electrical stream thrown into the terminals of

our tube, or better, electrically charged, we observed the discharge from the cathode, when the force behind was very low, projected in violet stream (Fig. 1, F) first straight to the middle of the platinum disk on our anode, and then straight across the tube in the line of the position of the anode (Fig. 1, J.), the glass walls of the tube being thrown into a brilliant, though violet fluorescence. The force behind was at once increased, and at this stage in the life history of the vacuum in the tube the production of



FIG. 2.—Skiagraph of excessive callus formation after Colles's fracture. Note the difference of shadows given by the bones of the metacarpus.

the Röntgen rays manifested itself; they began to show with "low vacuum," or such a vacuum as would just begin to permit of the production of an x ray. The vacuum was increased, the hemisphere of x ray activity showing beautifully, the cathodic stream was still to be seen on careful examination, as a bluish-violet pencil projected upon the middle of the anode with an increased movement, and an increased amount of heat manifested at the anode with every increase in the force and interruption. The x rays were developed as shown by the straight lines in our illustration (Fig. 1). Is it not most natural, that at the point of the most intense bombardment with the greatest amount of repulsion and attraction, if we take in consideration the resemblance between cathodic rays in their different

properties outside of the vacuum tube and the x ray, as described by Lenard, the pupil of Hertz, that we shall find the greatest amount of production of the x rays? And if so, that the greatest intensity of the x rays will be directly under this point in a straight perpendicular line at the angle shown in our illustration; or that we shall get at this point the best penetration in comparatively short exposure, when the proper distance and proper position of our subject from the tube at which a part and the photographic plate must be exposed, to secure essential correctness and non-distortion, is found? And with such a better penetration is it not self-evident that we shall get a better illumination with more detail in our negatives with internal structure of the bones, their substance, and the individual layers of the muscles and ligaments, if the exposure is not unnecessarily prolonged? And, further, is it not plain that the most active part of the central field of exact perpendicular radiation at the angle shown will produce better results in treatment of any lesion, and in a comparatively shorter time; and, the exposures being shorter, with less danger of dermatitis, or so called x ray "burn," than at any point of the departed x rays, especially if the proper tube of proper vacuum to the individual case is selected? The best results, as we know, namely, in superficial cases, are obtained with tubes of low vacuum; that is to say, with tubes that give out at their central point a large number of rays that are not highly penetrating; and *vice versa*, in internal cases, where a better penetration is desired, the high vacuum tube is used. In this way the danger of "burning" is avoided, with all the other precautions, and "dermatitis" in producing a cure is not necessary. It is impossible to determine exactly from our present knowledge, without trial in each individual case, which tube shall be used, and we have to state right here that there is not a pattern for this and the other treatment, which will tell us what cases will be favorably influenced by the x rays, and what will not. We are after the quantity and quality of the rays in each given case, and nothing more. The name of the tube or the vacuum, of which we have no positive knowledge, will not do!

The best protection and the safest, so far, we have in the lead only. In the treatment of my cases I used tin foil first, and now I have a special protector, designed by me, which is a combination of protective screen and shield, mask, and a lead box with diaphragms for precluding the diffused x rays. In therapy it gives us, not only lead and safe protection, without possible shock to the patient and any danger to the tube, but a very simple opportunity to treat any lesion directly with the best radiation from the anode focus point, at the correct,

standard distance, through a speculum; or, if necessary, over the whole area with the lymphatic glands in surrounding infected tissues. The protector may be used with any focus tube, regulating or not, and any make. For cavities and the treatment of the malignant growths there, epithelioma of the tongue, carcinoma uteri or recti, tuberculosis in the larynx, etc., we simply connect different rubber specula with the protector, and treat the lesion that way; or, if we so wish, treat the whole infiltrated area at once and use a special device for that purpose. During the whole treatment we may observe the tube in action anteriorly and posteriorly, and make out the hemisphere of x ray activity with the point of the best rays, without disturbing our patient. The main opening in the protector is situated in such a manner that the best rays only may be employed. In this way we not only get better results in skiagraphy or therapy, but protect the patient in prolonged exposures, the healthy tissue being not attacked at all, and we also protect ourselves during such operations, and for the future from the medicolegal standpoint, because there is no "burn" possible. Any tube of a good make works more steadily with this simple arrangement, the spreading of the rays when a tube becomes high in vacuum is avoided, and a certain amount of so called concentration is possible, giving the illumination of only the part exposed. The illumination can be regulated at will. With the help of the protector we shall see the image of the subject on the fluoroscopic screen much sharper and clearer, without any special fluoroscope; the ordinary fluoroscope will do in all cases. In examining the hand or some other thin object with a low vacuum tube, no particular difference is seen at once, but by careful observation, the subject directed right against the central anode focus point will be better illuminated, than at the end of the hemisphere of the x ray action; and in viewing a hip joint with medium high tube, the difference in contrast is very marked, because we are enabled to preclude the diffused rays, or screen them off, so to say, with our different diaphragms and openings technically perfect and accurately measured in the protector itself. In this way, we get only the best rays, and only so much as is absolutely necessary and requisite to give us the desired shadow, the desired illumination of the part exposed in skiagraphy, and the proper results in therapy. The description and directions for the application of the protector, I will reserve, if you allow me, please, for a special communication in the near future.

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Woman's Medical College.—The Woman's Medical College of Pennsylvania held its annual commencement on Wednesday, May 20th.

THE URETERAL PELVIS.

By BYRON ROBINSON, B. S., M. D.,
CHICAGO.

The ureteral pelvis is a membranous triangular or oval pouch occupying mainly the dorsal part of the sinus renalis. It lies dorsally to the larger renal vessels. It is elongated proximodistalward, flattened dorsoventrally, and irregularly oval or triangular. Proximally, it receives the distal orifice of the calices which pour the urine into the pelvis. Distally, it opens into the ureter at the proximal ureteral isthmus—the ureteral neck. The ureteral pelvis is surrounded by a constant solid cellular tissue, both internally and externally to the renal hilum, which is more or less developed according to the individual. It may become so voluminous that it would be considered pathological. Dorsally, the ureteral pelvis is applied to the dorsal abdominal wall. Proximally, the pelvis of the ureter is ventrally in relation with the duodenal loop and the right colon. These parts are adherent to the pelvis. The ureteral pelvis is developed by time. The pelvis and calices have the rôle of a urinary reservoir. The convexity is more pronounced on the ventral than on the dorsal surface. The ureteral pelvis is the location of selection

duodenum is in relation with the right kidney. It covers the ureteral pelvis and perhaps some of the proximal end of the ureter, hence must be accounted for in ureteral surgery. The pelvis is lodged be-

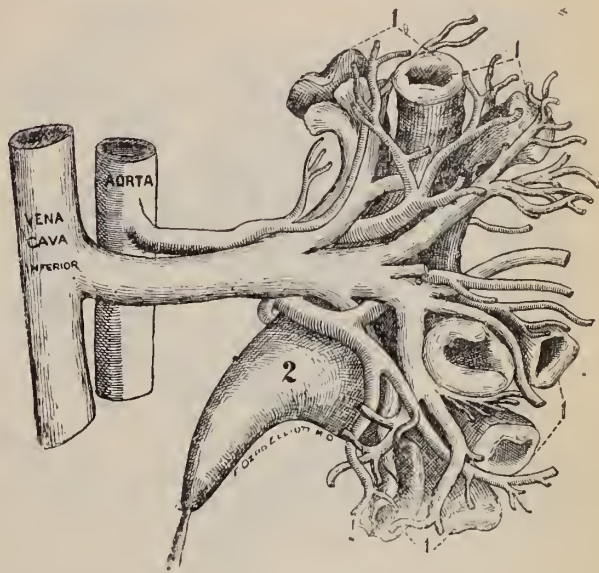


FIG. 2.—A life size paraffin cast of utereal calices (1, 1), ureteral pelvis (2), proximal ureteral isthmus (3), with vascular relations of the ventral ureteral surface. This is a beautiful figure from corrosion anatomy. The finer vessels broke away while washing the specimen. An incision in Hyrtl's exsanguinated renal zone will fall dorsally to the external longitudinal line of the calicular periphery.

tween the distal ends of the calices proximally and the ureteral neck distally, while ventrally lie the larger branches, and dorsally the smaller branches, of the vasa renalia. The pelvis is located partly within and partly without the hilum renale. The right pelvis lies more distalward than the left. If the ureteral pelvis fails, the ureteral calices open outside the sinus renalis directly into the ureter proper, without an intervening funnel-shaped membranous pouch (pelvis). This is rather an anomaly of development.

With some fifty representations of ureteral pelves before me, the majority x ray pictures, the minority paraffin casts of almost all ages, not one is like any other. All the moulds of the same individual differ on the two sides.

THE FORM OF THE PELVIS.

By inspection of the moulds, as the immortal Hyrtl notes, three distinct groups may be observed as to the form of the ureteral pelvis, *e. g.*, first, a voluminous ureteral pouch; second, the dichotomously divided ureter with small or no pelvis; and third, a half ureteral pelvis formed by the proximal or distal major calix. The form of the pelvis is that of an irregular pouch, the apex being located at the proximal ureteral isthmus. The apex, or ureteral neck, may be the narrowest lumen of the ureter. It is cylindrical immediately proximally to the constricted



FIG. 1.—Represents an x ray of 8 ureteral calices. 1, calices; 2, ureteral pelvis; 3, proximal ureteral isthmus (necks). Note the wide variation of shape, number and dimensions of the calices.

for calculi. It is the second urinary reservoir. The distal pole of the kidney sustains the ureteral pelvis; it is, moreover, the original cause of the proximal ureteral isthmus. The vertical portion of the

neck. The base of the pelvis is located at the distal end of the calices and may be an inch and a half long.

The pelvis ureteris is funnel-shaped, bean-formed,



FIG. 3.—Paraffin cast of calices (1, 1), pelvis (2, 2), f proximal isthmus (3, 3), and arteria renalis (RA, y and x). Note spiral in ureter at 3. observe the larger ventral arteries (double) y, y, and the smaller dorsal arteries (double) x, x. The primary renal branches enclose the calices and pelvis in their grasp like two hands. The hooks draw the dorsal primary renal branches from it. Pelvis and calices in order to facilitate the view.

with its larger end directly proximalward, while in the sinus renalis generally the pelvis divides dichotomously into a smaller proximal and larger distal major calix, whence its calices become fastened to the papillæ renales which project from the renal pocket. The pelvis is flattened dorsoventrally. The difference in ureteral pelvis lies in the length of the ureteral calices, *i. e.*, it depends on the bifurcation—slow or fast.

The pelvis presents (a) a dorsal and (b) a ventral face; (c) a lateral and (d) a medial border; (e) a base; and (f) an apex. The ventral ureteral pelvic surface is in intimate contact with large vessels and nerves. Ventrally and dorsally on the pelvis one finds ramifications of the vessels, all bound in dense cellular tissue. The veins lie ventrally, the arteries dorsally.

The dorsal ureteral pelvic surface is practically free from vascular relations—fortunate in ureteral surgery. The ureteral pelvis is separated from the psoas and first lumbar vertebra by the transverse vertebral processes. The proximal convex pelvic border is hidden by an artery and vein. The median distal border of the pelvis lies against the vena cava and right ovarian vein.

The dorsal surface of the ureteral pelvis is more exposed than the ventral. The base of the ureteral pelvis is found at the borders of the hilum renale. The formation of the pelvis is secondary to urinary stasis. The ureteral pelvis was formed at the expense of the ureter. The distal lateral ureteral pelvic border is concave and lies on the median surface of the distal renal pole, united to it by connective tissue. The terminal renal vascular branches,

dorsal and ventral, spread like fans and grasp between their blades the ureteral pelvis and calices. The ureteral surgeon should watch for pelvic anomalies as regards vessels, especially multiple arteries. In case of early fusion of the calices, the pelvic base approaches the renal substance to a degree varying according to the length of the calices. The ureteral pelvis is the most favorable locality in the ureter for surgical intervention, on account of ample walls and lumen.

The distal pelvis is closely applied to the internal surface of the distal kidney pole. It frequently forms a groove in the kidney pole and is bound to it firmly by connective tissue. In this ureterorenal sustaining structure may be observed veins. This fixation of the distal pelvis to the distal pole furnishes grounds for a suspicion of hydronephrosis. The ureter must kink at the neck in nephroptosis. The pelvis is nearer the dorsal than the ventral face of the kidney. The distal kidney pole and the distal pelvis are absolutely bound together, and in any dislocation the ureteral neck may suffer kinking, torsion, compression. Besides, there is already a curve in the pelvis at the distal kidney pole.

When the distal end of the ureteral pelvis lies mainly dorsally to the distal kidney pole, the ureter is more free and less liable to compression in nephroptosis. With distalward movements of the kid-



FIG. 4.—An x ray of 9 ureteral calyces; ureteral pelvises (2) and proximal isthmuses (3). No. L is that of a 25-pound golden-faced baboon. We injected the ureters with red lead and starch. They were x rayed in Dr. Harry Pratt's x ray laboratory, magnified by Dr. William E. Holland and later followed as a drawing model. No. xxxi ventral view with renal vessel also 3, the proximal arterio-ureteral crossing. P presents the proximal arterio-ureteral crossing. No. xxviii shows doubtless some hydronephrosis.

ney the distal pole passes medianward and hence must compress the ureter when it lies fixed in a groove in the distal pole. The pelvis extends dorsally, which forces the pelvic ureter into a curve.

THE TYPICAL TRIANGULAR PELVIC SACCULATION.

The first, prime, and most frequent form is that which consists of a triangular voluminous pouch lying partly internally and partly externally to the hilum renale, and divides mainly into a larger distal major calix and a smaller proximal major calix.

The normal pelvis shows distinct ventral convexity, and dorsally more flatness or concavity. The ventral convexity of the pelvis with the direction of the ureter gives a clue to distinguish the right and left kidney.

The dorsal and ventral surfaces of the pelvis show grooves on the paraffin casts where the primary dorsal and ventral branches of the renal artery course, especially on the ventral surface.

The ampullar form is a special type, and the first degree of ureteral dilatation. Perhaps a normal or dilated pelvis is a form of hydronephrosis. Most frequently the pelvis is reduced to a swelling located at the origin of the ureter.

THE DICHOTOMOUS DIVISION OF THE URETER WITH NO PELVIS OR ONLY AN EXTREMELY DIMINUTIVE ONE.

A second form of the ureteral pelvis is where the ureter divides dichotomously and practically no ureteral pelvis exists, or only a small one. The

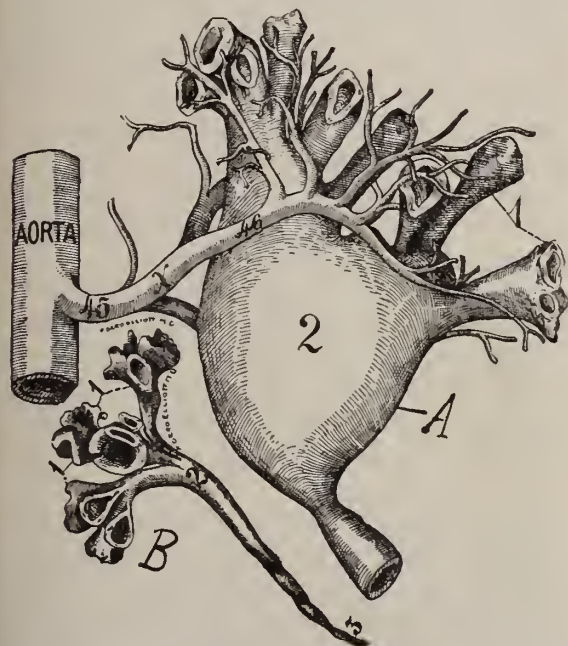


FIG. 5.—Life size paraffin casts of A, adult ureteral pelvis and calices and arteria renalis (45). B, infant of 4 weeks. 1, calices; 2, pelvis and 3 proximal ureteral isthmus. X, or 46 dorsal branch of renal artery. This pelvis was doubtless hydronephrotic. Note the spiral in the infant's ureter (B) at 3. Note how the dorsal ureteral pelvic surface (2) is free from blood vessels. The renal arterial branches at the periphery (Hyrtl's exsanguinated renal zone) do not anastomose but form a vascular line which in renal incision is quite free from hæmorrhage.

dichotomous division of the ureter occurs externally to the hilum renale in a proximal smaller, longer major calix and a distal larger, shorter major calix; each of the dichotomous branches of the ureter is

larger in calibre than the ureter proper. The point of division of the ureter may show no dilatation, hence practically no ureteral pelvis is present. The dichotomous division point of the ureter may pass

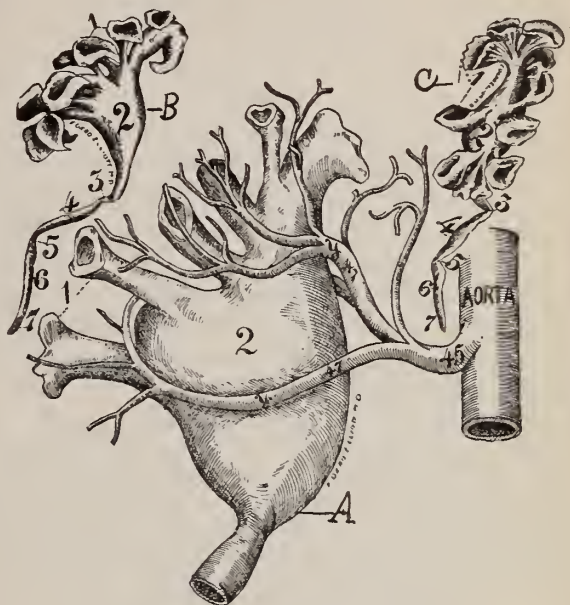


FIG. 6.—Reverse of Fig. 5. A, life sized paraffin casts of adult ureteral calices and pelvis and arteria renalis. Ventral surface showing ventral arterial renal branch (47), 45 arteria renalis. The pelvis shows hydronephrosis. B and C life size paraffin casts of 7 weeks' old infant calices, pelvis and ureter proper. Ventral and internal or medical view of same infant ureter. 1, calices; 2, pelvis; 3, proximal ureteral isthmus; 4, lumbar spindle; 5, middle ureteral isthmus; 6, pelvic spindle; 7, distal ureteral isthmus orificium urinarium vesicæ. Observe how dangerous it would be to incise the ureteral pelvis ventrally as one of the ventral primary branches (y, 47) passes across the ventral surface of the ureteral pelvis.

well distalward, even as far as the bladder, whence the double ureter arises (the double ureter arose thrice in 600 post mortem abdominal inspections). Should the ureter divide dichotomously at the hilum renale or immediately after entering the sinus renalis, such division should be viewed as calices majores. Whether this dichotomous division of the ureter indicates a reversion to the multiple-lobed kidney of lower animals I am unable to say; however, injections of infant kidneys furnish no clue. If the calices are very long or become emitted prematurely, the pelvis practically disappears. The frequency of the double ureter favors this idea. The ramified rudimentary form of the pelvis is the normal state.

THE HALF URETERAL PELVIS FORMED BY THE PROXIMAL OR DISTAL MAJOR CALIX.

A third form of ureteral pelvis might be considered as a half pelvis. It may happen that only the distal major calix of a dichotomously divided ureter enters into the formation of a half ureteral pelvis. In such a case the proximal major calix passes directly into the ureter, and the pole of the kidney contributing to form the half pelvis is the larger.

Also it may happen that the proximal major calix only enters into the formation of the half ureteral

pelvis. In such cases the distal major calix enters directly into the ureter.

THE DIMENSIONS OF THE PELVIS.

The pelvic dimensions are extremely variable. The average measurements of this irregular triangular sac are the following: The base, or transverse diameter, may be from $1\frac{1}{2}$ inches to 3 inches in length, the average being $1\frac{1}{2}$ inches. Its apex, the neck or proximal ureteral isthmus, is generally about $\frac{1}{10}$ of an inch in diameter. The average of the dorsoventral diameter is $\frac{3}{4}$ of an inch, which is over five times the lumen of the apex. The longitudinal diameter will average perhaps $1\frac{3}{4}$ inches. Its capacity is from one to five teaspoonfuls, average three drachms. The figures are the average of twelve paraffin casts.

Two of the paraffin casts here presented are perhaps hydronephrotic; however, at the autopsy no obstruction could be found in the tractus urinarius, yet the obstruction might have disappeared. This paraffin pelvic cast would hold about six drachms.

BILATERAL PELVIC ASYMMETRY.

Bilateral pelvic symmetry arises rarely. The casts demonstrate at a glance the non-bilateral pelvic symmetry. I have never observed bilateral pelvic symmetry. Practically, the typical triangular ureteral pouch may fail on one side, being a dichotomous division of the ureter, while the other side presents a typical triangular pelvic sacculation. Infants appear to present more variation in pelvic symmetry than adults.

Similarly to all other developments of the Wolfian body, the form and size of the ureteral pelvis show marked bilateral asymmetry. However, physiologically, these data are unimportant.

DIVERTICULUM PELVIS.

I am aware of no literature on ureteral pelvic diverticula except a report by Hyrtl of two cases. My collection of some fifty ureteral pelvises presents one case occurring on the ventral surface of a paraffin cast. Its size is that of a grape or hazel nut; its form is that of a sphere. The blood vessels pass proximally to it. The acid, in corroding the renal structures, also corroded the object which was lodged in the pelvic diverticulum, leaving no trace. This object was no doubt a renal calculus occupying the pelvic diverticulum. The calculus was smooth, as the cavity in the paraffin was perfectly smooth. The pelvic diverticulum reported and demonstrated from a cast of Hyrtl's shows that it is surrounded by a vascular ring, indicating that it was an old one—congenital. This vascular ring is a curiosity, as the branches of the arteria renalis do not anastomose with each other—it is an anomaly.

RELATIONS OF VESSELS, NERVES, AND LYMPHATICS TO THE PELVIS.

The relations of the renal vessels, nerves, and lymphatics to the ureteral pelvis are sufficiently constant to be located. The most part of the veins are located on the ventral surface of the pelvis, in which relation the vein stands ventrally while the artery lies dorsally to it, and both are accompanied by nerves and lymphatics. The renal artery emits a large ventral branch, which lies mainly on the ventral surface of the ureteral pelvis. This divides into some five branches, which course generally parallel with the calices. The smaller dorsal renal branch passes more proximalward and courses along the distal ends of the calices on the proximal border of the ureteral pelvis. The dorsal branches also course along the dorsal border of the hilum renale. The renal branches, forming themselves into the shape of a double-bladed fan on the ventral and dorsal surface of the pelvis and calices, make a kind of arterial arcade, open distalward for the pelvis, and proximalward for the calices. These arterial arcades envelop the pelvis and calices ventrally and dorsally like two hands. It is fortunate, however, for renal surgery that vessels do not cover the distal dorsal surface of the ureteral pelvis. The branches of the vein at its origin converge in the same manner as those of the artery on the ventral face of the pelvis. The right renal vein is short as well as the left renal artery. The right renal vein is so short that the cava borders on the ureteral pelvis, which is significant in renal surgery, as adhesions may exist, with consequent chances of laceration of the vena cava. The ventral and dorsal branches of the arteria renalis divide into some five branches about the calices, and terminate a short distance externally, laterally to the periphery of the calices (see paraffin casts). The paraffin casts of the renal vessels show an exact double renal circulation; the periphery of the ventral and dorsal renal arterial branches approach almost in contact but do not anastomose.

Hyrtl demonstrated this anatomical fact over thirty years ago, and he wittily remarked that it kept him busy making specimen casts of the kidney for foreign museums. To incise the ureteral calices and ureteral pelvis with the scalpel, we should make the renal cortical incision at the peripheral junction of the dorsal and ventral renal branches, *i. e.*, in the oligæmic renal zone of Hyrtl.

All renal corrosive anatomy demonstrates that the branches of the arteria renalis do not anastomose at their periphery. Arterial branches to a parenchyma—lungs, liver, spleen, kidney, mamma, and all glands—do not anastomose, with the exception of those of the uterus.

The end arteries of the tractus genitalis anastomose solidly with each other on the opposite side, and especially in the central longitudinal oligæmic uterine zone.

VASA NUTRIENTIA PELVIS.

The pelvic ureter lies between the ventral and dorsal branches of the arteria renalis, as in a bowl. From the dorsal and ventral branches of the arteria renalis arise small arterial vessels which pass to the wall of the ureteral pelvis and calices. The arteriæ nutrientes pelvis have nothing to do with renal parenchyma or renal secretion, and do not form coiled vessels as in Bowman's capsule. Their function is to nourish the ureteral pelvic and calicular wall. The arteriæ nutrientes pelvis end at the junction of the calicular fornices and papillæ renales. These vessels surround the proximal end of the calix as with a circular vascular zone. To secure a view of the arteriæ nutrientes pelvis, the paraffin should be colored red in the vessels, while the paraffin in the ureter should be white. Also weak acid should be used to corrode and gentle washing should be employed on the specimen. The nerves and lymphatics course with the blood vessels. Two anomalies of double pelvis or horseshoe kidney arose during the use of the x ray or corrosive anatomy. Wounds of the ureteral pelvis heal slower than those of the calices.

ECLAMPSIA—ITS PREVENTION AND TREATMENT.*

By EDWARD A. AYERS, M. D.,
NEW YORK.

Inasmuch as obstetrical specialists cannot offer the general practitioner a definite ætiology for eclampsia or agree as to the treatment, it would seem wisest for me to undertake the formulation of a practical working plan in actual practice, if I hope to secure useful results for the members of this society.

Few emergencies lay their heavy burdens of responsibility upon the shoulders of the general practitioner and obstetric specialist with greater weight than cases of eclampsia. The vital centres involved, the rapidity of transition from light to grave and desperate condition, and the variety of therapeutic and mechanical resource possible and needful, call for three prominent factors in the make-up of a physician's mentality. These three are: Readiness of understanding of the fundamental features of the disease; of knowledge of the remedial measures to be applied; and of judgment in balancing the fight for precedence between anticonvulsivants

and eliminatives. There is but one point on which we are all in harmony, and yet that point is not a demonstrated fact, but an hypothesis. The essential nature of eclampsia is due to the presence in the blood of morbid material that should be eliminated; which, if not eliminated, may excite the convulsions that constitute eclampsia.

We are not agreed as to whether the faulty organ is the liver, kidneys, bowel, placenta, or thyroid gland, or several of these, or whether germs are involved. Nor are we agreed as to the values of laboratory tests and clinical signs in giving warning of threatened attacks. The points of attack by investigators have shifted, but the siege continues. Albuminuria, head pressure in the inlet, non-elimination of urea, splanchnic nerve innervation, loss of control of metabolism by the thyroid gland, production of toxins by the placenta acting as a gland, etc., have all been persistently investigated, but it is not desirable to consider them now. While there is much variation in opinion, without actual opposition, as to what can be accomplished in preventing attacks, it may be considered conservative to say, that we all believe that a large majority of cases can be prevented by care in discovering certain conditions in pregnancy and promptness in applying known remedies for their removal.

The Prevention of Eclampsia.—Not knowing which one or more of the causes named above is the factor, it is best to consider all of them to blame, and we should endeavor to keep our pregnant patients protected from all. Personally, I believe that no one of them is often the cause. The first advice to a pregnant woman should be: to sustain constant normal action of the bowels and proper diet. Keeping the bowels properly emptied not only sustains the eliminative function, but permits the uterus gradually to occupy abdominal space with less interference to the daily work of the kidneys, ureters, and heart. Cascara, either alone as the fluid extract, or in tablet with aloin and podophyllin, is very satisfactory; and this should be varied with the use of calomel once a week, more surely to keep the liver in proper condition. Diet must vary according to each case. The rule for every pregnant woman should be, to be regular in meal hours, moderate in the use of meats, exclusion of the more indigestible vegetables, and of all wines, and avoidance of excessive quantity at any time.

The next advice to our patients should be, to take a measure once a week of the entire urine passed in twenty-four hours, and, by having learned what is its normal and accustomed amount, be able to inform the physician whenever the amount falls below normal. The special value of this is that it is practical. The greater number of pregnants never have

* Read before the Eastern Medical Society, April 10, 1903.

their urine noted in any way, notwithstanding all that has been said about it. Some women will develop eclampsia without having any reduction in urinary excretion, or without showing any urinary abnormality, but such are very exceptional; and some have marked albuminuria, deficient urea, etc., but no eclampsia; but to watch the urine is a safe rule, and leads to detection of a majority of cases.

I have never lost faith in the view, that increased abdominal pressure from the growing uterus has much to do with the development of eclampsia. This pressure is greater in primiparæ, the healthier class, than in multiparæ, and eclampsia is much more frequent in primiparæ. In all cases, when I examine pregnant, I consider this pressure. Is the abdominal wall tense, the foetal head held firmly in the inlet and with little ability to rise when pressed upward by the fingers in the vagina? Are the lower limbs or vulva œdematous or varicose? If so, I aim to keep the bowels empty, and have patients follow the rule of short periods of time on their feet and long rests on the back and side. Better ten five minute walks a day with intervals of hourly rests, than one walk of fifty minutes.

As regards the urine, I suggest this rule: Whenever the amount secreted or excreted, or of urea excreted, falls below normal, or albumin or casts are present, treat the patient by diet, laxative and diuretic to restore to normal the urinary function; and if moderate effort does not succeed, exercise diet with active bowel and kidney stimulation will sometimes cause death of the foetus, excite premature labor, or greatly weaken the mother; and these strenuous results may not be called for. If, with the urinary condition, are associated headaches, eye disturbances, a furred tongue, cold clammy skin, and an irritable pulse, we should not feel limited in the extent to which we carry preventive measures. The indications for the induction of labor should be determined by a specialist.

The application of the newer theory of the relation of the thyroid gland to eclampsia promises unusual difficulties. If the theory is correct, that the special function of this gland is to assist the metabolism of nitrogenous substances by the secretion of thyroiodinin in such a way that a deficiency of thyroiodinin causes a check in the formation of urea just when its products are very toxic, then we have yet to learn in what class of cases the administration of thyroid extract is indicated, or we shall be obliged to give it in all pregnancies. This newer subject of the thyroid in its relation to eclampsia is of great interest. At present I can only suggest that it would be well to try the administration of thyroid extract in threatening cases, particularly when our older methods fail. Most cases of

eclampsia develop, not through ignorance of physicians in prophylaxis, but because both patient and doctor are careless and neglectful.

The Treatment of Eclampsia.—So far as our knowledge goes to-day, we must approach the treatment of cases of eclampsia on the assumption that the disease is excited by the presence of toxins in the blood to an abnormal degree; and, that it is the convulsions which kill, if fatal results ensue. We see, at once, the consequent fundamental difficulty involved in the treatment. To check the convulsions by obtunding remedies, leaving the toxins in the blood, is only to hold the death threat under temporary check; while, to ignore anticonvulsives and labor for elimination only, is, perhaps, to permit coma from convulsions to develop before the poison is removed. It is readily seen, therefore, that the best treatment of eclampsia is a matter not of rule, but of judgment, in every case. Our ideal aim in all emergencies is ever to keep cool-headed and not needlessly to sacrifice a valuable part, nor yet to risk the life that comes first in an unwise effort to preserve everything.

I believe the following to be the best general plan to pursue in the treatment of eclampsia, whenever it is feasible: To secure such degree of elimination of toxins promptly as will put a temporary check upon the convulsions, and then, with more time at our disposal, to test whether we can remove the evidence of insufficient elimination by usual methods, and so, if successful, permit the pregnancy to go to term. Such a result is ideal, it sacrifices nothing. It may also be the safer. Many cases of eclampsia are the product of a very temporary condition of the emunctories. The women have over-eaten or overworked or have been exposed to cold and become chilled. If, in an attack, before the convulsions have produced much cerebral hyperæmia and asphyxiation of the blood, a free catharsis can be secured, the convulsions may entirely cease. After this, with the warning impressed, the danger of a second attack can be altogether removed by care, and the pregnancy go to its proper destiny, the birth of a living child. If the attack has already killed the foetus, then labor can be induced in a gentle way after the toxic condition has been removed.

A plan of treatment is followed by many physicians which gives this ideal result no chance to ensue. The convulsions are first attacked and removal of the uterine contents at once undertaken. It is not alone because I would seek to save the life of the child that I advocate what I have termed the ideal treatment, but because it may be the safer and better for the mother. If the patient has had only one or two convulsions, and that without much impairment of her various functions, we can often stop these

convulsions by prompt eliminative treatment; whereas, if we greatly blunt the nervous system with narcotics, we lessen the response to elimination and render it a failure, unless we add immediate delivery, and perhaps, blood-letting. Likewise, if we wish to put a temporary stop to the convulsions by elimination mostly, and then undertake delivery of the child, this latter effort may be such an irritant as to offset the anticonvulsive effect of elimination, and, so permit the convulsions to continue to a point where their consideration is supreme. While the number of cases in which this plan of treatment may be advisable is small, it should always be followed when it seems applicable. If the effect which the convulsions have had (it is the effect and not their number which we should consider) is not marked, the mind being clear, the pulse under 100, and the convulsions not occurring oftener than every hour to two hours, I favor immediately giving a saline cathartic by the mouth and a high saline solution in the bowel. The latter will not only favor an immediate emptying of the lower bowel and stimulate peristalsis, but will excite some sweating and diuresis. Hot packs, water-bags, wet blankets and sheets must be used with reserve. They can be so used as to excite convulsions, or, later, assist profound heart depression. If the case presents the highly nervous type, restlessness, tossing, and mental activity, I favor the administration of twenty to thirty grains of chloral *per rectum*, seeking, not narcosis, but removal of nerve tension. Nitroglycerin, $\frac{1}{50}$ of a grain, should be given at the start, and repeated as needed.

If free catharsis is secured and the secretion of urine is not suppressed, and the frequency or severity of the convulsions is lessening within from an hour to two hours, I would not touch the uterus or further administer narcotics. Oxygen and injection of saline infusion into the subcutaneous tissue are indicated, the first to antagonize the degree of asphyxiation caused by the convulsions, and the second to further elimination. If, following this treatment, the attack ceases, eliminative treatment should be continued with lessening severity for one or two days, the diet being reduced to milk alone. Numerous examinations of the urine should be made, and judgment passed whether the kidneys are approaching normal function or not. If not, then labor should be induced by use of the bougie and not by rapid dilatation.

Value of the Saline Solution.—The saline solution is one of the most valuable aids we possess in obstetrics, particularly in hæmorrhage. Its value in eclampsia cases is likewise very good, but its application is quite distinct in purpose, and requires far more care than in hæmorrhage. I question

whether it would not be better, in most cases, to refrain from giving it by direct infusion into a vein, unless preceded by blood-letting. During convulsions the heart is laboring violently to empty its blood into the aorta and pulmonary artery, but is largely prevented by the respiratory spasm. Increase of the blood volume by venous infusion adds to the strain until its transudation from the vessels has occurred. But by this time grave weakening of the heart and œdema of the lungs may have developed.

I saw a patient die rather suddenly from œdema of the lungs and heart failure while receiving a direct infusion in the cephalic vein. A few minutes previously all her symptoms were improving. In cases of asphyxia livida, blood-letting is good, and then direct saline infusion is doubly useful in sustaining volume and furthering toxine elimination. In other cases the injection of hot saline high in the bowel meets many cases and is quickly administered. If unretainable, then the subcutaneous method is to be used; and, likewise, its direct injection into the peritoneal cavity can be applied.

I am inclined to believe that as many patients in eclampsia die from exhaustion of the heart as from coma.

Control of the Convulsions.—It seems to be impossible, after making an extensive study of the literature on eclampsia, for one to select any one anticonvulsive as giving distinctly better results than others. Morphine, chloral, chloroform, and veratrum viride have been used most, and each has many able advocates. I have never used morphine, being prejudiced against it by the view that it checks elimination. The arguments of Stroganoff (*Monatsschrift für Geburtshilfe und Gynäkologie*, 1900, Bd. xii, Hft. 4), regarding chloroform seem strong, that while it is at times necessary, because of its prompt effect under inhalation, it should not be administered just before and during a seizure, because not only is it late in checking a particular convulsion, but it interferes with such oxygenation as the patient may obtain through natural respiration. If morphine is used it should be in patients who are in labor and about to be delivered. Chloral, given by rectal injection, has been very satisfactory. Its greatest danger lies in its effect on the heart, which may be more severely depressed than the brain. If we remember that its first effect is upon the brain, and endeavor accordingly to give no more than brain sedation requires, we can feel safer in its use. Veratrum viride has a very large following, and is, beyond question, of great value in cases showing high tension of the vasomotor system. It can be given hypodermically, the dosage being measured by its

effect on the pulse. Marked variations in the amount required are sometimes due to deterioration in the sample used. I recall one case in which I administered $1\frac{1}{2}$ drachm of the fluid extract without effect, when 5 minims of a fresh supply promptly reduced the pulse. I should like to see some experiments made in the administration of the individual alkaloids of veratrum—jervine and veratroidine—as the results may more closely specify what particular part of this compound is the agent we depend upon.

It will not be surprising to see veratrum supplanted by thyroid extract in the near future. As far as physiologists have gone in the study of this gland, the data certainly point to an intimate and important relation in its work to eclamptic conditions. It is a vasomotor depressant, just as the suprarenals are vasocontractors. The removal of the thyroid in animals produces a clinical picture closely similar to eclampsia; and one case is reported of a pregnant cat, whose thyroid had been removed three years before, developing convulsions during labor, which ceased following the intramuscular injection of thyroid extract. The physiological effect of thyroid secretion upon the brain and nervous system is that of a stimulant, and leads to irritation. In this respect its use in eclampsia would seem to be contraindicated. It stimulates nitrogenous excretion, and, in this respect seems indicated in eclampsia. We shall await further developments in this line with great interest.

In the treatment of eclampsia, it is not only useless to try to select a particular anticonvulsive and always use it, but it is an evidence of ignorance to do so; for there is no disease that calls more for special selection according to the type than eclampsia.

When the Eclamptic Patient is in Labor.—Eclampsia is most frequently found associated with active labor. If, in our judgment, such labor is going to continue whether we can check the convulsions or not, it is best to hasten delivery. If the mental condition of the patient is active and the nervous system apt to respond to the irritations of cervical manipulation, and we propose to assist dilatation, it is best to employ chloroform narcosis and dilate with judicious rapidity. If the condition of the cervix permits the use of the fingers, they are best. If not, I prefer the Barnes's bag. I never have followed, and do not believe I ever shall follow, Dührssen's method of cutting the cervix. Generally employed, this method would kill as many women by uterine rupture as it might save from eclampsia. Nor do I favor Cæsarean section. Theoretically it appeals, because it gives blood-letting and quick delivery; but the statistics do not

justify it, except upon a dead or dying mother. I must correct my statement regarding Dührssen's method. I performed a vaginal Cæsarean section, in 1886, upon a patient who had just died when I arrived at her tenement home, there being no time to secure the consent of her much excited relatives to make an abdominal section. The mother died from heart failure in the first stage of labor. There was no eclampsia.

My personal experience with eclampsia is limited to forty-six cases, of which there were four deaths; a better mortality per cent. than I should hope to secure in a second series, and, therefore, attributable to some extent to good luck. Several patients recovered whom I expected to die; and one died after both her physician and I considered her fairly out of danger. It is my belief that I have prevented eclampsia in fully a score of cases, though one can never be certain how to classify such cases. I have employed nitroglycerin in all cases; chloral, chloroform, and veratrum viride variously according to indications; dry and moist hot packs; saline infusion and injection; and various methods of cervical dilatation.

Concluding from my experience in all its phases, I wish to emphasize two thoughts as cardinal principles in our relations to eclampsia: First, that we can prevent the great majority of cases by careful application of the knowledge we possess; and, second, that in the treatment of cases each one must be a law unto itself.

127 WEST FIFTY-EIGHTH STREET.

ATONY OF THE DUODENUM DIAGNOSTICATED AND CORROBORATED BY OPERATION.

By MARK I. KNAPP, M. D.,
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I should like to report the following interesting case:

One night, past midnight, in May, 1901, I was called to see a lady, about forty-four years of age. I found her suffering very greatly from intense pain in the abdomen, spasms, and great distention of the bowels. Tense as was the abdomen I could nevertheless feel some resistance to the left of the umbilicus. This resistance ran somewhat downward. A large enema relieved the patient. However, she insisted on getting a hypodermic of morphine, as she had learned from past experiences that this was the only effective means to quiet her. Before leaving, I advised her to come and see me in the morning, fasting, ready for a test breakfast. She was then in a condition to smile at my suggestion, remarking that such attacks would usually keep her confined to bed for several days. The pa-

tient did come the following morning, to all appearances hale and hearty, and joked over her last night's experience. One hour after the test breakfast I aspirated some sanguinolent contents and therefore omitted the chemical tests. Another palpation of the patient's abdomen convinced me of the presence of the resistance in the location stated. I gave the patient some medicine and dietetic instructions and she felt well again for a few days, until, emboldened by such well feeling, she again partook of food forbidden. Another attack followed. She again consulted me and was again relieved. At one of the consultations I was brought in contact with two of her sisters, one of them in the theatrical business, a know-it-all. This lady especially insisted on the correctness of her diagnosis of cancer deriving her inspired knowledge from the fact that a friend of hers, an actor, had the same identical symptoms and died of cancer. This diagnosis was uttered and persisted in in the very presence of the patient, presumably for the good moral and psychical effect upon the suffering sister. As my connection with the patient in question was of but very recent origin, my own opinion, against cancer, could not possibly hold against the weighty knowledge of my fair opponents (the expression "fair" must be taken here only in a chivalric sense). The patient herself was inclined to believe rather her sister, although my prognosis was very much the brighter. After a few more days the patient concluded to go to the Presbyterian Hospital. Here, she came under the treatment of Professor Northrup. At the hospital the patient was several times examined, also in narcosis and with the x rays. But no other conclusion was reached than that there was a tumor present.

Visiting my patient, socially, in her room one afternoon, she told me that Professor Northrup would like to speak to me. I then met Professor Northrup and the following was the conversation:

"What is your diagnosis in this case, Dr. Knapp?"

"Atony of the duodenum."

"Due to what?"

"I don't know as yet, as I have not had sufficient chances to examine her."

"Have you felt anything?"

"Yes."

"What was it you felt?"

"A resistance."

"What is it?"

"It seems to be nothing else than a chronic cellular infiltration due to the oft recurring attacks."

"Where is it?"

"Not in the stomach, but not very far away from it."

"Is it cancer?"

"No."

"Why not?"

"Because I have learned from my master, Ewald, and I fully concur with him, that cancer, at least of the alimentary canal, does not give symptoms until

it begins to give symptoms; but when it begins to give symptoms there is no letting up of it. Here, the patient gets an attack, feels very bad, is treated, gets well after such treatment, until a mistake in her diet again brings her down with another attack; and so it goes on. If we had here a case of ulcerating cancer—and cancer of the alimentary canal does not give any symptoms until there is ulceration—the pain would never come at intervals, but would be constant."

Such was my opinion. The patient was subsequently transferred from the medical department to that of surgery and came under the care of Dr. McCosh.

I will now give the history of this very interesting case, as it appears in the printed reports of the Presbyterian Hospital, vol, v, January, 1902, p. 59:

A RARE TUMOR OF THE JEJUNUM—EXCISION—RECOVERY.

Mrs. A., aged forty-three; family history and personal habits good. No pregnancies. At the age of eighteen was confined to bed for several weeks on account of some intestinal trouble, which caused general abdominal pain, cramplike in character, accompanied by more or less abdominal distention and marked jaundice.

Her present illness began three years ago. During these years she has been subject to attacks of severe abdominal pain which she described as cramplike, often very sharp and cutting, and while the pain was general it was more severe on the left side of the abdomen. At first there was an interval of several weeks between the attacks, but their frequency has gradually increased. Between the attacks she was well, though troubled with belching of gas and rumbling of wind in the bowels. Ordinarily her bowels were fairly regular. The pain was more apt to occur when her bowels were constipated. During the attacks she often vomited. The attacks were more apt to occur soon after eating a hearty meal. On one occasion for a period of three weeks there was a slight jaundice.

For six months prior to her entrance into the hospital the frequency of the attacks had much increased, and recently they were of almost daily occurrence. There were no chills. She had never noticed blood in her stools. She had lost twenty pounds in weight in the last year. From June 10 to 18, 1901, she was practically confined to bed on account of the pain. She then came to the hospital, and from June 18th to 26th she remained under the care of Dr. Northrup in the medical division. During this week, from one to three severe attacks occurred daily, their duration being from a few minutes to one or two hours. The pain was severe, and during the attack there was generally increased abdominal distention. The stools were semisolid and fluid. Cathartics were needed. Diet had no effect on the pain. On physical examination the abdomen was found to be persistently more or less distended by gas in the intestines, and often its rumbling could be distinctly heard. Below and to

the left of the umbilicus an indistinct mass could be felt, and by combined abdominal and vaginal palpation it could be more distinctly mapped out. Its exact origin could not be determined, neither could its nature. It was evident, however, that it was the cause of partial obstruction of the bowels. A malignant growth was suspected, but under any circumstances the case was evidently one for a laparotomy. . . . On June 28th under chloroform anæsthesia, a median incision was made. The small intestines were found in part collapsed and in part distended. Just distal to a much distended coil was found a fusiform tumor involving all the coats of the small intestine. The mass involved four or five inches of the gut, and at its thickest point was about two inches and a half in diameter. It appeared nearly solid, the intestinal wall varying in thickness from half an inch to one inch. The tumor felt more or less nodular, and was hard throughout. In the mesentery opposite the tumor were several enlarged lymphatic glands, one being as large as a pigeon's egg. These glands extended down to the very base of the mesentery. Fifteen inches of the intestine, with the tumor in its middle, was excised. . . . During her convalescence no unfavorable symptoms developed, with the exception of attacks of colic due to indiscretion in diet. Since the operation the patient has gained thirty pounds in weight. She can now eat everything, and digestion is undisturbed. At the present time, nine months after the operation, she enjoys the best of health. At the time of the operation the tumor was regarded as a malignant one. The calibre of the intestine was almost occluded, the stricture at one point being so tight that a full sized surgical probe passed through it with difficulty. . . . From the appearance of the mucous folds it is evidently a part of the jejunum. At the centre of the specimen there is a great thickening and induration of the wall and constriction of the lumen, giving the appearance of a cancerous lesion. . . . The most noticeable change seen with the microscope is the accumulation of small cells. . . . *Much surprise was felt at the entire absence of cancerous lesions.* . . . the character of the small cells is rather that of inflammatory infiltration. There is certainly nothing found disproving this latter explanation. . . . Many of these cases have clinically, as well as on gross examination of the lesion, at first seemed to be cancerous.

We see, then, that my diagnosis was absolutely correct. There was atony of the duodenum. This was caused by the constricting infiltration of the jejunum. The lesion was not within the stomach but was not very far away from it; it was in the jejunum. Nor was the lesion cancer. Here we have a patient of middle age with a very palpable tumor, a history of long standing dyspepsia, emaciation and severe pain. But, nevertheless, as the subsequent pathological examination of the resected piece of jejunum convinced, the tumor was not one of cancer. The absolute and subsequently corroborated diagnosis would raise the question as to the

treatment. Why, of course, as the treatment here proved its efficiency, operation surely is indicated. True, miraculous disintegration and absorption might occur, and so the patient be cured "spontaneously." But then it is always a case of the "sword of Damocles" hanging all the time over the patient's head. There may at any time be complete occlusion before disintegration has begun. There is no question but that such reasoning might enter into the determination of what is to be done. But where we can easily avail ourselves of the services of a skilful surgeon, extirpation of the tumor should be first choice.

This case should teach us that a tumor in a middle aged person, coexistent with pain and emaciation, need not necessarily be cancer. The pain in this case was evidently not due to the tumor, but to distention and colic produced by the same agencies as usually do produce colics. As soon as the bowel was cleared of offensive material the patient felt fully well. As my only reason for declaring myself positively against cancer was based solely upon the intermittence of the pain, this has proved, certainly at least in this case, a valuable means for differential diagnosis.

136 EAST SEVENTY-EIGHTH STREET.

A FEW DIFFERENTIAL DIAGNOSES IN CONNECTION WITH THE EXANTHEMATA.

By WILLIAM L. SOMERSET, M. D.,
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The exanthemata, idiopathic skin diseases, syphilis, ptomaine poisoning, and many drugs—ingested or applied locally—produce conditions of the skin often difficult to distinguish. The corroborative evidence of history and of symptoms is often indispensable. The eruption of German measles may simulate that of either measles or scarlet fever. Varicella may resemble variola with perplexing exactness. Quinine may produce either a scarlatiform erythema or a purpura very similar to the eruption of either a malignant scarlatina or variola. Belladonna or —*par excellence*—copaiba may cause an erythema surprisingly morbilliform. Syphilis can imitate anything, but it is more frequently mistaken for diphtheria than for any of the exanthemata. In the following cases, the attempt has been made rather to confine the description to what was of importance in the diagnosis, than to give a complete clinical history. In each of the cases given, there existed, at some time in its history, a justifiable difference of opinion concerning the diagnosis.

CASE I.—The patient, a young woman, presented an intense scarlatiniform erythema over all the skin surface; face red and congested; eyelids swollen and eyeballs injected; tongue and throat negative. She was rational and "looked very sick." There was no distinguishable dermatitis. She had suffered from intense headache and abdominal pains for two days. She was seen when the eruption was twelve hours old, and died less than twenty-four hours later—the eruption becoming, meantime, slightly darker hued.

The appearance of the face, the negative appearance of the tongue and throat, the absence of the miliary vesicles or pustules of a dermatitis, the clinical condition—in *extremis* early in the first twenty-four hours of the eruption—were against scarlet fever. The patient had malignant variola. In these malignant, or fulminating, cases, the patients may live forty-eight, or, rarely, seventy-two hours. In this event the eruption becomes hæmorrhagic. There will be no papular stage and the condition may be confounded with malignant scarlet fever. The search for vesicles—filled with blood—must be most painstaking. The disintegration of tissue is, however, so rapid in these cases of variola, that the patient usually dies from hæmorrhages through the mucous membranes before the skin eruption loses its scarlatiniform appearance.

CASE II.—The patient, a young woman, was sent into the hospital as a suspect of scarlet fever. She presented a scarlatiniform eruption, generally distributed and intense—an erythema plus dermatitis; temperature 100° F.; pulse 90; coated tongue and normal throat. With this eruption, the throat and tongue should have been affected, the temperature higher, the pulse faster. Scarlet fever, however, may present as great irregularities as these, though, probably, not all of them in the same case. At all events, she was kept under observation. The next morning, the eruption was entirely gone, the temperature normal. The patient was discharged as "no case." She was returned that afternoon—a suspect of scarlet fever and repeated her previous routine. She was desquamating at the time of her second discharge.

Such a case of erythema scarlatiniforme may well require isolation for twenty-four hours. Regarded as scarlet fever, it will surely present irregularities, but the resemblances may sufficiently closely balance to justify the delay.

CASE III.—The patient, a girl aged eight years, was seen on the second day of the eruption. The face—including the eyelids—was congested and swollen; the eyes injected and "watery." A dark-red, confluent erythema covered the entire skin surface. The congestion was so intense that the skin was distinctly uneven—giving to the touch the effect of firm papules. There was a severe bronchitis. This patient, of course, had measles. The resemblance to an oncoming malignant variola was, how-

ever, by no means remote. The appearance of the face was unpleasantly similar to variola, and a smallpox patient may have bronchitis. The increased lacrymal discharge made for measles, as well as the dark hue of the eruption, the initial rash of malignant variola being scarlatinal in color. This patient both looked and felt sick, but was by no means in such grievous state as the patient in Case I, seen approximately twenty-four hours earlier in its history. The pseudopapules disappear if the skin is put on the stretch.

CASE IV.—The patient, a girl aged six years, ill in bed for a week with a severe bronchitis, or possibly bronchopneumonia, presented a fairly well-marked and generally distributed scarlatiniform eruption, confluent and uniform in intensity, with coated tongue and congested throat, and enlarged posterior cervical glands—glands not painful and freely movable under the skin. There was no conjunctivitis. The rash—noticed on the face the day before—was thought, at the time, to be due to measles; later, to scarlet fever. The patient was quite ill, but the new invasion had no marked effect on temperature or clinical condition. She had vomited several times, but had been taking "cough mixtures." The child had German measles—well marked, in fact, confluent.

The eruption of German measles is essentially macular, and only by confluence comes to resemble that of scarlatina. When the eruption is less profuse and the individual macules retain their identity, the resemblance is rather to measles; but the crescentic arrangement, formed by the partial coalescence of measles macules—crescents scalloped on the concave edge, larger scallops toward the middle of the crescent—is absent. German measles differs from measles, further, in giving a leucocytosis. In the more marked cases—*i. e.*, with a more profuse eruption, not necessarily more severe clinically—the resemblance is rather to scarlet fever, and, without any doubt, German measles and mild scarlatina may resemble each other very closely. There is no one symptom on which we may rely. German measles never gives a "strawberry" tongue; scarlet fever does not always give it. In German measles, the postcervical glands are often enlarged—by no means invariably. Pharyngitis is common to both diseases; conjunctivitis is exceptional in German measles; either may give a flushed face. Taken as a whole, however, the German measles case will have peculiarities that will not fit into our conception of scarlet fever—varied though that be. The temperature, pulse, and clinical condition will not "match" the rash in scarlatinal proportion. A German measles eruption, furthermore, is very likely to be patchy—intense over one area and nearly, or entirely, absent over an area close by. German measles is more likely to be mistaken for scarlet fever than is scarlet fever for German measles.

CASE V.—The patient, a young woman, presented, on first inspection, an eruption consisting of macules and papules, indiscriminate and widespread in distribution, of three or four days' duration. The lesions were most numerous on head, face, neck, and trunk, diminishing rapidly in numbers along the extremities. No lesion had gone on to vesiculation. Many of them had completed their development and were drying down; this process being slightly further advanced on the face than elsewhere. Lesions were all superficial, and could by no means be described as "shotty." Opportunity was afforded for seeing this case for several days. New macules appeared, became papules and dried down. None of the lesions ruptured, or broke down. No scabs presented a pit, or seed. The sites of some of the face lesions presented—later—slight seborrhoeal exudate and slight epithelial hypertrophy. There would be no permanent scars. The clinical condition had no bearing on the case. There was a vaccination scar of long standing.

This patient had variola. Yet had it been a contest for points—and each point to count the same—varicella had won the decision. But the points did not count the same.

Varicella has not been subjected to the influence of vaccination, both hereditary and immediate, and in varicella the abundance of the eruption varies directly with the degree of its development (there are, probably, second attacks of varicella that invalidate, or rather prove by exception, this remark. I have not chanced to see them). Variola, on the other hand, may begin with lesions about as abundant as is possible without confluence, yet abort at the popular stage. Variola, when modified, may present itself in forms so divergent from variola vera, that it deserves to be called varioloid, or some other name, were it not that the mildest case may give rise to the most malignant infection in others. I will mention, in this connection, an epidemic in a country village. The cases came along, one or two at a time, until there were a dozen or more—all mild and all considered as chicken-pox. Finally, two adults, among those exposed, died, after less than two days' sickness, from what was thought to be malignant scarlet fever. Of course they all had smallpox.

CASE VI.—The patient, an adult male, seen on the second day of his illness, presented a fading scarlatinal eruption, coated tongue, congested pharynx. Temperature 99° F., pulse 80. The day before (the first day) the eruption had been intense; temperature, 105° F.; vomiting, repeated, and with extreme nausea. The sore throat was of several days' duration and was the occasion for several five grain doses of quinine. There was a history of free exposure to scarlet fever. The patient did not have scarlet fever. The eruption and vomiting were synchronous; the eruption had appeared simultaneously all over the body. Most important, however, was

the practical recovery at the end of the second day. The patient was hungry and had been grievously ill the day before. The case was one either of quinine poisoning or of ptomaine poisoning—probably the latter.

Some persons—usually, not inevitably, adults—may have "sore throat" and a high temperature undoubtedly due to exposure, usually for days, to scarlet fever. There may be, also, in these cases, degeneration of the kidney epithelium and, at no time, any skin eruption or desquamation. Such cases must be considered ended when there are no longer any symptoms. It is well not to include among the above, mild cases with evanescent eruptions, which may not begin to desquamate for a week, or even two weeks, after what little eruption there was, has disappeared. The desquamation of scarlet fever may, undoubtedly, be sufficiently characteristic to justify a positive diagnosis without the corroboration of complications or of history. Measles, also, has a characteristic desquamation but, unsupported, it will not serve as a basis for positive diagnosis. The eruption and desquamation of measles are usually separated by a period, a week or ten days in duration. It is common, even among doctors, to consider a case of measles at an end before desquamation has begun.

83 LEXINGTON AVENUE.

Indications for Extirpation of the Gall Bladder.
By Maurice H. Richardson, M. D. (*Medical News*, May 2d).—The author's summarized conclusions are: (1) Certain lesions of the gall bladder, such as new growths and gangrenes, demand its removal. (2) Certain other lesions, such as contracted and inflamed gall bladders, that have thickened walls, are best treated by cholecystectomy. In general, all gall bladders that do not permit of easy and efficient drainage should be extirpated. (3) Drainage is to be preferred in the dilated and infected gall bladder, provided it is neither gangrenous nor materially changed. (4) Drainage is to be preferred, as a rule, in cases of acute cholecystitis with severe constitutional symptoms, provided there is neither gangrene nor contraction. (5) Extirpation is to be preferred in chronic cholecystitis, with dilatation and thickening of the gall bladder, and especially so if there is a stone impacted in the cystic duct. If the stone can be dislodged back into the gall bladder, then drainage will give at least as good results. (6) In the case of simple gall stones, where complete restoration of the function of the gall bladder seems probable, drainage is indicated. (7) Chronic pancreatitis, whether associated with gall stones or not, requires drainage through the gall bladder. Cholecystectomy is, in this condition, unjustifiable.

Correspondence.

THE WASHINGTON MEETINGS.

Special Reports of the Congress of American Physicians and Surgeons and other National Meetings.

WASHINGTON, D. C., May 13, 1903.

The second day of the sixth triennial session of the Congress of American Physicians and Surgeons was notable chiefly for an animated discussion, in at least two of the constituent bodies, on the methods of Dr. Adolf Lorenz, the noted Austrian surgeon, in the reduction of congenital dislocation of the bones of the hip. These discussions overshadowed in interest the session of the congress proper, and the meetings of other constituent bodies were almost deserted. There was a large attendance at the meetings of both the American Orthopædic Association and the American Surgical Association, where Dr. Lorenz and his methods were under discussion.

In the latter body, the Lorenz discussion consisted mainly of an exhibition of Charles Willett, a Washington boy, who was operated on last November by Dr. Lorenz. The operation had been performed for a club foot. Supporters of the Lorenz theory took advantage of the opportunity to eulogize the Austrian surgeon and his methods, while those who held different views did not fail to speak of Dr. Lorenz in terms of the greatest courtesy. Some of these speakers, however, did not mince words in discussing his "bloodless surgery," declaring that a system which fractured bones and mangled tissue for the object of curing from 25 to 50 per cent. of the patients should be discouraged.

Professor Sir William Hingston, of Montreal, Canada, struck a popular chord when he declared that it had been fortunate for the world that Dr. Lorenz had visited America. "Here," he said, "the subject is being threshed out, and if it is sound, it will soon be proved to be so, and whether correct or faulty, the world will be benefited by the truth. I never listened to so fair and impartial a discussion in my life, and this alone has paid me for journeying from near the north pole to hear it."

Regret was general among the attending members that Dr. Lorenz had not seen fit to attend the sessions of the congress. It is certain that had he been

here no disrespect would have been shown him, but on the contrary, that he would have been treated with the most distinguished consideration.

At this afternoon's session of the Orthopædic Association, the entire programme was given up to a discussion of hip disease. The first paper was by Dr. R. Tunstall Taylor, of Baltimore, who considered hip disease with special reference to the combined treatment. He barely referred to Lorenz's criticism of too prolonged traction according to American methods, and took occasion to agree with him, inasmuch as the use of functional joints was detrimental to the patient. He advocated the use of the x ray in determining the time of allowing functional use of limbs. Dr. Taylor exhibited a boy and a girl, aged four and six years respectively, upon whom he had operated by the combined method.

Dr. V. P. Gibney, of New York, cited cases of patients who had been operated upon by the Lorenz method and had been considered cured, but after some time tuberculous meningitis had developed as a result of the operation. He suspected that the original deformity of the hip returned after the operation had been performed in many cases. He saw more good in the Lorenz method in the after treatment than in the operation itself. He suggested that the success of Dr. Lorenz had been due rather to the plaster of Paris casts than to any special merit in the system. He advocated the continuance of the subcutaneous operations, stating that there was very little hæmorrhage attendant upon them.

In the discussion of this paper, Dr. H. J. Steele, of St. Louis, said that he had used extraordinary force in operating on a child eight years old under the advice of Dr. Lorenz, and "with such high authority as that he had thought to effect a cure." A few weeks afterward, however, the temperature increased, pains appeared, and tuberculous meningitis set in. The child died.

In summing up his views of the Lorenz method, Dr. Gwilym G. Davis, of Philadelphia, said: "The methods employed have been unnecessarily severe, and it is desirable to follow more closely the original lines laid down by Paci." The reference to Paci was significant, and the opponents of Lorenz assert that the Austrian was not the originator of the system which has been given his name. "The use of more recent methods has been accompanied by severe traumatism, paralysis, and death," Dr. Davis declared, and though he did not mention Lorenz as the author of "more recent methods," his hearers understood that to be his meaning. Dr. Davis favored manipulation, as advocated by Paci, and, if necessary, subcutaneous division of the adductors, and if this failed, the application of weights without resort to extreme force. "The many injuries

resulting from the extreme force used by one operator are known to all," he declared.

The Lorenz system was defended in part by Dr. E. H. Bradford, of Boston, who assisted the Austrian in several operations in that city. He said that he had become convinced that Lorenz's method was right for children between the ages of five and six years. For congenital hip disease, he considered it the correct method to use. One of the chief obstacles to applying the method, he said, was in determining the relative resistance of the tissues and the proportionment of force to this resistance. He introduced drawings of a device which a Boston lawyer had invented, which, it was thought, might remove this obstacle. It had been tried in dislocating the hips of cadavers, and worked admirably. He said that he had been slow to accept the invention of so important a medical device from a lay source, but necessity had compelled him to adopt it. As a whole, he favored the Lorenz method, with a partial incision of the adductor tendons.

Dr. Henry Ling Taylor, of New York, said that the danger in the Lorenz system lay in its use by those not acquainted with it. Of the system itself he had this to say: "In the cases observed by the writer in the last three or four months total paralysis of the quadriceps has been a not uncommon sequel of the operation, and total paralysis of the muscles supplied by the anterior tibial nerve has been twice observed."

At the conclusion of Dr. Taylor's paper, President Weigel announced that the subject was open to discussion. In making the announcement, he expressed regret that Dr. Lorenz was not present to open the discussion himself. The first surgeon called upon to discuss the subject was Dr. Roswell Park, of Buffalo. He said that he had prepared nothing to lay before the association, but the few words he said made it clear that he thought the Lorenz system a failure. "I do not think it advisable to practise a system attended by breaking bones and tearing tissues," he declared. Dr. Moore, of Minnesota, agreed with the views of Dr. Park. He expressed the belief that too much danger was involved in the system. The system, he said, touched the sympathy of the laity, but it brought greater loss of blood through the tearing of the tissue than the skilful surgeon caused with a knife. The profession of surgery, he said, like the press, was likely to fly off at a tangent.

Dr. McKenzie, of Toronto, said the people expected too much of Dr. Lorenz. The Austrian surgeon, he said, claimed to be able to cure only 25 per cent. of cases operated upon for double dislocation, and 50 per cent. of single dislocation.

Dr. Willard, of Philadelphia, said a considerable number of the patients would relapse, and that, as a torn muscle bled more than an incised one, the system should not be called a "bloodless" one.

The exhibition of the Willett boy before the surgical association was under the direction of Dr. J. Ford Thompson and Dr. E. L. Mason, of Washington, both ardent supporters of the Lorenz method. When it was learned that Dr. Lorenz would go to Mexico instead of attending the sessions of the congress, they decided not to abandon the project of placing the boy on exhibition. The cast had just been taken off the boy's foot, and he was allowed to walk the length of a dissecting table. Some of the critics of Dr. Lorenz were silenced by this exhibition, and it was generally admitted that in this case, at least, he had performed a great operation. According to the programme, there will be no further discussion of the Lorenz system, but debate of the method is likely to crop out in any of the surgical discussions.

The congress proper held but one session to-day, the afternoon being devoted to a discussion of the medical and surgical aspect of the diseases of the gall bladder and bile ducts. The programme consisted of papers by Dr. John H. Musser, of Philadelphia; Dr. George E. Brewer, of New York; Dr. C. A. Herter, of New York; Professor Ewald, of Berlin; Dr. William J. Mayo, of Rochester, Minn., and Professor Hans Kehr, of Germany. Not all these were present.

It was decided this afternoon that the next meeting of the congress should be held in this city in 1907, four years from the present time. This action was taken to prevent the congress being in session at the same time that the meetings of the International Society of Physicians and Surgeons are being held in 1906. After 1907, the meetings of the American congress will be held triennially, as heretofore. There was no session of the congress to-night, the members visiting the theatres or attending some of the several banquets that were in progress.

The address of Dr. Joseph E. Janvrin, of New York, president of the American Gynecological Association, was the feature of to-day's session of that body. It dealt with cancerous growth and was well received. One point he brought out was that the sooner a practitioner recognized a cancerous growth, the better was the opportunity afforded to work upon it and cure it by surgical treatment. This afternoon was devoted to business matters. It was decided to hold the next convention of the association in Boston. The following officers were elected: President, Dr. Edward Reynolds, of Boston; vice-presidents, Dr. Whitridge Williams, of Baltimore,

and Dr. Edward P. Davis, of Philadelphia; secretary, Dr. J. Riddle Goffe, of New York; treasurer, Dr. J. Montgomery Baldy, of Philadelphia.

The first session of the thirty-ninth annual meeting of the American Ophthalmological Society was held this morning. Dr. Charles Stedman Bull, of New York, presided. The report of a committee appointed last year for the selection of a standard print to be used in testing eyes, was adopted. This matter is regarded as a very important one. A number of interesting papers, but of a technical nature, were read.

At the business meeting, this morning, of the American Laryngological Association, the following officers were elected: President, Dr. J. H. Hartman, of Baltimore; first vice-president, Dr. John H. Lowman, of Cleveland; second vice-president, Dr. W. Peyre Porcher, of Charleston; secretary and treasurer, Dr. James E. Newcomb, of New York; librarian, Dr. J. H. Bryan, of Washington, D. C. Atlantic City was chosen as the place of the next meeting, which will be held next summer. Dr. H. Luc, of Paris, read a paper on his Latest Improvement in the Radical Treatment of Chronic Suppurations of the Accessory Sinuses of the Nose. He explained the details of the treatment and the various appliances used. The rest of the day was taken up with reports on special cases.

The American Association of Genitourinary Surgeons to-day elected the following officers: President, Dr. Edwin C. Burnett, of St. Louis; vice-president, Dr. F. Tilden Brown, of New York; secretary and treasurer, Dr. John Van der Poel, of New York. The programme of papers consisted of reports on special cases relating to this branch of surgery.

At to-day's meeting of the American Association of Pathologists and Bacteriologists there was presented a joint paper by Dr. Magrath and Dr. Brinckerhoff, of Boston, dealing with a case of variola observed in a female orang-outang at the Boston Zoological Garden. The case emphasized the fact already known that the great apes are subject to all the ills of mankind. The following officers were elected: President, Dr. E. Hodenpyl, of New York; vice-president, Dr. S. Flexner, of Philadelphia; secretary, Dr. H. C. Ernst, of Boston; treasurer, Dr. H. U. Williams, of Buffalo.

Dr. Irving M. Snow, of Buffalo, read an interesting paper to-day before the American Pædiatric Society, his subject being Gastroenteric Infections of New-born Children. A large number of local and visiting physicians were present to hear the paper. A number of other very able papers also were read. To-night the members of the society were the guests of President J. P. Crozer Griffith

at a dinner given at the Cabin John Bridge Hotel.

At the meeting of the American Surgical Association, prior to the exhibition of the Lorenz patient, two eminent foreign surgeons delivered addresses. The first was Professor John von Mikulicz-Radecki, of Breslau, Germany, who spoke on the surgery of the gastrointestinal tract, and the second was Mr. B. S. A. Moynihan, of Leeds, England, who gave a personal record of surgery of the stomach.

The following officers were elected at to-day's session of the Dermatological Association: President, Dr. Joseph Zeisler, of Chicago, vice-president; Dr. M. B. Hartzell, of Philadelphia; secretary-treasurer, Dr. C. J. White, of Boston. The next meeting will be held at Niagara Falls, on the last Tuesday in May, 1904. Among the papers presented was one by Dr. Francis J. Shepherd, of Montreal, on A Method of Early Diagnosis in a Case of Leprosy, which he had used on a Chinaman who had been admitted to the hospital at Montreal.

The final session of the American Otological Society was held to-day. The papers were purely technical.

That peculiar form of insanity which prompts maniacs to assassinate rulers was one of the interesting subjects of discussion to-day before the American Medico-Psychological Association. The two chief papers on this subject were by Dr. August Hoch, of Waverly, Mass., and Dr. R. Dewey, of Wauwatosa, Wis. The following officers were elected: President, Dr. A. B. Richardson, of Washington; vice-president, Dr. A. E. MacDonald, of New York; secretary-treasurer, Dr. C. B. Barr, of Michigan.

The American Neurological Association decided to-day that next year's meeting should be held in St. Louis, and elected the following officers: President, Dr. Frank R. Fry, of St. Louis; first vice-president, Dr. Hugh T. Patrick, of Chicago; second vice-president, Dr. William G. Spiller, of Philadelphia; secretary-treasurer, Dr. G. M. Hammond, of New York; councillors, Dr. Charles L. Dana, of New York, and Dr. J. J. Putnam, of Boston. A number of papers were read and interesting reports made.

The American Climatological Association will meet next year at Mackinac, Mich., at a time to be selected by the executive committee. The following officers were elected to-day: President, Dr. J. C. Wilson, of Philadelphia; vice-presidents, Dr. Thomas Darlington, Jr., of Kingsbridge, N. Y., and Dr. Thomas D. Coleman, of Augusta, Ga.; secretary-treasurer, Dr. Guy Hinsdale, of Philadelphia. Among the papers read to-day was one by Dr. Coleman, of Augusta, on tuberculosis in the

negro. He thought the large number of consumptives in the negro race was due to bad habits of hygiene, and not to any race conditions.

The American Therapeutic Society concluded its session to-day with a business meeting at which the following officers were elected: President, Dr. H. H. Baker, of Washington; first vice-president, Dr. J. N. Hall, of Denver; second vice-president, Dr. O. T. Osborne, of New Haven; third vice-president, Dr. Carl Beck, of New York; secretary, Dr. N. P. Barnes, of Washington; recorder, Dr. W. H. Spriggs, of Washington; curator, G. C. Ober, of Washington. Professor Tillmann, of Leipzig, Germany, was elected an honorary member.

This evening was largely given over to banquets, a number of the societies holding their annual dinners. The Laryngological Association and the Association of American Physicians met at the New Willard, while the Climatological Association, the Gynæcological Society, and the Orthopædic Association banqueted at Rauscher's. Excellent *ménus* were served and there were interesting programmes of toasts. Dr. and Mrs. Z. T. Sower, of Washington, entertained about sixty-five physicians and surgeons at luncheon to-day. The guest of honor was Professor William I. Halstead, of Johns Hopkins University, Baltimore.

WASHINGTON, D. C., May 14, 1903.

The sixteen societies affiliated with the congress wound up their business either this afternoon or this evening. Most of them adjourned to meet next year in various cities of the country. It had been expected that the subject of the success of the Lorenz method of reducing dislocated hip joints would come in for a large share of attention at to-day's sessions of some of the constituent bodies, but it was hardly mentioned. The sudden decision of Dr. Lorenz to go to Mexico instead of attending the sessions of the congress was accepted by some of the critics of his system as indicative that the noted Austrian surgeon did not care for free criticism of his methods, and they refrained from comments that might otherwise have been made. This left the supporters of Lorenz in possession of the field, and though some of them entered the lists as champions of "forcible reduction," their comments did not provoke a controversy.

The Orthopædic Association, the sessions of which probably attracted more attention than those of any of the other constituent bodies, did not take up the Lorenz question again to-day, but instead considered some interesting papers on the subject of flat-foot. Those who discussed it, however, steered a clear course, and the name of the Vienna

surgeon was not even mentioned in the discussion. The first paper was by Dr. A. H. Frieberg and Dr. J. Henry Schroeder, of Cincinnati. It involved a study of the foot of the negro. These surgeons said that the general impression that the negro race was flat-footed was disproved by the normal foot of the tribes in Africa, as shown by the examinations of Herz and Muskat. "An examination of the feet of adult negroes, as well as children, in this country," they continued, "shows that, while flat-foot is somewhat more common than in an equal number of white persons, the normal foot so commonly occurs that the flat foot of the negro may, in all probability, be ascribed to the same causes as that of the white man."

Dr. R. W. Lovett, of Boston, contributed a paper dealing with his observations in the cases of 500 nurses. He prefaced his paper by saying that it was a well-known fact that nurses in training were liable to be disabled by static disturbances in the foot. The conclusions drawn were that the breaking down was more associated with general causes than with any special structure of the foot, and that it followed a marked seasonal variation and occurred at a pretty definite time after the beginning of the nurse's training. He recommended the use of a good boot and proper supervision.

The foot of the Oriental maiden was treated of in a paper by Dr. E. H. Bradford, of Boston. He said the chief factor in the distortions was to be found in the articulations.

The next meeting of the association will be at Atlantic City, in June of next year. The following officers were elected just before adjournment: President, Dr. Reginald H. Sayre, of New York; first vice-president, Dr. Joel E. Goldthwait, of Boston; second vice-president, Dr. Gwilym G. Davis, of Philadelphia; secretary, Dr. John Ridlon, of Chicago; treasurer, Dr. E. G. Brackett, of Boston.

A short session of the American Laryngological Association was held to-day, closing the twenty-fifth annual meeting of the association. Next year it will meet at Atlantic City. There were a number of papers at to-day's session, and the newly elected officers were inducted into office. The association members were entertained at luncheon by Dr. T. Morris Murray and Dr. Frank Hyatt, of Washington, at the Metropolitan Club.

To-day's session of the American Dermatological Association was very brief, the only business coming before the association being the consideration of four papers by different members. At the conclusion of the papers, the president, Dr. Bowen, declared the meeting adjourned until next year, when it would meet at Niagara Falls.

Among other matters coming before the closing session of the American Gynæcological Association

were the memorial tributes to the fellows who had passed away during the year. Dr. Charles Jewett, of Chicago, spoke of the life and death of Dr. John Byrne; Dr. Clement Cleveland, of New York, on Dr. T. Gaillard Thomas; and Dr. Andrew F. Currier, of New York, on Dr. Edward W. Jenks. Several very able papers were read.

The members of the American Ophthalmological Society spent the greater part of to-day in sight-seeing. At the business session, which was held this afternoon, the advisability of holding the next meeting at Atlantic City came up. The society had voted to meet next year in St. Louis, but some preferred a point in the east, especially since several other associations affiliated with the congress will meet next summer in Atlantic City. The matter was referred to a committee for determination. The following officers were elected: President, Dr. Charles Stedman Bull, of New York; vice-president, Dr. Arthur Matthewson, of Brooklyn; corresponding secretary, Dr. J. S. Prout, of Brooklyn; recording secretary, Dr. S. B. St. John, of Hartford, Conn.

The American Pædiatric Society, after listening to a number of papers to-day, selected Detroit, Mich., as its next place of meeting, and elected the following officers: President, Dr. A. Caillé, of New York; first vice-president, Dr. A. Baines, of Toronto; second vice-president, Dr. E. E. Graham, of Philadelphia; secretary, Dr. S. S. Adams, of Washington; treasurer, Dr. J. P. West, of Bellaire, Ohio; recorder, Dr. W. L. Carr, of New York.

Before the American Medicopsychological Association to-day, Dr. J. M. Buchanan, of Meridian, Miss., read a paper on the Treatment of the Morphine Habit by Hyoscine. The paper attracted a great deal of attention. A paper by Dr. F. W. Robertson, of Elmira, N. Y., on Recognition of the Insane in Penal Institutions a Factor in Diminishing Crime, was equally interesting. Dr. Robertson took the view enunciated in Professor Lombroso's *Man of Genius* that the quickest way to eliminate crime is to recognize the insanity in criminals and treat them accordingly.

After listening to three able papers, the American Association of Pathologists adjourned to-day, to meet next year in New York.

The American Physiological Society met this morning and transacted routine business, after which it adjourned. The officers of the society are not elected annually, but once in fifteen years. The next place of meeting will be decided by the council.

The American Surgical Association this afternoon elected the following officers: President, Dr. N. P. Dandridge, of Cincinnati; vice-president, Dr. Charles A. Powers, of Denver; secretary, Dr. Dudley P. Allen, of Cleveland; treasurer, Dr.

George R. Fowler, of Brooklyn; recorder, Dr. Richard R. Harte, of Philadelphia. There were morning and afternoon sessions, at both of which interesting papers were read.

Dr. J. Madison Taylor, of Philadelphia, read at to-day's meeting of the American Climatological Association a paper on the Conservation of Energy in those of Advancing Years, which attracted much favorable comment. Dr. Taylor presented what were thought to be practical recommendations as to the diet and hygiene of aged persons. He recommended the systematic and mechanical stimulation of the nuchal region. Mineral waters and climate of appropriate qualities, he believed to be the means by which the degenerative effects could be postponed. Dr. Richard C. Newton, of Montclair, N. J., read a paper entitled Studies in Deep Breathing, in which he recommended that pulmonary gymnastics be allowed consumptives. The association concluded its work this afternoon, when, at the Columbia University, Dr. Judson Daland, of Philadelphia, gave an address, with lantern slide illustrations, on Leprosy in the Hawaiian Islands, and Dr. Gilbert McClurg, of Colorado Springs, also with lantern slide illustrations, described the topography and climate of the Pike's Peak region.

The Association of American Physicians concluded its session at five o'clock this evening. At the executive session, the following officers were elected: President, Dr. William T. Councilman, of Boston; vice-president, Dr. Edward Trudeau, of Saranac Lake, N. Y.; recorder, Dr. Solomon Solis Cohen, of Philadelphia; secretary, Dr. Henry Hun, of Albany; treasurer, Dr. J. P. Crozer Griffith, of Philadelphia; councillors, Dr. Victor C. Vaughan, of Ann Arbor, Mich., and Dr. George M. Kober, of Washington, D. C. The association will again meet in this city in March of next year. There were two sessions to-day, at both of which able papers were read, followed by general discussions.

The American Association of Genitourinary Surgeons will meet next year at St. Louis. This was decided upon at a meeting this afternoon. Officers elected the day before were installed, and the meeting closed with a number of papers.

With the elaborate "smoker" at the New Willard, Washington's most fashionable hostelry, the sixth triennial session of the Congress of American Physicians and Surgeons came to a close to-night. It was attended by about 175 of the visiting and resident medical men. The congress had as its guests the prominent visiting physicians and surgeons not members of the body. All gathered about small tables and spent an evening of pleasant social intercourse. Among the guests were Professor von Mickulicz, of Breslau, Germany; Professor Tillmanns, of Leipzig, Germany; Professor Ewald,

of Berlin; Mr. Moynihan, of Leeds, England, and Sir William Hingston, of Montreal.

In the absence of Dr. Keen, president of the congress, in the early part of the evening, the meeting was called to order at eight o'clock by Dr. Shande. Papers were read with lantern slide demonstrations. Dr. R. C. Cabot, of Boston, exhibited illustrations of the ring bodies in the blood of anæmic patients. Dr. E. A. Locke, also of Boston, showed slides of twenty-one cases of Paget's disease. At the conclusion of these papers refreshments were served in the banquet hall. Here the physicians remained until eleven o'clock, discussing the work of the congress, interchanging experiences of practice and chatting together informally. No speeches had been arranged by President Keen, and the smoker ended with an exchange of farewells.

The 2,000 medical men who attended the congress are agreed in pronouncing it the most successful yet held; the attendance was the largest, the papers most interesting, and the social entertainments on a scale not before undertaken.

The members of the Gastroenterological Society held a banquet to-night at Rauscher's, in compliment to Professor Ewald. The tables were beautifully decorated, the *ménù* was an excellent one, and the banquetters had a jolly time.

The sixth annual meeting of this society convened here to-day. It is not affiliated with the congress, but, for convenience, frequently holds its meetings at the same time and place. To-day's meeting, which was held at the Shoreham Hotel, was presided over by Dr. John C. Hemmeter, of Baltimore, president of the society. About one hundred physicians were in attendance. The feature of the programme was the paper and talk of Professor C. A. Ewald, of the University of Berlin. His subject was the Diseases of the Intestines, and for purposes of illustration he had brought with him from his laboratory, in Berlin, a tumor which had been taken from the intestinal tract of a patient. President Hemmeter delivered his annual address and a number of other very interesting papers were read.

During the evening the following officers were elected: President, Dr. S. J. Meltzer, of New York; first vice-president, Dr. Fenton B. Turck, of Washington; secretary-treasurer, Dr. Charles D. Aaron, of Detroit. A reception and lunch was given to the members of the society by Dr. Morgan at one o'clock, at his home in Washington. This also was in honor of Professor Ewald.

Another body not affiliated with the congress, but the meetings of which have attracted considerable attention, is the National Association of United States Pension Examining Surgeons. The members were welcomed to the city by Pension Commissioner Ware, and all their meetings have been

largely attended. The treasurer's report submitted to-day showed a balance on hand of \$333.17, and an increase of membership at this meeting of 250, making a total membership of about 750. At the concluding session this afternoon, the following officers were elected: President, Dr. William A. Howe, of New York; vice-president, Dr. P. Y. Eisenburg, of Pennsylvania; second vice-president, Dr. John Van Rensselaer, of Washington; third vice-president, Dr. Parks Ritchie, of Minnesota; fourth vice-president, Dr. J. M. Thompson, of Kansas; secretary, Dr. Wheelock Rider, of New York; treasurer, Dr. Charles H. Glidden, of New York. Next year's meeting will be in St. Louis.

WASHINGTON, D. C., May 15, 1903.

An important matter brought out at the sixth triennial session of the Congress of American Physicians and Surgeons, but which has attracted little attention in the daily press, is the proposed enforcement of what, in effect, amounts to a new pure food law, enacted at the last session of the United States Congress. Attention was called to the matter by Dr. W. H. Wiley, chief of the Bureau of Chemistry, Department of Agriculture, in an address before one of the medical societies.

The matter had escaped general attention, said Dr. Wiley, because it had become law in the form of an obscure paragraph in the annual Department of Agriculture appropriation bill, but it was far-reaching in its effect and was regarded as an important victory by the advocates of federal pure food legislation. It did not affect goods of domestic production, but placed vast powers in the hands of the Department of Agriculture in dealing with importations. The paragraph of the law reads as follows:

To investigate the adulteration of foods, drugs, and liquors, when deemed by the Secretary of Agriculture advisable, and the Secretary of Agriculture, whenever he has reason to believe that articles are being imported from foreign countries which by reason of such adulteration are dangerous to the health of the people of the United States, or which are forbidden to be sold or restricted in sale in the countries in which they are made or from which they are exported, or which shall be falsely labeled in any respect in regard to the place of manufacture or the contents of the package, shall make a request upon the Secretary of the Treasury for samples from original packages of such articles for inspection and analysis; and the Secretary of the Treasury is hereby authorized to open such original packages and deliver specimens to the Secretary of Agriculture for the purpose mentioned, giving notice to the owner or consignee of such articles, who may be present and have the right to introduce testimony; and the Secretary of the Treasury shall refuse delivery to the consignee of any such goods which the Secretary of Agriculture reports to him have been inspected and analyzed and found to be dangerous to health, or which are forbidden to be sold or restricted in sale in the countries in which they are made, or from which they are exported, or which shall be falsely labeled in any respect in regard to the place of manufacture or the contents of the package.

Therapeutical Notes.

Antibromidism.—Dr. Louis Faugères, Bishop, of New York, sends us the following: "I have been using the following formula now for some years in cases in which neurological conditions, such as epilepsy, made it desirable to administer bromides pretty continuously; the formula was devised for that purpose and is made up in tablet form. I call it antibromidism.

I find that by giving one of these tablets before meals patients can take large amounts of bromide continuously without any bad effects and with great benefit from the bromide. I prefer this method of combating the bad effects of bromide to the use of adjuvants in the bromide mixture itself. The formula is as follows:

℞ Fowler's solution.....5 minims;
Potassium bicarbonate.....5 grains;
Powdered rhubarb.....2 grains;
Powdered ipecac..... $\frac{1}{4}$ grain;
Oil of peppermint..... $\frac{1}{10}$ minim.

M. For one tablet.

For Lichen Pilaris.—According to *Nouveaux Remèdes* for April 24th, Lestikoro recommends a resorcinized paste (3 or 5 per cent.), a sulphurated zinc paste, or the following dusting powder:

℞ Precipitated sulphur.... }
Kaolin..... } equal parts.
Venice talc..... }

M.

Saalfelt recommends ointments of sulphur, naphthol, or chrysophanic acid, or one of the following powders:

℞ Precipitated sulphur.....15 grammes ($\frac{1}{2}$ ounce);
Lard..... } of each 30 grammes (1 ounce);
Potash soap..... }
Powdered pumice.....16 grammes (240 grains).

M.

Or this:

℞ Lanolin..... }
Lard..... } of each 50 grammes ($1\frac{1}{2}$ ounce);
Potash soap..... }
Naphthol.....15 grammes ($\frac{1}{2}$ ounce);
Prepared chalk.....10 grammes ($\frac{1}{3}$ ounce).

M.

Large Doses of Digitalis in the Treatment of Pneumonia.—Dr. Pietro Monetti, an Italian country practitioner (*Gazzetta degli ospedali e delle cliniche*, March 29th) speaks highly of large doses of digitalis in the treatment of lobar pneumonia. He has treated twenty-nine cases of this disease with very good results with the most trustworthy of cardiac stimulants, and has found that large doses are essential to a successful management of pneumonia. In most of the cases he was called early, so that the remedy had time to produce its effect. The author makes a practice of bleeding the patient freely to begin with. At first he did this because the patients in his rural district insisted on bleeding, but he has convinced himself of the value of this measure in the beginning of pneumonia, and now employs it of his own accord. The bleeding reduces the temperature and removes some of the toxins, etc. Then he administers digitalis in the form of an infusion, with anisated solution of ammonia, and brandy. He gives from three to five grammes

(forty-five to seventy-five grains) of digitalis leaves daily—doses that may be considered very large indeed. In pneumonia, he believes, a large amount of this drug can be borne so as to neutralize the paralyzing influence of the pneumonic toxins. In two cases only, of the twenty-nine reported, did the pulse-rate sink to 40 a minute, owing to an over action of the drug, and the rate was immediately restored by administering caffeine and strychnine. The author made a practice of watching the pulse and regulating the administration of the drug accordingly. He found that the crisis ensued usually from the fourth to the sixth day of the disease, and of forty-five cases of pneumonia and bronchopneumonia thus treated, only one patient died, a young man of tuberculous parentage, who lived far out in the country and could not be properly watched.

The Treatment of Chronic Rheumatism.—*Ἱατρικὴ Πρόδος* for January 1st says that in the treatment of the chronic form of rheumatism the iodide preparations may advantageously replace those of the salicyl group. Colchicum, given in the form of wine, is a fitting drug when the preparation is of official strength. Frequently this preparation is made carelessly by the pharmacists from worthless seeds or bulb, and the practitioner in such case is disappointed at his ill success.

Iodine salt and colchicum may be prescribed in combination as follows:

℞ Sodium iodide.....12 grammes (180 grains);
Wine of colchicum seed..12 grammes (180 minims);
Spirit of gaultheria...enough to make 120 grammes (4 ounces);

M. A teaspoonful in water after each meal.

Oil of gaultheria may be combined with sodium iodide as follows:

℞ Sodium iodide.....10 grammes (150 grains);
Solution of potassium arsenite.....6 grammes (90 minims);
Oil of gaultheria.....6 grammes (90 minims);
Spirit of gaultheria...enough to make 120 grammes (4 ounces).

M. One teaspoonful to be taken in water with each meal.

For Gastric Hypochylia in Intestinal Dys-tripsia.—Dr. John C. Hemmeter (*Medical News*, April 18th) gives the following as his favorite recipe:

℞ Strychnine sulphate.....0.02 gramme ($\frac{1}{3}$ grain);
Dilute hydrochloric acid..15.00 grammes ($\frac{1}{2}$ ounce);
Fluid extract of condurango.....45.00 grammes ($1\frac{1}{2}$ ounce);
Elixir of gentian.....180.00 grammes (6 ounces).

M. Sig. Half a fluid ounce in two ounces of water, half an hour before meals, through a glass tube.

Dr. Hemmeter adds that the dilute hydrochloric acid cannot be given in sufficiently large quantity to replace completely the normal secretion if this is absent entirely. Its function is merely that of a gastric and pancreatic stimulant in these doses.

When there are evidences of anæmia, Dr. Hemmeter says that the following acts satisfactorily:

℞ Quinine sulphate.....1.16 gramme (18 grains);
Strychnine sulphate.....0.02 gramme ($\frac{1}{3}$ grain);
Iron sulphate.....0.80 gramme (12 grains);
Arsenous acid.....0.012 gramme ($\frac{1}{8}$ grain).

M. Sig. Make into 12 pills. One pill three times daily. They must be prepared fresh and not coated.

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THE DEFINITION OF THE PRACTICE OF MEDICINE.

At the recent New Orleans meeting of the Confederation of State Medical Examining and Licensing Boards a definition of the practice of medicine was adopted which properly expands the meaning of the phrase beyond what many of the courts have held to apply. Since the necessity for protecting the "health, life, and limb" of the citizen against the evil consequences of incompetent "doctors" culminated in the control and regulation of the practice of medicine by statutory laws, there have naturally developed modifications of the various phases of quackery and charlatanism which, as they had been "practised," would be amenable to the police power of modern medical legislation. The principal result of the administration of medical law is to condition the possession of the license to practise upon an ample general education, an adequate mastery of the principles of the medical sciences, and an efficient training in the art of their application in the treatment of diseases, deformities, and injuries. In other words, for the "doctor," as conventionally understood, qualification based upon education is the one essential necessity. This qualification is attested by licensure, and all who attempt to practise medicine without it are, in fact, not competent so to do. Law, the safeguard of every human being against fraud and deception, and especially under conditions involving the higher interests, is ever subject to attempts at circumvention by that unprincipled class who, in all spheres of life, thrive by their wits. As in no one thing is humanity so gullible as in medicine, there exist multitudinous types of so called "doctors." These miscreants succeed by all sorts of cleverness in being

regarded as "doctors," *i. e.*, qualified practitioners, and under terms of "pathists" of great variety, and professing the possession of mysterious powers, take advantage of every apprehensive and gullible victim of some form of morbid imagination or hypochondriacal tendency, fleece him of large fees, and keep him within their unprincipled grasp as long as money can be extorted. These charlatans make bold to treat all diseases, deformities, and injuries, and, utterly disregarding the principles underlying character and duty, endanger the life and health of individual, family and community, to the spread of contagion, pestilence, and death. Too frequently when these illegal practitioners of medicine—and they are practitioners, but unqualified and therefore incompetent—have been subjected to the police power of medical legislation, the higher court has occasionally ruled that a practitioner of medicine, *i. e.*, a doctor, is legally one who treats diseases, deformities, and injuries by the administration of drugs or medicines and the use of instruments, and, therefore, those who treat these afflictions without the employment of medicines and the use of instruments are not practitioners of medicine ("doctors") and consequently not amenable to the requirements and penalties of medical law. That such decisions by the courts emasculate medical law and encourage and protect incompetency, quackery, and charlatanism needs no demonstration. The importance, therefore, of a legal definition of the practice of medicine and of a practitioner of medicine, or the doctor, is self-evident. It means the practicability of enforcing statutory requirements and granting the practice right only to the fully qualified; it means that the safety of the community against the fearful consequences of the incompetent treatment of all human ills is secured beyond all doubt; it means that everybody will ultimately know that the doctor, the practitioner of medicine, is the only proper authority qualified to serve those great interests which are based upon the possession of health. The definition therefore must involve the general principles of that common law which regards personal rights and the free exercise of privileges rightfully possessed by all qualified to assume the responsibilities of any profession or calling. What, then, constitutes the practice of medicine? Manifestly and only, the treatment of diseases, de-

formities, and injuries. Qualification to do so implies the possession of knowledge of the structure of the human body, of its manifold functions, its diseases, deformities, and injuries, of the laws indissolubly associated with each and every one that are operative both in their causation as well as their relief and cure, and of the laws underlying any means whatsoever and essential for their proper treatment. It implies the possession of the necessary skill or ability to adjust the means involved to the ends required. Qualification is, therefore, the constitutional right of every statutory law to demand, and it is of equal constitutional right to prevent anyone from offering or granting services for the treatment of human ills who is not qualified.

What then, is the legally qualified practitioner of medicine? Only such a person as possesses these qualifications. A practitioner of medicine obviously is anyone who treats human ills by any means whatsoever and is practically a doctor, in fact, whether this is attempted by the use of drugs, medicines, and instruments or through any agencies whatever. When the courts recognize these principles, anyone assuming the responsibilities and presuming to practise, unless qualified, can be subjected to those penalties which will exterminate evil and protect humanity from what is worse than the ravages of disease. In a word, to profess to be qualified to practise medicine and be unable to furnish the legally required proof of such qualification, nullifies what the proper definition of the practice of medicine clearly sets forth.

DOCTORS AS TRAVELING COMRADES.

While we all believe that we belong to a profession characterized by geniality, it is not every one of us that often has the opportunity to observe how conspicuously this quality is shown forth in travelling. A rather exceptional occasion for such observation on a large scale was afforded by the necessity imposed upon many of us of taking a long journey to get to New Orleans for this year's meeting of the American Medical Association. Tedious indeed would that journey have been, in spite of the beautiful scenery encountered, had it not been for the adaptation to each other's moods which seems to be peculiarly natural to medical men.

It is not alone on a railway train or a vessel that

doctors show themselves preeminently good companions; the custom of engaging communicating rooms in hotels by little coterie seems to be on the increase, and the growth of that practice has not failed to bring out still more pointedly the community of thought and feeling that animates the medical profession. The various individuals that make up these temporary families, so to speak, go their several ways during the day for the most part, but they are pretty sure to come together in the evening for a chat before going to bed. It is in these daily reunions that old friendships are strengthened and new ones made. And not only do men form lifelong attachments in this way; they gain an understanding not otherwise readily arrived at of the conditions prevailing in remote parts of an enormous country. Who can tell how great may be the influence of this state of things in ultimately shaping corporate action for the good of the profession?

SPORTS FOR THE LUNATICS OF WARD'S ISLAND.

We are glad to see that these sports, instituted, we understand, by the superintendent of the Manhattan State Hospital, East, Dr. A. E. Macdonald, are kept up. The last programme was for Arbor Day, May 8th, and the sports were entered upon after the ceremonious planting of trees had taken place. They included baseball, lawn bowls, foot races, the tug of war, the running high jumps, the potato race, throwing the baseball, the sack race, the shoe race, the three-legged race, the wheelbarrow race, and the hurdle race. The female patients took part in such of the sports as were suited to their sex, and the employees were represented. Surely the effect of such contests must be beneficial to the insane, and we hope that they will become more and more frequent. The prizes were inexpensive, but calculated to gratify the winners.

THE PERILS OF THOSE WHO WAIT IN LINE.

In the *Bulletin of the Health Department* of Chicago for the week ending May 2d, we find it set down that during the week four deaths resulted from the exertion of long standing in the taxpayers' line. It is hard that people should be forced to incur peril by waiting in line under any circumstance, but doubly so when it is an incident of the paying of taxes. If it is impracticable to receive the feeble out of turn, surely benches might be provided for them.

News Items.

Society Meetings for the Coming Week:

MONDAY, May 25th.—Medical Society of the County of New York; Lawrence, Mass., Medical Club (private); Cambridge, Mass., Society for Medical Improvement; Baltimore Medical Association.

TUESDAY, May 26th.—Metropolitan Medical Society, New York (private); Buffalo Academy of Medicine (Section in Obstetrics and Gynecology); Richmond, Va., Academy of Medicine and Surgery; New York Medical Union (private); Rome, N. Y., Medical Society; Boston Society of Medical Sciences (private).

WEDNESDAY, May 27th.—New York Academy of Medicine (Section in Laryngology and Rhinology); New York Pathological Society; New York Surgical Society; American Microscopical Society of the City of New York; Philadelphia County Medical Society; New York Dermatological Society (private); Auburn, N. Y., City Medical Association; Berkshire, Mass., District Medical Society (Pittsfield).

THURSDAY, May 28th.—New York Academy of Medicine (Section in Obstetrics and Gynecology); New York Orthopaedic Society; Brooklyn Society for Neurology; Roxbury, Mass., Society for Medical Improvement (private); Pathological Society of Philadelphia; Church Hill Medical Society of Richmond, Va.; New York Celtic Medical Society.

Change of Address.—Dr. L. Leopold Rosenberg, to Bedford Sanitarium, Bedford Station, N. Y.

Clara Barton Honored.—A reception was tendered by the hospital corporation of Philadelphia, on May 17th to Clara Barton, the founder of the American Red Cross Society.

Gouverneur Alumni Society.—The next regular meeting of the Gouverneur Alumni Society will be held on Tuesday, May 26th, at the New York Academy of Medicine.

New York State Medical Association.—A stated meeting of the New York State Medical Association was held on Monday, May 18th, at the New York Academy of Medicine.

Cornell Medical College.—The splendid building given by the late Dean Sage for the use of the Ithaca division of the Cornell Medical College was opened on May 18th. Dr. L. A. Stimson made the opening address.

A Hospital for Richmond, Ind.—Daniel G. Reid, of New York, has given \$50,000 for the establishment of a hospital in Richmond, Ind., his native place, on condition that \$25,000 shall be raised in addition for an endowment fund.

Seney Hospital a Beneficiary.—After an address made by the superintendent of Seney Hospital, the congregation of the Methodist Episcopal Church of New Rochelle subscribed \$3,000 to endow a child's crib in the name of the church.

Hope Hospital Destroyed.—Hope Hospital, in Rochester, which has become unpleasantly prominent of late, was completely burned to the ground on May 11th, by order of the health authorities of the city. The patients had been previously transferred to the new municipal hospital.

Smallpox in Philadelphia.—Twenty-five new cases of smallpox were reported from Philadelphia during the week ending May 16th.

A Railroad Surgeon Appointed.—Dr. Frank Kingsley Ainsworth, of Vermont and New York, has been appointed surgeon-in-chief to the Southern Pacific Railroad.

St. John's Guild.—St. John's Guild has sent out its annual report and announces a deficit for the year, and appeals for financial aid. It supports two floating hospitals and a seaside hospital.

Albany Medical College.—The thirtieth annual meeting of the Alumni Association of the Albany Medical College was held on May 5th, and the seventy-second commencement on May 6th.

Tropical Worm Disease.—The government of Berlin, Germany, has appointed a commission to investigate the tropical worm disease which has attacked the miners in Westphalia. One hundred and fifty physicians have been detailed to combat the disease, which is said to be chiefly due to lack of sunlight and proper cleanliness.

A Woman Appointed as Municipal Physician.—By a vote of twelve to three, Mrs. Alma A. Wiliston, M. D., was appointed municipal physician by the town council of Phillipsburg, Warren County, N. Y. In addition to a salary of \$200 a year she will be provided with an automobile and have an allowance of \$100 a year for medicines.

A Medical Practice Act for Louisiana.—At the meeting of the Louisiana State Medical Society, April 28th, 29th, and 30th, a resolution was adopted that a committee be appointed to engross and submit to the next State legislature a new Medical Practice Act. This measure was necessitated by the fact that it is almost impossible to secure a conviction under the present law.

Tulane University.—By a decision of Judge Somerville, of New Orleans, the handsome bequest of the late Alexander Hutchinson to Tulane University, for the establishment and maintenance of a hospital in connection with the medical department, was upheld on the ground that the donation was to the university direct and that the medical department was part and parcel of the university.

Disinfection in Louisiana and Texas.—The State boards of health of Louisiana and Texas have adopted a uniform plan of disinfection governing quarantine regulations in New Orleans and Galveston. This precaution is especially directed against the introduction of disease from the tropics, and, after May 1, 1903, owners of baggage from Florida ports coming to Louisiana, must satisfy the inspector of the Louisiana State board that they do not come from Cuba, or their baggage will be held at the Louisiana State line or inspection stations, for inspection and disinfection.

Milwaukee in Line on the Spitting Question.—The physicians of Milwaukee are being asked to sign a petition to the council to pass an ordinance against spitting.

New York State Medical Association.—A stated meeting was held by the New York State Medical Association, on Monday evening, May 18th, at the Academy of Medicine.

Orange County Medical Society.—At the ninety-eighth annual meeting held at Goshen on May 5th, the matter of uniting with the Orange County Medical Association was discussed.

Albany County Medical Society.—The following officers were elected at the annual meeting held on May 12th: President, Dr. Cyrus S. Merrill; vice-president, Dr. John L. Archambault; secretary, Dr. H. T. K. Shaw; treasurer, Dr. W. H. George.

Medical Inspectors.—An open competitive examination will be held on Friday, June 12th, for the position of medical inspector in New York city. Applications for examination will be received from Monday, May 25th until Monday, June 1st. The position is open to both women and men, technical knowledge and experience being the chief requisites. Applicants must be residents of New York and have a State license to practise medicine.

Schemerhorn Pavilion Formally Opened.—Under this name an addition to the New York Eye and Ear Infirmary, at Second Avenue and Thirteenth Street, was formally opened on Monday, May 11th. Short addresses were made by Bishop Potter, the Rev. Dr. W. R. Huntington, the Rev. Dr. David H. Geer, William J. Schieffelin, and Dr. Graham Bacon. Miss Keller, the former deaf-mute, who has learned to use her voice, essayed to read a paper, but was unequal to the task, and the veteran actor, Joe Jefferson, taking the manuscript from her hand, read it for her.

State and County Civil Service Examinations.—The next general examination for the State and county service in New York State will be held on June 13, 1903. The following positions are included: Junior physician in State hospitals and institutions, and pupil nurse in the Erie County Hospital. Persons desiring to enter these examinations must file applications in the office of the State Civil Service Commission, in Albany, before noon of June 8th.

A New Consumption Hospital.—Among the bills signed by Governor Odell on May 11th was one appropriating \$115,000 for a hospital for consumptives at Bay Brook in the Adirondacks. The hospital will, it is expected, be ready by November. The hospital is designed for the poor and admission can be obtained by applying to the superintendent of the poor. Although the institution will be managed and supported by the State, each county sending a patient will pay the cost of that patient's treatment.

Cayuga County Medical Society.—The Cayuga County Medical Society held its annual meeting on May 14th.

Scarlet Fever in Tuxedo Park.—An outbreak of scarlet fever in Tuxedo Park has caused consternation in the fashionable colony. A strict quarantine is being kept over the infected houses.

Pneumonia in Chicago.—According to the report of Dr. Banks, of the Marine Hospital Service, the death rate from pneumonia within two months ending May 15th, was 22 per cent., the diseases being almost epidemic.

Cerebro-Spinal Meningitis at Navy Yard.—Up to May 14th there had been ten cases of the so-called spotted fever, four of which had ended fatally, at the League Island Navy Yard. The *Minneapolis*, on which the outbreak occurred, has been twice scoured and fumigated, and the fever seems to be under control.

Bequests to Hebrew Societies.—By the will of William Weisell, lately deceased, \$1,000 is left to Beth Israel Hospital, \$1,000 to the United Hebrew Charities, \$500 to the Montefiore Home, \$1,000 to the Hebrew Benevolent and Orphan Asylum Society, \$1,000 to the Home for Aged and Infirm Hebrews, \$1,000 to the Mount Sinai Hospital, and \$500 to the Jewish Theological Seminary.

By the will of the late Adolphe Openhym, of New York, \$5,000 is left to Mount Sinai Hospital, \$5,000 to the Montefiore Home for Chronic Invalids, and \$5,000 to the Hebrew Benevolent Orphan Asylum.

Ankylostomiasis in Germany.—According to the last reports of the Society of Mines at Bochum, Germany, there is a large increase in the number of cases of ankylostomiasis among the miners in the east of Germany. In 1900 there were 286 cases, and in 1901 1,023 cases, five of them being fatal. This recrudescence of this malady is accounted for by the recent introduction of a system of irrigation into the mines and the consequent propagation of the embryos of filaria. The efforts of physicians to arrest the epidemic have hitherto proved unavailing largely by reason of the want of sanitary precautions on the part of the miners themselves.

New York Academy of Medicine.—The Section on Ophthalmology of the New York Academy of Medicine met on Monday, May 18th, when a paper was read on The Mental Derangement which is Occasionally Developed in Patients in Eye Hospitals, by Dr. C. J. Kipp. The following cases were presented: (a) Cases showing the definite results produced by advancement without tenotomy in strabismus, by Dr. H. W. Woolton; (b) removal of angioma of the brow without removal of the skin, by Dr. E. Gruening; (c) extensive laceration of the sclera (with presentation of specimen), by Dr. Linn Emerson; (d) case of traumatic bilateral ophthalmoplegia (complete on one side) with recovery in one eye and slight improvement in the other, by Dr. H. H. Tyson; (e) a peculiar case of optic nerve atrophy, by Dr. J. Wolff; (f) a peculiar form of zonular opacity of the cornea, by Dr. A. Duane.

Army Surgeons' Annual Meeting.—The Association of Military Surgeons of the United States met in Faneuil Hall, Boston, on May 19th.

Typhoid Fever in Cleveland.—According to the *Cleveland Medical Journal*, the deaths recorded from typhoid fever in Cleveland in the last thirteen years, from 1890 to 1902 inclusive, reach a total of 21,250, and the average monetary loss incurred by the city is more than \$960,000 a year, estimating the loss on the earning capacity of the patients.

An Association for the Relief and Control of Tuberculosis.—Under the name of the Boston Association for the Relief and Control of Tuberculosis, an association has been formed in Boston to prevent, if possible, the spread of consumption among the poorer classes by showing them how tuberculosis patients may be treated at home without endangering the health of the rest of the family. The officers of the Boston society are Dr. E. O. Otis, president; Dr. A. K. Stone, vice-president; Miss Alice Higgins, secretary; G. S. Mumford, treasurer, with an executive committee of six members.

Compulsory Notification of Tuberculosis in Providence.—The city council of Providence, R. I., has passed an ordinance providing for the compulsory reporting of tuberculosis. It is expected that there will be some slight opposition from the same sources that objected primarily to reporting diphtheria and scarlet fever, but from which, after the habit had become established and the reporting a custom expected by the laity, the opposition ceased. It is not intended to take any objectionable stand in the execution of the ordinance, cases being visited by the medical inspector only when requested to do so by the physician reporting the case. These cases are usually in families of the poor. The physician in the upper classes of practice prefers to attend to the instruction of the patient himself, and although the custom has been rather indifferently established, the reporting of cases by others and the educating of the laity will force the opponents of the plan to comply with the law.

Sanitary Legislation in Rhode Island.—The most important action taken by the legislature of the State of Rhode Island during the session just closed was the appropriation of seventy-five thousand dollars for the erection of a sanatorium for the reception and education of incipient cases of pulmonary tuberculosis. Six thousand five hundred dollars had already been appropriated for the purchase of the land which has been secured in the northern part of the State, and it is expected that with these sums the buildings may be erected but not furnished. Work has already been begun and will be pushed with vigor. The accommodation is intended for one hundred patients and the estimated expense of running the sanatorium is about twenty-five thousand dollars. Patients will be expected to assume one half the expense of board as at Rutland, Mass. The elevation is only about seven hundred feet, but it is believed that as good results should be looked for as at a greater elevation. An

appropriation of fifteen hundred dollars was made available for the use of the State board of health for the investigation and control of diphtheria, which includes the examination of cultures from suspicious throats and the free distribution of antitoxine to those unable to pay for the same. Rhode Island was the first State to assume this work, commencing a few months after its introduction in the city of New York. This has been kept up without cessation each year. An appropriation of one thousand dollars was made available to the same board for the investigation and control of tuberculosis in men. This work has also been carried on since 1894. Fifteen thousand dollars were placed at the disposal of the Board of Agriculture for the destruction of cattle diseased with tuberculosis. This serves to rid the State of all such cases as may be so far advanced in animals that they have ceased to be a source of profit to the farmer, when he applies to the board which destroys the animal and allows the farmer a certain amount for the animal destroyed. The animal, however, remains with the herd long enough to infect the other members, and so the disease is preserved for the disbursement of new appropriations each year. It is impracticable, however, to convince the members of the legislature of the necessity of making one large appropriation and stamping the disease out as a whole and commencing with non-infected herds and disinfected or new barns. Legislation which is new in Rhode Island and of interest to all, is the passage of the so called "barbers' bill." As in other States and cities, the object of the bill primarily is to provide for cleanliness in shaving, hair cutting, etc., and to control the sanitary surroundings of barbers' shops and of barbers. Incidentally the labor question comes in for its share of attention and provision is made for the time required before permission to practise may be given, and this only after examination by a board appointed by the governor. The sanitary requirements must meet with the approval of the State board of health.

The Late Dr. Hugo Lupinski.—At a meeting of the Academy of Medicine of Grand Rapids, Mich., held on April 22nd, the following resolutions were adopted:

In the prime of manhood, at the zenith of his success, in the midst of a wide field of usefulness and endeavor, Dr. Hugo Lupinski departed this life, April 7, 1903; and,

Whereas, In the death of Dr. Lupinski the Academy of Medicine of Grand Rapids, as a whole and individually, has suffered an irreparable loss, in that his loyalty to the principles upheld by the academy was unflinching, and his ability as a scientific physician lent value and dignity to its meetings; and,

Whereas, The community at large as well has lost a true citizen and a faithful public servant, possessed of strong convictions and the courage of them,

Be it, therefore, resolved, That we, the Academy of Medicine and members of this community, do hereby express our sense of loss and sorrow, in a full realization of the good works and noble traits of character of our lamented colleague and brother; and,

Be it resolved, That these resolutions be spread upon the records of the academy, and that copies be furnished to the medical press, within the judgment of the secretary of this society, and to the sorrowing family of Dr. Lupinski, in evidence of our sympathy and grief. (Signed)

CHARLES E. HOOKER, *Chairman*,
HENRY HULST,
PERRY SHURTZ.

Official News.

Infectious Diseases in New York:

We are indebted to the Sanitary Bureau of the Health Department for the following statement of cases and deaths reported for the two weeks ending May 16, 1903:

DISEASES.	Week end'g May 9.		Week end'g May 16.	
	Cases.	Deaths.	Cases.	Deaths.
Measles	314	19	392	16
Diphtheria and Croup.....	405	51	366	44
Scarlet fever.....	323	18	380	18
Small-pox	0	0	0	0
Chicken-pox.....	108	0	98	0
Tuberculosis	293	175	335	151
Typhoid fever	25	5	50	11
Cerebro-spinal meningitis.....	0	0	0	0

An Examination for Assistant Surgeons of the Public Health and Marine-Hospital Service.—

We have received the following from the Treasury Department, Bureau of Public Health and Marine Hospital Service:

WASHINGTON, D. C., April 30, 1903.

A board of officers will be convened to meet at the Bureau of Public Health and Marine-Hospital Service, 3 B Street, S. E., Washington, D. C., Monday, June 15, 1903, for the purpose of examining candidates for admission to the grade of assistant surgeon in the Public Health and Marine-Hospital Service of the United States.

Candidates must be between twenty-two and thirty years of age, graduates of a reputable medical college, and must furnish at least two testimonials from responsible persons as to their professional and moral character.

The following is the usual order of the examination:

1. Physical. 2. Oral. 3. Written. 4. Clinical.

In addition to the physical examination, candidates are required to certify that they believe themselves free from any ailment which would disqualify for service in any climate.

The examinations are chiefly in writing, and begin with a short autobiography of the candidate. The remainder of the written exercise consists in examination on the various branches of medicine, surgery and hygiene.

The oral examination includes subjects of preliminary education, history, literature and natural sciences.

The clinical examination is conducted at a hospital, and when practicable candidates are required to perform surgical operations on a cadaver.

Successful candidates will be numbered according to their attainments on examination, and will be commissioned in the same order as vacancies occur.

Upon appointment the young officers are, as a rule, first assigned to duty at one of the large marine hospitals, as at Boston, New York, New Orleans, Chicago or San Francisco.

After five years' service, assistant surgeons are entitled to examination for promotion to the grade of passed assistant surgeon.

Promotion to the grade of surgeon is made according to seniority, and after due examination, as vacancies occur in that grade. Assistant surgeons receive sixteen hundred dollars, passed assistant surgeons, two thousand dollars, and surgeons twenty-five hundred dollars a year. When quarters are not provided commutation at the rate of thirty, forty and fifty dollars a month, according to grade, is allowed.

All grades above that of assistant surgeon receive longevity pay, ten per centum in addition to the regular salary for every five years' service up to forty per centum after twenty years' service.

The tenure of office is permanent. Officers traveling under orders are allowed actual expenses.

For further information, or for invitation to appear before the board of examiners, address

WALTER WYMAN,
Surgeon-General,
Public Health and Marine-Hospital Service,
Washington, D. C.

Public Health and Marine-Hospital Service Health Reports:

The following cases of smallpox, yellow fever, cholera and plague, have been reported to the surgeon-general, Public Health and Marine-Hospital Service, during the week ending May 16, 1903:

Smallpox—United States.

Places.	Cases.	Deaths.
California—Los Angeles	Apr. 25-May 2 ..	2
California—San Francisco	Apr. 26-May 3 ..	6
Colorado—Denver	Apr. 11-25 ..	53
District of Columbia—Washington	May 3-9 ..	1
Florida—Jacksonville	May 3-9 ..	3
Georgia—Atlanta	Apr. 29-May 6 ..	1
Illinois—Belleville	May 3-9 ..	5
Illinois—Chicago	May 3-9 ..	14
Illinois—Galesburg	May 3-9 ..	4
Indiana—Indianapolis	May 3-9 ..	7
Iowa—Des Moines	May 3-9 ..	4
Kansas—Wichita	Apr. 26-May 9 ..	1
Louisiana—New Orleans	May 3-9 ..	18
Maine—Biddeford	May 3-9 ..	1
Maryland—Baltimore	May 3-9 ..	4
Massachusetts—Holyoke	May 3-9 ..	1
Michigan—Detroit	May 3-9 ..	12
Michigan—Flint	May 3-9 ..	1
Michigan—Grand Rapids	May 3-9 ..	4
Michigan—Port Huron	May 4-11 ..	1
New Hampshire—Manchester	May 3-9 ..	2
New Hampshire—Nashua	May 3-9 ..	3
New York—Buffalo	May 3-9 ..	3
New York—Rochester	Apr. 30-May 7 ..	1
Pennsylvania—Johnstown	May 3-9 ..	3
Pennsylvania—McKeesport	May 3-9 ..	1
Pennsylvania—Philadelphia	May 3-9 ..	26
South Carolina—Georgetown	May 18	2
Tennessee—Memphis	May 3-9 ..	1 patient from Charleston. 2 cases im- ported.
Utah—Salt Lake City	May 3-9 ..	3
Wisconsin—Milwaukee	May 3-9 ..	2

Smallpox—Foreign.

Belgium—Brussels	Apr. 18-25 ..	7
Belgium—Ghent	Mar. 28-Apr. 25 ..	6
Brazil—Rio de Janeiro	Apr. 5-12 ..	3
Canary Islands—Las Palmas	Apr. 4-18 ..	44
Colombia—Bocas del Toro	Apr. 21-28 ..	Presu. t.
Great Britain—Birmingham	Apr. 18-25 ..	7
Great Britain—Dublin	Apr. 18-25 ..	8
Great Britain—Liverpool	To Apr. 25 ..	69
Great Britain—London	Apr. 18-25 ..	9
Great Britain—Newcastle-on-Tyne	Apr. 18-25 ..	2
Great Britain—South Shields	Apr. 18-25 ..	2
Great Britain—Sunderland	Apr. 18-25 ..	7
India—Bombay	Apr. 7-14 ..	67
India—Calcutta	Mar. 28-Apr. 18 ..	7
India—Madras	Mar. 28-Apr. 3 ..	1
Italy—Palermo	Apr. 18-25 ..	1
Mexico—City of Mexico	Apr. 12-26 ..	21
Russia—Moscow	Apr. 4-11 ..	5
Russia—Odessa	Apr. 11-18 ..	4
Russia—Warsaw	Apr. 4-11 ..	8

Yellow Fever.

Brazil—Rio de Janeiro	Apr. 5-12 ..	29
Colombia—Panama	Apr. 30-May 7 ..	3
Costa Rica—Limon	Apr. 23-30 ..	2
Ecuador—Guayaquil	Apr. 11-18 ..	2
Mexico—Tampico	May 2-9 ..	2

Cholera—Foreign

India—Calcutta	Mar. 28-Apr. 11 ..	206
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Plague.

Australia—Perth	To Mar. 23 ..	16
Australia—Rockhampton	To Mar. 28 ..	2
Australia—Townsville	To Mar. 28 ..	3
Brazil—Rio de Janeiro	Apr. 5-12 ..	2
India—Bombay	Apr. 7-14 ..	1,360
India—Calcutta	Mar. 28-Apr. 11 ..	1,779
India—Karachi	Mar. 29-Apr. 5 ..	195
		161

Public Health and Marine-Hospital Service:

Official List of Changes of Station and Duties of Commissioned and Non-commissioned Officers of the Public Health and Marine-Hospital Service, for the Seven Days ending May 14, 1903:

GEDDINGS, H. D., Assistant Surgeon-General. To proceed to Elkins, W. Va., for special temporary duty.

CARMICHAEL, D. A., Surgeon. Granted leave of absence for seventeen days, from May 19th.

KALLOCH, P. C., Surgeon. To assume temporary command of the service at Portland, Maine, during absence, on leave, of Surgeon S. D. BROOKS.

- BROOKS, S. D., Surgeon. Granted leave of absence for three days, from May 19th.
- OAKLEY, J. H., Passed Assistant Surgeon. Granted leave of absence for three days.
- GRUBBS, S. B., Passed Assistant Surgeon. Granted leave of absence for one month. To rejoin station at Gulf quarantine at expiration of leave of absence.
- DECKER, C. E., Assistant Surgeon. Granted extension of leave of absence, on account of sickness, for fourteen days, from April 10th.
- RICHARDSON, T. F., Assistant Surgeon. Granted leave of absence for three days, from May 8, 1903, under provisions of paragraph 191 of the regulations. To proceed to Gulf quarantine station for special temporary duty.
- GLOVER, M. W., Assistant Surgeon. To proceed to Newbern, N. C., for special temporary duty.
- DUKE, B. F., Acting Assistant Surgeon. Granted leave of absence for four days, from May 18th.
- GOLDSBOROUGH, B. W., Acting Assistant Surgeon. Granted leave of absence for five days.
- GREGORY, G. A., Acting Assistant Surgeon. Granted leave of absence for four days, from May 18th.
- KENNARD, K. S., Acting Assistant Surgeon. Granted leave of absence for twenty-one days, from April 25th.
- STEVENSON, J. W., Acting Assistant Surgeon. Granted leave of absence for seven days, from May 11, 1903, under provisions of paragraph 191 of the regulations.
- ROEHRIG, A. M., Pharmacist. Granted leave of absence for five days, from May 12, 1903, under provisions of paragraph 191 of the regulations.

Naval Intelligence:

Official List of Changes in the Medical Corps of the United States Navy for the Week ending May 16, 1903:

- DYKES, J. R., Acting Assistant Surgeon. Appointed Assistant Surgeon from April 18, 1903.
- SMITH, R. K., Passed Assistant Surgeon. Resignation accepted to take effect May 19, 1903.

Army Intelligence:

Official List of Changes in the Stations and Duties of Officers serving in the Medical Department of the United States Army for the Week ending May 16, 1903:

- DEVEREUX, JOHN R., First Lieutenant and Assistant Surgeon. Granted leave of absence for five days, from May 11th.
- HARTNETT, EUGENE H., First Lieutenant and Assistant Surgeon. Upon relief from duty at Fort Columbus, N. Y., will proceed to Key West Barracks, Fla., for duty, to relieve CHARLES N. BARNEY, first lieutenant and assistant surgeon, who will proceed to Fort Schuyler, N. Y., for duty.
- KENNEDY, JAMES M., Captain and Assistant Surgeon. Detailed as member and recorder of the examining board to meet at the Presidio of San Francisco, vice GEORGE J. NEWGARDEN, Captain and Assistant Surgeon, relieved.
- LIPPINCOTT, HENRY, Colonel and Assistant Surgeon-General. Granted leave of absence for one month, to commence about June 1st, with permission to apply for an extension of two months.
- ROBBINS, C. P., First Lieutenant and Assistant Surgeon. Granted leave of absence for ten days, from May 27th.
- WEBB, WALTER D., First Lieutenant and Assistant Surgeon. Detailed as a member of the examining board at the Army Building, New York city, vice CLYDE S. FORD, first lieutenant and assistant surgeon, relieved.
- WILCOX, TIMOTHY E., Lieutenant Colonel and Deputy Surgeon-General. Will proceed to such posts of the Department of the Columbia in Alaska as may be necessary on business pertaining to the sanitary and medical inspection thereof.
- The following Assistant Surgeons are ordered to duty in the Philippines: First Lieutenants NOEL I. BARRON, LOUIS C. DUNCAN, JAY W. GRISSINGER, PHILIP W. HUNTINGTON, EDWIN D. KILBOURNE, WILLIAM H. MONCRIEF, ALEXANDER MURRAY, LEON T. LE WALD.

Births, Marriages, and Deaths.

Married.

BEDINGER—LAUER.—In Indianapolis, Indiana, on Saturday, May 9th, Dr. Wade Bedinger and Miss Alice Lauer.

HOUCK—GEYER.—In New York City, on Thursday, May 14th, Mr. William Gabriel Houck, of Buffalo, and Miss Julie Emilia Geyer, daughter of Dr. Julius William Geyer.

HURT—HARRISON.—In Cleveland, Ohio, on Tuesday, May 12th, Dr. John A. Hurt and Miss Ida Alice Harrison.

MADDERN—HOWARD.—In Brooklyn, N. Y., on Monday, May 4th, Dr. William Harvey Maddern and Miss Helen Louise Howard.

Died.

BELDING.—In Rochester, N. Y., on Tuesday, May 5th, Dr. W. Homer Belding, in the seventieth year of his age.

CHAPMAN.—In Kansas City, Missouri, on Friday, May 15th, Dr. A. L. Chapman, in the seventy-eighth year of his age.

DYER.—In Washington, D. C., on Saturday, May 9th, Dr. John I. Dyer, in the seventy-sixth year of his age.

HASBROUCK.—In Poughkeepsie, N. Y., on Saturday, May 9th, Dr. Alfred Hasbrouck, in the eighty-third year of his age.

HEALY.—In Philadelphia, Pennsylvania, on Thursday, May 7th, Dr. John J. Healy, in the fifty-fourth year of his age.

HENDRICKS.—In Mantua Station, Ohio, on Monday, May 11th, Estella Hendricks, wife of Dr. Lyman Hendricks, in the forty-fifth year of her age.

HOLBROOK.—In Salem, Massachusetts, on Wednesday, May 13th, Dr. Solomon H. Holbrook, in the seventieth year of his age.

MCCHESNEY.—In Chicago, Illinois, on Thursday, May 7th, Dr. Alfred B. McChesney, in the seventy-fifth year of his age.

MILLER.—In Paris, France, on Tuesday, April 7th, Dr. Guy Bryan Miller, of Buffalo, in the thirty-first year of his age.

PERRIER.—In Cleveland, Ohio, on Sunday, May 10th, Dr. John Perrier, in the sixty-first year of his age.

ROONEY.—In Brooklyn, N. Y., on Sunday, May 17th, Margaret Rooney, wife of Dr. Alexander J. Rooney, in the fifty-eighth year of her age.

VAN HARLINGEN.—In Brooklyn, N. Y., on Sunday, May 17th, Dr. John Van Harlingen, in the fifty-seventh year of his age.

WARNOCK.—In Atlanta, Georgia, on Saturday, May 9th, Dr. J. T. Warnock, in the sixty-eighth year of his age.

Obituary.

THOMAS GEORGE MORTON, M. D.,
OF PHILADELPHIA.

The death of Dr. Morton, which took place in Cape May on May 20th, after a short illness, deprived the profession of one of its most brilliant and original surgeons. He was born in Philadelphia in 1835, and graduated in medicine at the University of Pennsylvania, in 1856. He served with distinction as a medical officer in the Federal army during the civil war. He was a frequent contributor to the periodical literature of medicine, and he was among the earliest to practise the radical operation for disease of the vermiform appendix.

Pith of Current Literature.

PRACTICE OF MEDICINE.

The Toxicity of Appendicitis, with a Report of Two Cases of "Appendicular Vomito Negro."

By George Ryerson Fowler, M. D. (*Medical Record*, April 25th).—Distinction must be made between general intoxication and distant infection. The former is the result of toxines or of toxic bacterial products. Its chief symptoms are icterus, with urobilinuria and albuminuria, together with the more or less rapid development of cerebral symptoms. The latter is due to the invasion of distant structures by the infecting microorganisms. Such an invasion may occur: (1) By displacement and migration of venous thrombi containing the agents of infection. (2) By the absorption of pyogenic organisms into the general circulation (pyæmia). (3) By infection through the medium of lymph channels at a distance from the original focus. The particular complication of appendicitis, to which the author wishes to call attention, is the occurrence of bloody vomit. He particularly invites attention to the consideration of the possible methods, by which the diffusion of the toxic agents, or of their products, is brought about and to how they cause the symptom under consideration. This symptom, which has been called "appendicular vomito negro," is usually accompanied by a condition of intense general intoxication. To this general manifestation of appendicitis has been given the name of "appendicular hæmorrhagic ulcerative gastritis." Dieulafoy has reported seven cases of this condition occurring during appendicitis and one case occurring with strangulated hernia. The author reports two cases that have come under his observation. Two of the cases reported came to autopsy. In both, numerous small ulcers were found in the stomach. Nitzsche, who reported one of the fatal cases, concluded that the ulcerative condition was not due to embolus, but to the digestive action of the gastric juices on the devitalized stomach mucosa. In the other case, one of Dr. Fowler's, both emboli and staphylococci were found in the vessels of the gastric mucosa. The reported cases show further that black vomit does not depend on the presence of a diffuse septic peritonitis. The author concludes that the gastric lesions constitute one of the local expressions of a distant infection as distinguished from an intoxication occurring through the circulation.

Perforating Typhoid Ulcer.—Dr. H. G. Kyle (*Bristol Medico-Chirurgical Journal*, March) refers to recent statistics that emphasize very forcibly the importance of early surgical intervention. The recoveries after operation undertaken during the first twelve hours were 40 per cent.; during the second twelve hours 10 per cent., and after twenty-four hours no cases recovered. The only constant early symptom is the sudden onset of pain, with localized and persisting tenderness; but unfortunately pain and tenderness occur apart from perforation, and it is far from easy to distinguish between colic and perforation. It may be said, as a rule, that the pain of colic is more movable, less per-

sistent, and less likely to be associated with tenderness; so, the combination of pain, tenderness, and some localized fixity will, the author believes, be found to be a constant indication for exploration. A rise in frequency of the pulse which continues to increase, is also a valuable indication when noted, and absence of liver dulness is of undoubted value when it is first noted at the onset of other symptoms. Collapse, if absent, must not be waited for. A profusion has been noted in several instances, as has also a rigor. The author considers these not as symptoms of perforation, but *rather* as indications for operation. If we act on this principle, we shall doubtless on some occasion open an abdomen needlessly, but if we do so, the risk to the patient is small and not to be compared with the risks of an undetected perforation.

As for resection, in many cases it must involve a considerable portion of the cæcum and ileum, because one would have to get beyond the area of ulceration. No successful cases of resection have been recorded thus far; but when we have so improved our powers of diagnosis that we can get the cases early, we shall be in a better position to improve our methods of dealing with the lesions found. Our present position is probably this: Most cases can be satisfactorily dealt with by suture, many cases are too bad to attempt it, but there is probably a certain percentage of cases in which it offers the best chance. We can, however, say nothing from experience on this point, as the method has not had a trial; but by getting suitable cases sufficiently early, we shall feel ourselves justified in giving it a trial.

Diphtheria.—Dr. Robert G. H. Tate (*Dublin Journal of Medical Science*, April), in a thesis for the degree of Doctor of Medicine in the University of Dublin, discusses, among other things, the close relation which appears to exist between the presence of diphtheria and the existence of faulty drainage or polluted water supply in the neighborhood. This connection of facts has been the cause of much controversy, some authorities stating that the emanations from faulty drains are in themselves capable of producing the disease, while others deny this assertion. The more recent researches seem to indicate that people constantly exposed to the lowering influences of drainage effluvia have their vitality reduced to such a low ebb that they are unable to resist the assault of diphtheria infection, and the coexistence of this disease and faulty drainage would seem thus to be partially, if not entirely, explained. The author quotes, in the matter of stains for the bacilli, a writer in the *British Medical Journal*, who states that the staining method of Neisser is absolutely diagnostic in the majority of cases; the polar bodies on the ends of the bacilli are found to take up a deep blue color, while the body of the organism is stained brown if the process is properly carried out.

As to treatment, the patient should be isolated from the rest of his family in a well-lighted, airy room, from which everything, except such articles as are absolutely necessary for his comfort, has been removed. The air should be kept at an even temperature of about 68° F., and also should be kept

moist by means of a steam kettle. The membrane may be removed by actual force gently applied, and by irrigating and swabbing with antiseptic lotions, which would appear to be most efficacious when applied in an alkaline condition, owing to the fact that mucus is dissolved by solutions of this nature. For the throat we must use the strongest antiseptic that can safely be applied, by means of a spray or on a swab of wool bound to a stick—perchloride of mercury in aqueous solution, up to a strength of even 1 in 500, having been used with marked success. Swabbing or spraying should be done three or four times each day, and it is well to remember that the bacillus is retarded in its growth by the presence of acid. Irrigate the cavities with alkaline antiseptic solutions (*e. g.*, glycerin and carbolic acid, 6 drachms; sodium bicarbonate, 2 ounces; water to 6 ounces) and endeavor by gentle manipulation to remove parts of the membrane, and immediately after this apply strong perchloride of mercury on a swab. With regard to general remedies, the great consensus of opinion seems to be in favor of iron perchloride. For a child of three years of age the following mixture seems beneficial:

R Tincture of iron perchloride.....5 minims;
Potassium chlorate 2 grains;
Syrup 20 minims;
Water half an ounce.

M. Make a draught to be taken every three hours.

Cardiac symptoms must be met by suitable treatment. A mixture containing digitalis and caffeine gives excellent results; but caffeine alone in two grain doses, in a tablespoonful of port wine, works well, if given frequently. Nephritic symptoms must be treated by the usual remedies, and the lungs must be also carefully watched, and, if necessary, attended to. With regard to intubation and tracheotomy, if, on inspection before operation, the lower ribs and intercostal spaces are sucked in by the effort at inspiration, we may hope for success, but if, on the inspiratory effort being made, no matter how strong it may seem, no such phenomenon is observed, the hopes of a successful result from operation are very slight. The introduction of the antitoxine treatment of this disease has, of course, reduced its nature from being one of the most virulent character to one of comparative innocence.

Chronic Angeiocholitis and Hepatic Insufficiency with Symptoms of Acromegaly.—M. Klippel and M. A. Vigouroux (*Presse médicale*, March 21st) in discussing the obscure ætiology of acromegaly, record the case of a man, fifty-three years of age, in whom they had an opportunity of watching the development of symptoms of acromegaly with those of chronic angeiocholitis and insufficiency of the liver. The latter was marked by digestive disturbances, an earthy color of the skin, repeated epistaxis, a foetid diarrhœa which lasted until death, and a diminished uræa secretion (150 grains in twenty-four hours). There was a modification in the elimination of methylene blue and a terminal motor delirium. Simultaneously, there was a progressive hypertrophy of the extremities, characteristically acromegalic, the fingers of the right hand

were strongly flexed with contracture of the palmar fascia. The mental state was confused. The tongue was extremely large and thick. Other characteristic symptoms of acromegaly were also present. At the autopsy, the pituitary gland was not markedly enlarged, but it was found to be sclerosed. Considering all the clinical elements of the case and the autopsy findings (which are given in detail) the authors believe that the insufficiency of the liver may be responsible for the acromegaly in not preventing the toxic elements which cause the latter disease from entering the circulation. [The article should be read in the original by those interested.]

Gonococcus Pneumonia.—Dr. Bressel (*Münchener medizinische Wochenschrift*, March 31st) reports the case of a man, thirty-two years of age who suffered from gonorrhœa for about six weeks. While in the hospital, he began to complain of severe and continuous headache, which in seven days was traced to a central pneumonia. The pulse during the disease was never over 80. Cultures taken from the blood gave rise to a growth of organisms which were identified as gonococci. Later, there was no growth from the blood. The author draws attention to the unquestioned origin of the pneumonia from the gonococci and to the cultural peculiarities above noted, that is, that the time of the taking of the culture is all important in all infections by the gonococcus.

A Case of Acute Ependymitis in an Infant. By Dr. J. A. Coutts. (*Lancet*, April 25th).—Cases of primary acute ependymitis, leading to the formation of pus in the cerebral ventricles, are exceedingly rare. The author reports the case of an infant, aged three months, characterized by vomiting, slight diarrhœa, and the occurrence of convulsions. At the autopsy the third ventricle and the lateral ventricles were found to contain pus, the dilatation of the latter being extreme. The ependyma was covered with a thick inflammatory deposit. Bacteriological examination showed streptococci. Judging from this case the main features of acute ependymitis in infants would seem to be acute onset with vomiting, a persistent hectic temperature, very frequent fits dating from the onset, and early and persistent bulging of the anterior fontanelle, along with convergent strabismus.

Some Remarks on Seasickness.—Dr. Otto Dornblüth (*Münchener medizinische Wochenschrift*, April 7th) says that it has been well demonstrated that many persons have the sensations of beginning seasickness as the vessel pitches forward, and that this feeling of the "abdomen falling away" disappears as the bow of the vessel rises. He has found the wearing of a tight abdominal binder and the taking of deep inspirations as the ship plunges forward efficacious in warding off this feeling and often in preventing seasickness altogether. He also advises the nightly administration of from thirty to forty-five grains of sodium bromide at bedtime for a week before the date of sailing. Women will do well to substitute for their corsets a snug abdominal binder.

Adipositas Dolorosa (Dercum's Disease).—M. Gilbert Ballet (*Presse médicale*, April 8th) in recording a case of this disease, goes minutely into the individual symptoms. The disease must be differentiated from myxœdema and trophœdema. Heredity seems to play some rôle, the ancestors frequently having been obese, gouty, asthmatic, or subject to migraine; in other words, the victims of nutritional disturbances. In Dercum's disease, the signs of premature senility are frequently present. Its origin is to be traced to some form of intoxication which is neither syphilitic or alcoholic, and which resembles thyroid intoxication. It is possible that the disease is due to defective action of some internal gland, but the nature of the toxine evokes simultaneously the peripheral nervous lesions and the encephalopathy. Thyroid medication has been tried, but it has not proved efficacious.

SURGERY AND ANATOMY.

Some Fatal Cases of Intestinal Obstruction.—Dr. William Taylor (*Dublin Journal of Medical Science*, March) directs attention to the lamentable results that must follow delay in undertaking the operative treatment of intestinal obstruction. Any patient, but especially one past the middle period of life, in whom the symptoms of complete obstruction, with stercoraceous vomiting, have been present for upwards of a week, should be considered a likely case in which a sudden failure of the heart may be anticipated. In such cases operations under eucaïne or cocaine anæsthesia, even with their attendant disadvantages, would be the more correct procedure. In early cases, where the patient's condition is fairly good, a free incision and the complete removal of the cause of the obstruction, followed by the evacuation of the contents of some of the coils of the intestines, if distended, is advisable. In the later cases, where the condition of the patient is very serious, we should only do a small incision, with the drainage of the first congested loop that presents. A more protracted operation in serious cases will surely prove fatal, whereas the simple procedure will occasionally be successful in tiding the patient over his danger for the time, when, under a more favorable condition, the abdomen can be opened and the cause of obstruction removed. The author gives a valuable hint in advising that, as there may be more than one cause of obstruction, cases admitting of free exploration, should be carefully examined for further causes of obstruction after one is found and relieved, and this more especially if there has been a history of previous peritonitis. The treatment of strictures or tumors whether simple or malignant in which acute symptoms have supervened, is of great importance and no matter what the temptation to resection and end-to-end anastomosis at the time the exploration is undertaken, it should never be yielded to. The intestine above the obstruction should first be drained, either by tying in a Paul's tube or by performing a temporary colostomy or enterostomy, and the patient should be relieved of his obstruction in this way and tided over his condition of septic poisoning before the actual "*fons et origo mali*" is removed and the continuity of the gut established. It is im-

portant to wash out the stomach after, as well as before, the operation, to relieve the stomach of the septic decomposing contents of the upper part of the intestinal tract, which, during the intraabdominal manipulations, are sure to find their way into the larger viscus. Uncertainty of diagnosis should not be permitted unduly to postpone operation, and it is also well to remember the dictum of Sir Frederick Treves on this subject, who says "operation in these cases is too often regarded as a last resource; it should be *the first* as it certainly is *the only* resource."

The Surgical Treatment of Gastric Ulcer. By Dr. C. Mansell Moullin. (*British Medical Journal*, April 25th).—The author does not advocate operation as a general mode of treatment for all cases of ulcer of the stomach—the condition is more medical than surgical. He has operated upon fifteen cases of active gastric ulcer, with two deaths. In twelve cases the ulcer was excised or ligatured in various ways. In two gastrojejunostomy was performed, as the ulcer could not be dealt with locally; and in one the ulcer was not in the stomach but in the duodenum. In four cases the immediate cause for operation was persistent pain and vomiting. These patients all recovered. In the other eleven cases the immediate cause was hæmatemesis, and in six of these the loss of blood had been so severe that transfusion had to be performed. Two of these patients died. No patient died that was not literally moribund at the time of operation. The classical funnel-shaped ulcer is almost never found; in its stead are cracks and fissures from which the bleeding takes place. In acute ulceration there are two indications for operation—perforation and hæmorrhage. Perforation can rarely be diagnosed beforehand, but the presence of persistent cutaneous hyperæsthesia in Head's epigastric triangle, is an evidence that an ulcer is spreading instead of healing. If hæmorrhage from the stomach is so profuse as to endanger life, an attempt must be made to expose the bleeding point. But it must be remembered that gastric hæmorrhage often stops just before a fatal result is produced. Each case must be judged on its merits. A single hæmorrhage is rarely fatal. But if the pulse grows more rapid, and if restlessness and yawning appear, the hæmorrhage is probably still going on, and exploration should be performed. Frequently repeated hæmorrhages, even if small, rapidly produce anæmia and a liability to tuberculosis; in 20 per cent. of such cases the patients die subsequently of phthisis. It is a question whether early operation should not be advised in such cases.

In every case of chronic ulcer of the stomach, operation should be performed without delay. Such cases are beyond cure, except by operation, and the longer they last the worse they get. Perforation and peritonitis, subphrenic and perigastric abscesses, adhesions, hour-glass contraction of the stomach, pyloric stenosis, and cancer are simply the result of leaving things alone in many instances. On the other hand, the operation is very simple, and should be no more serious than an internal operation for appendicitis. Gastroenterostomy should be reserved for cases of multiple ulceration of obsti-

nate recurrence, or in which there is already some degree of pyloric stenosis. It cannot stop bleeding but places the stomach at rest, and so enables the ulcer to heal.

The Surgical Treatment of Tuberculous Peritonitis. By D. S. Fairchild, M. D. (*Philadelphia Medical Journal*, April 18th).—After reviewing the general subject of tuberculous peritonitis and giving the indications for operative intervention, as formulated by various writers, the author gives his own conclusions as follows: (1) If an intraabdominal focus of tuberculosis is diagnosed or is suspected, an abdominal section should be made with a view to efficient treatment. (2) If a chronic tuberculosis of the peritonæum with ascites is diagnosed or believed to exist, laparotomy is indicated as soon as it is found that medical and hygienic treatment has failed. (3) In fibrous tuberculosis of the peritonæum the same course should be pursued, and if cheesy degeneration has not commenced or progressed too far, a certain percentage of recoveries will follow. In acute tuberculous peritonitis with ascites and high temperature, laparotomy is useless. In extensive adhesive tuberculosis with matting of the intestines, laparotomy is useless, and the attempt to separate the adhesions is dangerous in its immediate results.

The Question of Anæsthesia.—Dr. G. Burckhard (*Zentralblatt für Gynäkologie*, April 4th) is in favor of the use of chloroform. In 2,000 narcoses, there was but one fatal case and one case of asphyxia. He does not employ the drop method, although he admits it does not increase the danger; he uses the chloroform poured on the mask in quantity. If the heart contraindicates the employment of chloroform, Burckhard uses the A. C. E. mixture of Billroth (chloroform, ether and alcohol).

A Case of Partial Gastrectomy, with Remarks upon the Treatment of Malignant Disease of the Stomach. By B. G. A. Moynihan, F. R. C. S. (*British Medical Journal*, April 25th).—In order to discover the lines which an operation for cancer of the stomach should follow if local recurrence is to be avoided, it is necessary to inquire into, first, the mode of invasion of the stomach by the growth, the lines of spread, and the rapidity of growth; and, secondly, the anatomy of the lymphatic system of the stomach, the direction of the lymphatic vessels, and the location of their terminal glands. The results of the author's investigations on these points are as follows:

(1) That malignant disease of the stomach begins in most instances near the pylorus just below the lesser curvature. (2) That from this point it spreads most widely and most rapidly in the submucosa. (3) That the rate of growth toward the cardiac orifice is rapid, toward the duodenum very slow. The duodenum is rarely affected extensively. (4) That the tendency of the growth is to drift toward the curvatures.

The lymphatic system of the stomach consists of (a) an area along the lesser curvature; (b) an area along the greater curvature; and (c) an "isolated" area, over the greater tuberosity and lower end of

the œsophagus. The author reports a case of partial gastrectomy performed alone these lines. While the patient died 312 days after the operation, yet he was relieved of all the local growth, and the operation was not followed by any recurrence in the stomach or duodenum. The cause of death was secondary growth in the lungs and liver.

New Local Anæsthesia for Inflamed Tissues.—M. E. Foisy (*Presse médicale*, March 25th) employs a combination of cocaine and adrenalin for local anæsthesia in inflamed tissues. The injection is made endodermically and before incision a few centimetres are injected into the cavity of the abscess. The injection is made in the same manner as an infiltration anæsthesia. The anæsthesia is perfect, the tissues are exsanguinated by the solution and there is consequently no hæmorrhage; the tissues are blanched and vessels can be easily seen and ligated. To avoid symptoms of vertigo and syncope, it is desirable to have the patient recline for a few hours following the operation. The advantages of this method of anæsthesia consist in the entire absence of pain and the possibility of executing rather severe surgical manœuvres. Foisy has opened abscesses with this anæsthesia in all parts of the body and has extirpated a carbuncle of the neck and has operated upon an anal fistula. The ordinary solution employed is

Cocaine hydrochloride (1-200) . . . 10 c. c.;

Adrenalin (1-1,000) 10 drops.

For large incision and for the removal of morbid tissues, he uses,

Cocaine hydrochloride (1-200) 20 to 25 c. c.;

Adrenalin (1-1,000) 13 to 15 drops.

To avoid distention of the tissues in furunculosis and felons, thus eliminating pain, this solution is used:

Cocaine hydrochloride (1-100) 1 c. c.;

Adrenalin (1-1000) 4 to 5 drops.

An Analysis of 110 Operations for Strangulated Hernia. By W. Thorburn, F. R. C. S. (*British Medical Journal*, April 25th).—The 110 cases of strangulated hernia reported by the author are classified as follows: Inguinal, 55 cases and 15 deaths; femoral, 37 cases and 8 deaths; umbilical, 17 cases and 3 deaths; ventral, 1 case and 1 death. Of the 27 deaths, 9 were due to delay leading to gangrene, and 14 to delay which rendered the patient unable to stand the shock of the operation; 2 resulted from other causes (mitral stenosis); and 2 were direct results of the operation. The average age of the patients in the fatal cases was fifty years, in the cases in which recovery ensued, forty-one years. In the majority of cases no cause for the strangulation was assigned. The contents of the hernia included intestine in all cases, no case of simple epiplocele being met with.

Knock-Out Blows. By J. G. Duncanson. (*British Medical Journal*, April 25th).—An impression prevails that there is only one blow—that on the point of the jaw—which constitutes the knock-out blow. This is an error. The temple is a very vulnerable part of the head, the lesion usually produced being laceration of the brain substance with

hæmorrhage. A blow on the ear may cause rupture of the membrana tympani, and collapse. Dangerous points are over the carotid and on the larynx—the danger lying in the concussion conveyed through the large nerve trunks which run down the neck. A blow on the larynx with the bare fist may cause instant death, as may one on the chest wall over the heart. Diaphragmatic blows are not so dangerous to life, the shock being temporary. Brisk rubbing and the use of stimulants, is the most satisfactory mode of treatment. Blows over the kidneys may cause rupture and hæmorrhage with intense pain and shock. The most dangerous and infinitely painful form of knock-out blow is that on the "mark"—an area of the abdominal wall corresponding to the centre of a triangle formed by the xiphosternal articulation above, and a line joining the bony ends of the seventh ribs below; behind this lies the pyloric end of the stomach. A blow here constitutes the "solar plexus" blow, but in reality it is the stomach which receives and transmits the shock.

MATERIA MEDICA, PHARMACY, AND THERAPEUTICS.

Dietetics. By Dr. R. Hutchinson. (*Lancet*, April 25th).—The diet of a healthy man must fulfil two well defined conditions: (1) That the food yields enough potential energy to supply the daily outgoings from the body in the form of heat and work; and (2) that it contains enough proteid to replace the daily and inevitable waste of tissue. There are three great groups of diseases in which dietetic means are potent for cure. These are: (1) Diseases of the organs (stomach and bowels) which prepare and elaborate the food; (2) diseases of metabolism (fever, obesity, malnutrition, diabetes, and gout) in which there exists a perversion of the usual methods of dealing with the nutritive constituents of the food by the cells; and (3) diseases of the excretory organs (especially the kidneys) which are concerned in removing from the body the end products of the food.

In dyspepsia the mechanical form of the food is more important than its chemical composition. The meals of a dyspeptic must be small and easy of solution. In organic affections of the stomach food is everything, in functional disorders it is of little importance. In diarrhœa the food must leave as little residue as possible; in constipation the reverse obtains. Acute fever cases should not be overfed, but in chronic fevers one may be liberal with the diet. In all forms of fever carbohydrates should enter freely into the dietary. In obesity, the carbohydrates and fats should be restricted; abstention from fluid at meals does good by rendering it difficult to overeat. Alcoholic liquids should be avoided, alcohol being a potent sparer of fat. In diabetes a large consumption of fat, for that ingredient of the food alone is devoid of risk. The milder a case of diabetes, the more rigidly should the diet be restricted. A sharp distinction as regards diet should be drawn between acute and chronic renal disease. In acute nephritis an exclusively milk diet is best. But in chronic nephritis proteid is necessary, in order to sustain a vigorous heart action; meat should be given, but its non-albuminous ex-

tracts should be avoided. Where there is a considerable amount of dropsy the amount of fluid given should be restricted. The idea that fluid promotes elimination in such cases is groundless.

Therapeutics of a Sea Voyage.—Dr. H. Roxburgh (*The Bristol Medico-Chirurgical Journal*, March) remarks that the popularity of the sea voyage as a therapeutic measure has markedly declined in recent years. He attributes this to the altered conditions of ocean travel. Passengers are no longer conveyed to distant ports in sailing ships which take months of varied experience on the wide seas to reach their destination, but are hurried thither in half or a quarter of the time in crowded steamers, whose dates of arrival can be calculated with mathematical precision. From the point of view of the health seeker there can be no comparison between the two methods of transit. The liability to sea-sickness is less on a sailing vessel. The constant vibration of the steamer predisposes to sickness, and even under the very best conditions it is impossible wholly to eliminate the disagreeable emanations from the engine room, the disturbing noise and throb of machinery, and the falling of soot on deck. Above all the constant course of the steamer irrespective of contrary winds and currents, gives rise to the incoordinate movements of pitching and rolling which, with the thump of the propeller, are trying, even to the most seasoned traveller. In a long voyage by steamer, a "bad sailor" may suffer so continuously as to be brought into a state of dangerous asthenia. With the yielding movements of a sailing vessel seasickness is but transient.

In convalescence from acute illness, in nerve exhaustion from overwork or any other cause, and in the anæmia and enfeeblement of rapid adolescence, no treatment, according to the author could possibly be better than a long sea voyage. Such absolute repose of body and mind can never be obtained at any health resort at home or abroad. The absence of a daily newspaper and of the excitements of the telegraph and post, the freedom from all petty anxieties and social worries, the perfect physical rest, the soporific effects of the air, the cradle-like movement of the ship, the unrivalled opportunity for general reading, and the first-hand contact with Nature—all these are wholesome and recuperative features in an environment which reduces life to its primal elements, and banishes fatigue of the nerve centres and of the organic processes. In the neurasthenia accompanying prolonged dyspepsia, however, the voyage is contraindicated, because a certain amount of monotony in the diet is unavoidable, and, though hardly appreciable by a healthy stomach, it is unfavorable to the dyspeptic.

GENITO-URINARY DISEASES.

The Treatment of Syphilis. By W. D. Trenwith, M. D. (*Medical News*, April 25th).—The fundamental principle in the treatment of syphilis consists in giving mercury in the early stages, when the infiltrating round cells are young and are easily destroyed, and in giving potassium iodide later when the round cells have become degenerated and it becomes necessary to remove them. For purposes of treatment syphilis may be divided into four stages.

It is to be remembered that in practice these stages are only clearly defined in typical cases. The stages are to be distinguished by the kind of lesion present and not by the time that has elapsed since the occurrence of the infection. *Stages of syphilis and their treatment.* (1) The secondary incubation or pre-eruptive period. This stage extends from the appearance of the primary sore to the development of the secondary rashes, a period of about forty days. No specific treatment is to be instituted at this time. Confirmation of the diagnosis is to be awaited. The treatment will consist in forbidding smoking, chewing, and drinking; in seeing that the chancre is kept clean; in having the patient's teeth put in good order; in prescribing a potassium chlorate mouth wash, and in putting the patient on an iron tonic. Cutting out the chancre will never have any effect on the development of the syphilitic infection. (2) The eruptive stage, including the first six or seven months. The author prefers to treat his cases by the inunction method. He uses the official, 50 per cent. mercury ointment and starts with 30 to 40 grains. He uses Dr. Taylor's division of the body, into eleven parts, for the seats to which the ointment is to be applied in rotation. Patients must be closely watched in order to avoid salivation. If the first series of applications has been well borne, the second set of inunctions is performed with 45 grains of the ointment at a time. On the completion of the second round, if salivation has not occurred, the quantity of mercury is raised to 60 grains. The inunctions are now stopped and the patient is put upon the saturated solution of potassium iodide, beginning with ten drops three times a day, and rapidly increasing the dose up to 25 drops. The iodide is continued for about fifteen days. It is then discontinued and the inunctions are resumed, two series of eleven applications being given. Then the iodide treatment is resumed. The alternate use of mercury and the iodide is persisted in up to the end of the sixth or seventh month. By this time the patient's entire body will have been anointed from seven to twelve times. The author lays great stress on the necessity of having all parts of the patient's body anointed. (3) From the sixth or seventh month to the end of the second or third year—the late secondary stage. The patient is given three or four weeks' rest just before beginning the treatment of the third stage. This consists in administering the mixed treatment (mercury biniodide $\frac{1}{32}$ to $\frac{1}{24}$ grain and potassium iodide 5 to 15 grains) up to the end of the first year. Following this the iodide is given by itself in gradually increasing doses, up to 50 or 60 grains t. i. d., p. c., for two months out of every four. Occasionally the iodide treatment will be suspended for a short time in order to resume the mixed treatment. The author considers the special treatment of some of the rebellious lesions that are occasionally met with. Injections of mercury bichloride are often of great use in overcoming intractable tertiary lesions. This method is not to be commended as a routine treatment for syphilis. The same may be said of mercury fumigations. (4) The tertiary stage. Potassium iodide in large doses will, as a rule, give the best results. One must not expect to cure patients suffering from tertiary syphilis. The most

one can do is to make them fairly comfortable. At times when the iodide of potassium fails, fumigations, the injections of bichloride, the biniodide of mercury, or the mixed treatment will be found of value.

The Symptoms and Diagnosis of Stone in the Kidney. By R. C. Lucas, M. B. (*Lancet*, April 25th).—Attention is usually first drawn to the existence of stone in the kidney by the occurrence of pain. But in some cases pain may be entirely absent; its variability depends upon: (a) The position of the stone—where it is in the fleshy or secreting portion of the kidney, it causes no pain, but if in the pelvis of the kidney, it may cause excruciating agony. (b) The more movable a stone, the more pain it is apt to cause. Pain, to be of service in the diagnosis of renal calculus, must be unilateral. Its character varies greatly in different cases, an aching, gnawing pain extending from the loin through to the front being that most commonly complained of, due to reflection along the last dorsal nerve. Attacks of renal colic and transferred, radiated, or reflected pains are almost symptomatic of stone in the kidney. The pain is apt to be worse at night, and to be increased by jolting exercise. It is said to vary with the composition of the calculus, oxalate of lime calculi causing the most pain, those of uric acid the least. The author recommends violent stamping of the foot on the affected side; a sudden acute pain is commonly caused by this manœuvre if a calculus is present. Hæmaturia alone is of little value in the diagnosis of renal calculus. In rare cases the blood coagulates in the pelvis and ureter, giving rise to characteristic mouse-tail clots. Hæmaturia may be the only symptom of calculus; it is almost invariably excited or increased by severe exercise, and quickly subsides with rest in the horizontal position. Where it follows an attack of renal colic it is very characteristic of calculus. It may be so great as to cause death. Frequency of micturition is by no means a constant symptom, and is due more often to conditions secondary to the stone, than to the stone itself. It may even give place to extreme tolerance. Extreme irritability of the bladder and painful micturition felt in the perinæum and at the end of the penis may be caused by a stone impacted in the ureter. Frequent micturition, sudden uncontrollable desire to pass urine, and incontinence, are often symptoms of renal calculus in children. Retraction of the testis is a more obvious and important sign in children than in adults. The most important information to be gained from the previous history of the patient is that of the passage of small calculi or gravel. Grating, when the kidney is grasped, is the only definite indication of the existence of multiple calculi. Total suppression of urine and its consequences, may be the first indication of renal calculus obstructing the outlet of the one remaining kidney. X ray photographs, when negative, cannot be implicitly relied on.

Among the conditions liable to be mistaken for renal calculus are the following: tuberculous disease of the kidney, movable kidneys, lithiasis and oxaluria, acute Bright's disease and chronic granular or gouty kidney, villous growth in the pelvis of the

kidney, biliary colic and distended gall bladder, caries of the spine in children, and colic of the appendix vermiformis.

LARYNGOLOGY, RHINOLOGY, AND OTOLOGY.

Laryngeal Paralysis and Crises in Tabes Dorsalis.—M. Collet (*Lyon médical*, March 22d) reports several cases of locomotor ataxia in which prominent features were paralysis or spasm of the larynx. He says that the laryngeal crisis is not dependent upon a paralysis of the dilators of the glottis, as a mechanical result. The paralysis simulates a crisis when heard at some distance or on superficial examination; but it also increases the intensity of the spasm, frequently coexists with it, and is one of the principal factors in favoring the contraction of the adductors and in placing the larynx in a continual state of imminence of spasm. Collet calls attention to the beneficial effect upon the pulse and the crises obtained by suspension and consequent extension of the cord.

OPHTHALMOLOGY.

Three Cases of Different Forms of Congenital Syphilitic Disease of the Eye Occurring in the Same Family.—Dr. James Hinshelwood (*Glasgow Medical Journal*, April) gives three cases of interest to specialists. With regard to the treatment of diseases of the eye due to congenital syphilis he remarks that great benefit may be derived from mercurial treatment, combined with full doses of syrup of the iodide of iron. Mercury he administers either in the form of grey powder, or by inunction. We must, of course, recognize the limits of treatment and not expect too much from it. No treatment can repair or restore tissue which has been destroyed or irreparably damaged. In all cases, however, specific treatment, properly carried out can put an end to the activity of the specific poison and to the further progress of the disease. Hence the great importance of an early diagnosis, before extensive damage has been done to the delicate structures of the eye. The author urges the necessity of an ophthalmoscopic examination at the earliest possible period in the cases of infants or young children who may show evidence of defective vision. Unfortunately we do not see these little patients until their vision has become very defective and the delicate structures of the eye irreparably damaged. In these cases the early diagnosis is of the utmost importance, as it is then, before destruction of tissue has taken place, that the greatest benefit can be derived from treatment.

PHYSIOLOGY AND PATHOLOGY.

The Pathogenesis of Diabetes. By Henry S. Stark, M. D. (*Medical Record*, April 25th).—The author examines the facts on which the various theories of the causation of diabetes have been based and, as a result of his review, formulates the following conclusions: (1) The exact truth of the pathology of diabetes is not known. (2) There are no constant anatomical appearances of the liver or of the pancreas that are acknowledged to be asso-

ciated with diabetes mellitus. (3) There are no characteristic lesions in any other organ. (4) An impairment of the physiological function of the ductless glands may be at the root of the disease. (5) Artificial glycosuria is not diabetes. The facility with which this phenomenon can be elicited, implies its insignificance as a pathological factor. (6) So far as can be ascertained from reliable sources, there is hope that the vacuum in our knowledge of the nature of diabetes will soon be filled.

Probable Nature and Life-Cycle of the Yellow Fever Germ.—Idle though it may seem to speculate about a germ which has never been seen Carlos Finlay (*Revista de Medicina Trópic*, April) offers some very plausible theories concerning the nature of the yellow fever germ. The fact that the germ requires two hosts for the completion of its life-cycle, one of them being the body of a non-immune human being, and the other a particular species of mosquito, establishes an analogy with the mode of propagation of malaria, which, in the author's opinion, suggests that the germ of yellow fever, like that of malaria, must be a protozoon rather than a bacterium; and that the former goes through phases of development more or less similar to those of the malarial parasite. He believes that, while the human subject is rightly considered the permanent host of the malarial parasite, it is the stegomyia mosquito which acts in that capacity for the yellow fever parasite. He calls attention to the fact that malaria, untreated, is a chronic affection of long duration; while yellow fever is a very acute disease running its course, as a rule, in the space of a week. Though it is not known how long the young embryos of the malarial parasite may live within the body of the contaminated anopheles, it seems evident to him that, cramped and crowded together in the tiny body of the insect, the embryos of the malarial parasite would not be able to reach their full development, for want of space and such nourishment as would have been supplied by the human blood. On the other hand, he states that it is positively known that the germ of yellow fever continues to live within the body of the stegomyia mosquito at least two months, and probably till the natural death of the mosquito host. A further point of contrast is seen in the fact that the anopheles becomes infected by biting a person suffering from malaria at any time when the parasite, in the form of gametes or of resting bodies, happens to be present in the peripheral blood circulation of that person; a condition which may last during several months; while the yellow fever mosquito (*Stegomyia fasciata*) can only become infected if it chances to bite a yellow fever patient within the first few days of his attack; and when convalescents just recovering from an attack of the disease are removed to another locality inhabited by non-immunes, though there may be an abundance of stegomyia mosquitoes, the infection is not transmitted to their new abode. This contrast he deems, however, more apparent than real, if it is granted that the stegomyia mosquito acts, for the yellow fever germ, the same part that the human host does for the malaria parasite. Finlay believes that the yellow fever germ, being a parasite of a very small insect

in whose body it must go through all the phases of development and multiplication by schizogonia with only the very scant food supply to be obtained from the tissues of its host, must of necessity be a much smaller protozoon than the malarial parasite. He deems it possible, however, that in the body of the contaminated stegomyia some larger, resting form, analogous to the crescent of malaria, may some time be discovered.

Limitations of the Dimethylamidoazobenzol Test for Free HCl in the Stomach Contents.

By Wilbur F. Skillman, M. D. (*American Medicine*, April 18th).—Lactic acid, in amounts of 2 per cent. or more, in the gastric juice, will give, with Topfer's reagent, a reaction resembling the one due to free HCl. This objection is not so important as it at first sight appears, since, in the presence of food, the amount of lactic acid necessary to produce the reaction is considerably greater. A diagnosis should never be based exclusively upon the results of an analysis of the stomach contents. The physical examination of the patient's abdomen should be always used as a check to purely laboratory findings. If the cautions noted below are observed, the so called Töpfer test will be found reliable for clinical examinations: (1) If the test for lactic acid is positive, Gunzberg's or Boas's reagent, or some other method, should be used to determine whether the dimethyl reaction is due to lactic acid or to free HCl. (2) If the stomach is normal, both as to size and position, and the peristaltic function is unimpaired, then dimethyl will give fairly accurate results. (3) If the size and position of the stomach are not normal, or if the peristaltic function is delayed, then Gunzberg's or Boas's test should be first performed, to test positively whether free HCl is causing the reaction, or whether it is caused by organic acids, before proceeding to titration with dimethyl.

The Reaction Time of Corrosive Sublimate in Different Dilutions Against Various Species of Bacteria.

By Charles Harrington, M. D., and Harold Walker, M. D. (*Boston Medical and Surgical Journal*, April 23).—The organisms employed in making the experiments were: *Bacillus pyocyaneus*, *Staphylococcus pyogenes albus*, *Staphylococcus pyogenes aureus*, *Bacillus coli communis*, *Bacillus diphtheria*, *Bacillus typhosus* and *Bacillus anthracis*. The solutions of corrosive sublimate used were 1:1,000, 1:5,000, 1:10,000. Pieces of silk thread, about three quarters of an inch long, were first infected, and then subjected, under varying conditions, to the disinfecting solutions. The paper gives tables showing the results obtained from each experiment. The conclusions, condensed, which the authors draw from their experiments are appended: "(1) Different species of pathogenic bacteria, and different cultures of the same species, vary very greatly in their resistance to corrosive sublimate. (2) With some species, resistance is diminished to a remarkable degree by a condition of dryness, so that even the 1:10,000 solutions can bring about sterility in a very short time. But some

species are not materially affected in this respect by dryness. (3) Corrosive sublimate in as weak solution as 1:5,000 is ineffective against the common pathogenic bacteria, including the pus organisms, when they are moist, excepting after prolonged contact . . . the use of this and weaker solutions in surgical work and for irrigations and similar purposes should be abandoned. (4) Corrosive sublimate in the 1:1,000 solution is very slow in its action on some of the commonest of the skin bacteria . . . It should not be relied upon to any great extent to secure sterility of the hands or of instruments . . . (5) Corrosive sublimate in any of the strengths commonly employed is a much overrated disinfectant, and, under the best of conditions, is so uncertain in its action that it would be of advantage to abandon its use altogether in surgery."

On Regeneration of the Blood.—Dr. P. Schmidt

(*Münchener medicinische Wochenschrift*, March 31st) concludes that basophilic granules and polychromatophilia appear especially in the convalescence of anæmias at a time when the general condition improves. This change for the better occurs in anæmias of toxic and traumatic origin, as well as when a loss of blood has taken place. Experimentally, if a rabbit's ear is shut off from the general circulation after the injection of a blood poison, the basophilic granules appear everywhere except in the ear in from sixteen to eighteen hours. In many cases of experimental anæmia, as well as in human anæmias, all stages can be observed in a single blood-cell, from gross nuclear changes to the finest dust-like granules. In some cases of experimental anæmia, the granules can be seen exclusively in the nucleated red-blood cells. Basophilic granules and polychromatophilia can be observed physiologically in the blood of new-born animals and in embryos of advanced development, while at the same time, nuclear rests and many normoblasts are visible. The proof that polychromatophilia arises from a solution of the granules can be made experimentally, in that the blood of an animal which contains many basophilic granules shows a decided diminution of the granules after the injection of alcohol or hydrochloric acid, while there is a decided increase in the polychromatophiles; the same experiment on animals not possessing basophilic granules evokes no increase in the polychromatophilic cells. About three quarters of all nucleated cells or at least the greater number of those retaining a larger portion of their nuclei, as well as embryonal blood and the blood of the marrow, is polychromatic. In consideration of all these factors, it is evident that the basophilic granules are derived from the nucleus and represent a regenerative process, and that the polychromatic faculty of the red blood cells arises in the majority of instances from the dissolved nuclear substance mixed with hæmoglobin. In other words, the basophilic granules and the polychromatosis are young forms of blood cells and represent the regeneration of the blood.

Proceedings of Societies.

THE SOCIETY OF THE ALUMNI OF CITY (CHARITY) HOSPITAL.

One Hundred and Second Stated Meeting, November 12, 1902.

The President, DR. G. H. MALLETT, in the chair.

Ectopic Gestation.—Dr. ALEXANDER LYLE presented a specimen received from a married woman, twenty-three years of age. It was the first pregnancy and of ten weeks' growth. Shortly after her last menstruation she had a sharp pain which was diagnosed as colic. When the second rupture occurred on the left side, Dr. Lyle was called and, after consultation, operated. Though the patient was extremely blanched and almost pulseless she made a perfect recovery. The specimen showed that the first rupture was into the broad ligament and the second into the peritoneal cavity. After the first rupture it had fallen into the cul-de-sac, where a new covering was formed from which it ruptured into the peritoneal cavity. One half of the placenta was in the tube and half in the new sac.

Dr. G. H. MALLETT said that in quite a number of these cases of ectopic gestation, it was a common thing to have as a premonitory symptom the oozing or slight rupture of which Dr. Lyle spoke. The patient Dr. Mallett had shown here last year had had one of these attacks of severe pain and symptoms of shock. It had passed away very quickly, and the final rupture had occurred some three weeks after that. This patient he had taken into the hospital, and there had not been found any mass on examination. The rupture had occurred later, and after the abdominal incision had been made the foetus hopped out of the abdominal wound. He had shown it here.

Dr. A. LYLE, replying to some remarks by Dr. Childs, wished to say that there had been a general oozing. There were two points he forgot to mention when speaking of the case. One was that the placenta was attached down in this cul-de-sac in the new sac, and in lifting it off the peritonæum, the latter was torn off the vessels, which could be seen lying bare on the floor of the pelvis. On examination he found a mass on each side of the pelvis. After they had got this side cleaned out, he went over to the right side, and found a mass there, which was about what was to be expected with a two months' unruptured ectopic. He took that out and preserved it in alcohol, and was congratulating himself that it was a double ectopic before he had it examined. The pathologist, however, said that it was not ectopic—only a blood clot. It was interesting to determine how the blood clot got into the right tube. There was a great deal of blood in the peritoneal cavity, but how did the blood clot get into the right tube?

Dr. W. E. CLADEK said that he had an interesting case of rabies to report, that ended the usual way. The patient was bitten on April 17, 1902. He was a big, powerfully built man, and his hand was very badly lacerated. The animal was killed; nothing was done in the way of examination, and the man forgot about the thing for a time; then he began

worrying. All during July and August he spoke to his friends as worrying about himself in fear of rabies. He worked all this time in a machine shop, and he worked all the last week of August. Dr. Cladek saw him on the night of August 21st. He had worked the day previously, and then he appeared to be in an hysterical condition. Dr. Cladek confessed that he was fooled in the case; he thought the man was simply worrying about it and had worked himself up into an hysterical condition. He exaggerated most of his symptoms; he would attempt to drink, and try to show how he would drink; would go through contortions, had a good deal of pain, was gasping for breath, and at the same time would jump up out of bed and walk round the room. One constant symptom he had was a constant desire to pass urine, with a feeling of seminal ejaculation and partial priapism. Dr. Cladek saw him again the next morning about nine o'clock. He had shaved himself before the doctor saw him. He would get up and go around the room, and appeared to have the use of his limbs; and still there were the same urinary symptoms and the same difficulty in drinking. He could drink, however, by trying hard. He spent the day in trying to drink and to see how much he could drink. Dr. Cladek saw him again in the evening, and he died in convulsions shortly afterwards.

Dr. Cladek wanted to get a specimen of the cord to see if anything could be made out microscopically, but the patient's friends would not allow it. The duration of the disease from the time of the bite to the time of the symptoms was four months and a half. The last week that he worked he complained of backache, and was stretching his arms constantly to get rid of the aching feeling, as he expressed it.

Dr. J. B. BISSELL said that they had had two or three of these cases in St. Vincent's the last year or two. They had all terminated in the same way, and had pretty much the same symptoms. In one case it was six months after the dog's bite before the symptoms began; in another, eighteen weeks had elapsed, so far as he remembered.

In this connection Dr. Bissell had had a case of tetanus lately, which developed rather oddly in coincidence with a similar case in the wife of a physician who lived close to the hospital. The first case spoken of was in the hospital; the physician's wife lived two or three doors from the hospital. Both had severe symptoms which began about the same time. Dr. Bissell's case was that of the driver of a sand wagon, who fell from the wagon. Curiously enough all the injury done to him was that the scrotum was torn badly. It had healed up except for a little line of granulation, when these tetanic symptoms began. It was a typical case of tetanus. The physician's wife, Dr. Bissell thought, had a tooth pulled; she died in four or five days. Both had received the same treatment, and coincidentally both were on the same side of the city block. Both had the antitetanus serum injected into the veins, but the physician's wife died, while Dr. Bissell's patient got well. He had two injections of 50 cubic centimetres into the veins of his arm, and later the injections of serum were continued in the breast and subcutaneous tissue for sev-

eral days. With the serum they had both medication with antispasmodics—bromides, Calabar bean and chloral. This was the only case he had ever seen get well. This man was thirty-five years old, had typical symptoms, beginning with rigid jaws, and the little grin, which came every time he spoke, and the standing out of the sternocleidomastoid muscles, and the rigid abdominal muscles. A characteristic symptom of his case was constant sweating, the perspiration standing out in great drops on his forehead and chest. The fact that both patients were affected at the same time and got practically the same serum treatment, had about the same incubation period, and yet one went on rapidly to death, while the other had equally steady improvement, made an interesting contrast.

Dr. H. G. PIFFARD had often asked himself this question, but had never been able to answer it satisfactorily. In view of the fact that the tetanus bacillus was assumed to be an earth bug, why was it there were so many cases of tetanus where we could trace any earth connection? He had seen but three cases of tetanus, all in July, 1865, when he was house surgeon in Bellevue. They all came from Fourth of July wounds in connection with Fourth of July pistols. The wounds were all in the hands. They were distinct and clear cases of tetanus and all the patients died. Now, why did the gun powder not sterilize the charge?

(To be continued.)

Letters to the Editor.

PARASITIC INFECTION AND CONDITIONS OF THE ORGANISM.

156 WEST CHIPPEWA STREET,
BUFFALO, May 11, 1903.

To the Editor of the NEW YORK MEDICAL JOURNAL:

Sir: Will you kindly allow me to present the following proposition through your columns? Without expressing a personal opinion, I should like to collate those of clinicians, sanitarians, and pathologists, and would suggest that, to insure their receipt, they be sent to me in the form of private correspondence or references to literature.

"Of all diseases due to parasites, of whatever kind, tuberculosis alone clearly illustrates predisposition by general states of the organism of the host, independently of opportunities for infection and of plainly local lesions or cellular states (as in regard to the malignant neoplasms, if these are considered parasitic) which favor colonization of the parasite. Even in the case of tuberculosis, these latter factors outweigh purely general conditions of diminution of resistance."

A. L. BENEDICT, M. D.

A Physician Detailed to Study Yellow Fever in Vera Cruz.—Dr. H. B. Parker, of the Public Health and Marine Hospital Service, in Washington, has been detailed to Vera Cruz, where he will join Dr. Edward Francis in making a study of yellow fever.

Book Notices.

Transactions of the American Orthopædic Association. Sixteenth Session held in Philadelphia, June 5, 6 and 7, 1902. Volume XV.

The anomalous state of affairs that finds American medical literature without a representative special weekly or monthly periodical devoted to orthopædics, partly finds its compensation in the appearance of the annual transactions of the American Orthopædic Association.

In this the fifteenth volume, which contains close on to 500 pages, we find the best tribute to the zeal and impetus that orthopædics derive from the special surgeon in America. We agree with the plea of the President for a wider publicity to be gained for the writings of the members by changing the *Transactions* into a *Year-book* of still larger scope, in the hope that the present deficiency will be still further amended by the appearance of a current orthopædic publication. Had such a periodical existed it is not likely that the American orthopædists and surgeons would have found themselves placed in such an awkward position by the lay press on the eve of the triumphal entry of bloodless surgery into America.

In justice to the host of excellent contributions we would not single out any in particular, yet we cannot forbear to refer specially to the contribution in an article on Wolff's law. This was first treated of in last year's *Transactions*, and merits the wider publicity it is receiving as the newer basis of orthopædics.

In the appendix there is a list of writings published by the members of the Orthopædic Association at all times, and a summary of all orthopædic literature of the last year. This is by far the largest and best number published.

Therapeutics of Dry Hot Air. By CLARENCE EDWARD SKINNER, M. D., LL. D., Professor of Thermo-therapy in the New York School of Physical Therapeutics, etc. New York: A. L. Chat-terton & Company, 1903. Pp. 5 to 200. (Price, \$2.)

Dry hot air has for many years been used as a therapeutic agent, but the general practitioner at the present time finds for it a very limited use. In this little volume the author gives us what has thus far been ascertained of this remedy, accompanied by a brief mention of other therapeutic agents which may be used as accessories in the treatment of various diseases. Where necessary, a short reference is made to pathological changes. The author ascribes the lack of success which has hitherto attended the use of this agent, partly to the fact that it has been called upon to influence pathological conditions not amenable to its physiological action, but mainly to faulty technics in its administration.

After a short description of the apparatus itself and its physiological action, a detailed description of the technics of treatment follows. The rest of the book is devoted to the diseases which can be benefited by this treatment. Starting with rheumatism, the author mentions the diseases in the order of the beneficial effects to be derived. The articles on arthritis deformans, especially the paragrahs,

devoted to diagnosis, are to be recommended most highly for their completeness. The author emphasizes the fact that "the sphere of action of the local application is practically confined to the part treated," for which reason it should not be called upon to cure pathological changes dependent upon impairment of the central nervous system. He also lays stress upon the fact that diseases of an entirely different nature from rheumatism are very frequently mistaken for that disease, and do not respond to antirheumatic therapeutics. In a few instances the author is rather over-enthusiastic, and the results which he claims for hot air treatment of sprains, pneumonia, peritonitis, etc., are not those generally conceded to this agent.

The book is full of valuable points on diagnosis. It shows, in many instances, very close observation, and is presented in a most clear and concise style. The photographic illustrations, which are fairly numerous, are useful additions to the text. To anyone interested in this subject we heartily recommend this volume.

Twentieth Century Practice. An International Encyclopædia of Modern Medical Science. By Leading Authorities of Europe and America. Edited by THOMAS L. STEDMAN, M. D. In Twenty-one Volumes. Volume XXI. Supplement. New York: William Wood & Company. 1903. Pp. xiv-845. (Price, \$5.)

In the two years that have elapsed since the completion of this encyclopædia, there have been advances in certain lines of medical work that have necessitated the publication of this supplemental volume, in order to complete and bring up to date articles in the preceding volumes of the series.

This volume contains articles on the Röntgen rays in medicine; on diseases of the kidneys, ureters, and the bladder; of the uræthra and prostate gland; on chemical and microscopical examination of the urine; on diseases of the adrenal bodies; and diabetes mellitus; on rheumatism, gout, arthritis deformans, diseases of the skin, of the nose, of the trachea, of the lungs, or the œsophagus, of the stomach, of the liver, of the aorta, of the blood, of children, of menstruation, of the spinal cord, of the peripheral nervous system; and also brief accounts of more recent knowledge of hernia, scarlatina, insanity, tabes dorsalis, ptomaine protozoa, yellow fever, bacillary dysentery, meningitis, tetanus, rabies, smallpox, cancer, tuberculosis, and malaria.

In order to include all these subjects within the scope of some 800 pages, it has been necessary to present the advances with great brevity, but the editor has discharged a very important duty with great success, and the volume materially adds to the usefulness of the series.

Miscellany.

An Emergency Substitute for Glasses.—The optical properties of the pinhole are well-known in these days of amateur photography. Probably, however, the following device, based thereupon is not generally known, though it is easy to conceive of circumstances in which it might serve a very useful purpose. The *Medical Times* for May reminds us that by making a hole through a piece of paper

or postal card with a pin, moving the pin a few times round the hole to give it a smooth edge, holding the pin-hole close to the eye, and looking at printed or other matter held at the normal reading distance, there is perfect definition, and any one who requires glasses to read can with this device read anything. When a pin hole is held to both eyes at the same time, there is a great improvement over one, with perfect binocular effect. The field of view is much smaller than that seen when glasses are used. There is less light and no magnification. The importance and utility of this simple device in many circumstances are obvious.

"Handsome is as 'Hansom' Does."—The *Lancet* recently fell foul of the hansom cab, whereupon the London *World* apostrophizes the *Lancet* as follows:

Ungrateful *Lancet*, which the hansom scolds
As fruitful source of accidents and colds,
Have you forgotten that from ills like these
The doctor captures many "hansom" fees?

The following reply is respectfully submitted to the notice of our keen-edged contemporary, to whom it is freely offered in the extension of professional courtesy:

The "*World's* ingratitude" so well is known,
Ere it chide ours, 'twere best to curb its own.
Purgation of its "matter" would enhance it
So much in health, we prick it with the *Lancet*.

Strawberries and Suicide.—According to the *New York Times* for May 2nd, an ingenious person in Washington has discovered an ætiological relation between strawberries and suicide. The following specimen of the ingenious person's logic is quoted by the *Times* in a leading editorial:

"Suicides are more frequent in the spring than at any other time. There must be some reason for it, and some time ago I suggested that strawberries were to blame. Investigations I have made have confirmed me in my opinion. Eating strawberries out of season invariably produces mental depression, and it is when people are in low spirits that they think of suicide and kill themselves. I do not believe there would be so many suicides if people would not eat strawberries until they are ripe at home."

Upon this the *Times* comments as follows:

"The fact that premature indulgence in strawberry eating causes mental depression is a matter of general if not universal experience. There are many good reasons why this should be so. One is the price. The young man who begins to supply his best girl with Southern berries at 50 cents a plate or at 75 cents to \$1.25 a pint box naturally finds his contact with this alluring vegetable conducive to mental depression. We had not supposed that this often assumed the form of suicidal mania, but it might very well do so if the girl is inconsiderate. Another reason for the depressing influence of the premature berry is that it is not nearly as good as it is expected to be by those who buy it. Its searching acidity, which produces sensations at the hinges of the jaw suggesting incipient mumps, is extremely disappointing, and disappointment is always depressing."

But finally and most important: "There is also another and even better reason why the premature

strawberry produces depression and induces suicide. It is found in the ear-splitting, soul-harrowing cries of the vendors of this unseasonable fruit. Their pernicious activity begins early in April and lasts until strawberries are so common that there is no profit in hawking them. The leather-lunged Hooligans who engage in this business might drive to suicide any sensitive person under whose window they sing their tuneless and monotonous solos. The wonder is, not that so many reach the conclusion in the weeks preceding strawberry time that life is not worth living, but that so many of those who have nerves manage to survive this trying period and resist the morbid impulse of self-destruction."

But even here strawberries can only be saddled with a portion of the blame for the prevalence of that depression which leads to self-destruction. For are not trolley cars, elevated trains, and "extra specials"—or "special extras," which is it?—always with us?

Hippocrates and the Doctrine of the Struggle for Existence.—In an article on *The Wisdom of the Ancients*, in the *Practitioner* for February, the writer, "W. C. B.," says: "The possibility of the evolution of mankind from lower animals was not recognized by Hippocrates, though it was mooted by some of the acute thinkers of antiquity. He realizes, however, that a gradual advance has taken place in the social condition of our race, and he recognizes that a struggle for existence must have taken place in the process, leading to the survival of the fittest. He tells us that originally men ate coarse food, and among it all sorts of unwholesome materials. On this the weak died out, and only the strong survived. Experience gradually brought about an improvement in the *ménù*."

The Treatment of the Common Clinical Forms of Gonorrhœa in the Female.—Dr. R. Oliver Kevin, at a meeting of the Obstetrical Society of Philadelphia held on April 2d, read a paper in which he deplored the fact that too little attention was given by physicians generally to the study of gonorrhœa in the female, so that as a consequence the disease was comparatively seldom recognized until the woman had communicated it to others. The baleful effects of gonorrhœa in the female were mentioned and asserted to be more serious than those of syphilis. As evidences of this were cited many cases of "pus tubes," peritonitis, cystitis, abscesses, endometritis, etc., which occasioned much suffering and chronic invalidism. The point especially emphasized was the important rôle played by the infection of Bartholin's glands in propagating the disease to the male and leading to apparently fresh infections in the woman herself. The cause of this was the extreme frequency of involvement of these glands, which broke down, forming small sinuses full of gonococci, which escaped the observation of physicians unless pains were taken to critically examine the glands in every woman presenting herself with symptoms of irritation or inflammation of the parts. The following was a classification as to the structures involved: Urethra, cervix, vagina, vulva,

uterus, rectum, and inguinal glands. If the uterus was the seat of an acute gonococcus infection, local measures should be avoided, owing to the danger of favoring the communication of the disease to the tubes, ovaries, and peritonæum. In such cases the patient should be placed in bed and treated on general constitutional principles until the acute stage had subsided, after which injections of half an ounce of a 10 to 20 per cent. solution of argyrol should be carefully made once daily. In involvement of the urethra, a 5 to 10 per cent. solution should be made three or four times daily, either by the physician or by the patient. The writer stated that since he had adopted this plan of treatment no involvement of the bladder had been observed in his cases. Should, however, infection of the bladder exist, urinary antiseptics should be administered internally and the bladder be irrigated with weak solutions of silver nitrate, copper sulphate, or potassium permanganate, after which half an ounce of a 20 per cent. solution of argyrol was to be injected into the bladder and allowed to remain. When the urethral follicles or Skene's glands were involved the urethra should be dilated with ordinary sounds lubricated with Fenger's ointment or preferably a 20 per cent. argyrol ointment in lanolin; in some cases the glands were best treated by injections (blunt-pointed hypodermic) of carbolic acid or silver nitrate solution, 20 grains to the ounce.

In gonorrhœa of the cervix the parts must be first cleansed of adherent secretions and a few drops of 20 per cent. argyrol solution or 5 per cent. protargol injection with a long-nozzled syringe, care being taken to previously expel all air from the syringe, to avoid the production of uterine colic. Treatment must be made daily. Tampons saturated with 20 per cent. argyrol solution should be left in contact with the servix for from four to six hours, in order to obtain the continued gonococcidal effects of the drug.

When the uterus was involved, the organ should be irrigated with any of the following solutions: Creolin, lysol, normal salt solution, potassium permanganate, argyrol, protargol, or a mixture of carbolic acid, sulphocarbonate of zinc, and glycerin. After irrigation a strip of gauze saturated with 20 per cent. argyrol solution should be packed in the uterine cavity and allowed to remain. In some cases after subsidence of the acute stage the cervix and entire vaginal mucous membrane should be painted with silver nitrate solution, 10 grains to the ounce. For the catarrhal process that remained no combination equalled in efficiency a mixture of ichthyol, 25 per cent., argyrol 25 per cent., and glycerin 50 per cent., used freely as a local application every day or two. Uterine curetting was dangerous when gonorrhœa existed.

The author summarized his paper as follows: Always make a thorough examination of the region of Bartholin's glands in suspected cases. If these are infected, flush the vagina with antiseptic solutions, make free incision of the sinuses and glands, remove diseased or necrosed tissue with a curette, and swab the entire surface with 50 per cent. argyrol solution, strong carbolic acid, or nitrate of silver; argyrol is to be preferred because it is non-irritating and possesses deep penetrative power. Never use

local treatment in an acute gonorrhœa of the uterus, but put the patient at absolute rest and endeavor thereby to prevent the spread of the disease to the uterine annexa and peritonæum.

Surgery of the Heart By Benjamin Merrill Ricketts, Ph. B., M. D. (Continued from p. 919).

INJURIES OF THE HEART. 1552-1903.

Gun-shot, lacerated and incised wounds.—In this chapter are considered all lacerated, incised, or punctured wounds of the heart from any cause.

Paré (1552) said that wounds of the heart must result in instant death. He had seen a duellist with a sword wound in his heart large enough to admit a finger, run two hundred paces before falling. In the meantime he fought his antagonist in a most vicious manner.

Senac (1749) attributed sudden death in wounds of the heart to profuse bleeding, while Morgagni thought it due to obstruction of the circulation dependent upon the distention of the pericardium from bleeding. The latter reports the case of Valsalva, in which death occurred on the eighth day following a wound of the right ventricle.

Aprilis wrote concerning a case of sword wound of the right auricle resulting in death five days later. This report is in the first medical journal ever published (Obs. 1680).

Lerogue (1792) reports a case of a soldier who resumed his vocation on the ninth day after receiving a stab in the right auricle, and died suddenly on the eleventh day at a cabaret.

In the case of Durande (1798) a sword wound of the right ventricle did not terminate fatally until the end of the fifteenth day. This patient lived longer than the usual time after such a wound. If life is prolonged to this extent, recovery usually ensues.

Fournier (1834) reports the case of a soldier who received a gunshot wound in the breast, followed by profuse hæmorrhage; he was thought to be dead, but rallied and in three months recovered. He died three years later, when the ball was found buried in the apex of the heart.

Lavender (1851) mentions a case of recovery following a penetrating wound of the right ventricle.

In the case of Bullock (1858) the patient lived four days and eighteen hours with a bullet in the left ventricle.

Andrew (1860) records a case in which a fish bone, after lodging in the œsophagus, perforated it and the diaphragm and entered the heart.

Dudley (1871) records a case of a man living four days with a pistol ball in his heart. Among the cases of recovery from gunshot wounds of the heart is that of Mellichamp (1876).

Heil (1878) records a case in which the patient lived twelve months after having a stab wound penetrating the aorta.

Hally (1878) reports a case of pistol shot through the right ventricle, sæptum, and aorta. Apparent recovery at the end of the fourteenth day; sudden death on the fifty-fifth day. Autopsy revealed the ball lying in the left ventricle.

Simmons (1882) reports a case in which the pistol ball, after entering the heart, fell into the inferior vena cava.

The author's case (1882) of a man who walked ten paces before dying with two gunshot perforations of the heart.

Needle wounds.—This class of wounds is quite common. At one time it was thought that a needle puncture would cause immediate death; this, however, is not necessarily true.

Callender (1871) removed a needle from the heart of a patient who had attempted suicide.

Holmes and Fisher (1881) report a series of four hundred and fifty-two wounds of the heart; one hundred and four immediate deaths; two hundred and nineteen deaths not immediate; seventy-two recoveries, and fifty-seven uncertain as to time of death.

One hundred and twenty-three wounds of the right ventricle; one hundred and one of the left ventricle; twenty-six of both ventricles; twenty-eight of the right auricle; thirteen of the left auricle; seven of the sæptum ventriculare: seventeen of the apex; two of the base; sixteen of the whole heart; fourteen of the right heart; five of the left heart; two of the coronary artery; fifty-seven uncertain, and fifty-one of the pericardium. They also report a series of cases of foreign bodies in the heart, such as needles. One entered through the sternum; eight by the œsophagus; thirty by the thorax and eight uncertain.

Fisher enumerates four hundred and fifty-two cases, of which forty-four (with ten recoveries) were punctured wounds; two hundred and sixty (with forty-three recoveries) were punctured incised wounds; seventy-two (with twelve recoveries) were gunshot wounds; seventy-six (with ten recoveries) were contusions and traumatic rupture.

Ollivier and Sanson state that, out of twenty-nine cases of penetrating wounds of the heart, only two proved fatal in forty-eight hours. In the others death took place in from four to seventy-eight days after the wound.

Lorson says that death varies with position, size, and character of the wound in the heart, and, in general, 85 per cent. of all heart wounds are fatal.

There have been three hundred and thirty-eight contributions to this subject.

CARDIOCLASIA.

1758-1903.

Rupture of the heart due to injury, disease, or both.

Disease is conducive to traumatic rupture and rupture may occur without trauma at any time in disease. May be complete or incomplete, of any size, single or multiple, and they may or may not communicate with each other. The fissures are usually parallel to muscular fasciculi, unless an abscess is present, when the opening may be of a perforating character. The edges are irregular and materially aid in the formation of clots which have been frequently found in the opening.

George II and the Princess of Brunswick each succumbed to rupture of the heart.

Fatty degeneration is the most frequent cause in advanced life, two thirds of cases occurring in subjects beyond sixty years of age; the proportion being about the same in each sex.

The left ventricular wall is most frequently involved, spontaneously or by traumatic influence. There are numerous such cases reported. The wall of any chamber of the heart may rupture.

The aorta may rupture independently, or it may be associated with one or all of the cavities of the heart. Rupture of the coronary arteries may be due to injury or disease, and may involve any part of the lumen or any part of their branches.

There have been three hundred and fifty-five contributions to this subject.

CARDIOTOMY OR CARDIORRHAPHY. 1896-1903.

Billroth condemned any attempts to suture wounds of the heart. Not until 1871, when Callender removed a needle from the heart, was there anything done surgically with injuries of the heart.

Goodheart (1876) cured a case of hydatids of the heart by surgical operation.

Reidinger (1884), Tillman, Rosenthal, Del Vecchio, Salomoni, and Bode each discouraged any attempts whatever at suturing of the heart.

Druitt (1867) says that opium is the only available remedy in injuries of the heart, and Stephen Smith (1887) says the first aim in wounds of the heart is clot, and that, to induce it, fluid should be drawn off with a trocar. He also says that the only operation of the heart and pericardium is undertaken for dropsy.

Stephenson (1887) says, concerning heart wounds in war, "that no method of treatment is likely to be of permanent service toward their cure."

Ashhurst says that "there is nothing to be done in wounds of the heart." This statement was made as late as 1889.

Paget (1897) says that "small wound don't need suturing, and large ones give no chance."

The character and distance of the weapon, the velocity, size and shape of the missile, age, sex, and general physical condition all have great bearing upon lacerated injuries of the heart. Exposure to the elements, and complications of new growths are also of great consideration.

Symptoms are local, functional, and general systemic.

There may or may not be external signs of injury to the heart. Hæmorrhage may be oozing, may pulsate, or may come periodically at irregular periods.

The heart's action is more rapid, irregular and feeble, thread-like or tumultuous. Its sounds are less distinct, becoming more so as hæmorrhage increases. Cyanosis is usually present varying in degree, dependent upon amount of hæmorrhage and interference with respiration. The heart may not be in its normal position.

Orthodiagraphy may be used to determine the presence of foreign bodies, or the position of the heart itself.

The temperature is usually subnormal. Perspiration is mild, profuse, or absent. Pallor varies in degree; it may be absent, but is usually present. Respiration may be difficult and may vary in degree. Sighing, yawning, and gasping may exist as one, or altogether. Facial expression indicates distress; mental excitement varies from mild to delirium, or even unconsciousness; delirium coming on after a few days indicates pyæmic cardiac abscess.

The nervous system suffers greatly, with irregular muscular contraction, hacking cough, and restlessness to the point of general convulsion. The patient may claw at his clothing, or, if lying upon the ground, will pull at grass, dirt, weeds, or anything he can grasp.

TREATMENT—SANITARY AND SURGICAL.

Stimulants should be given with great caution. Exclude hot or cold draughts of air; snow or rain; or sun's rays. Exclude all but necessary attendants. Do not transport the patient unless absolutely necessary. Apply aseptic principles and discard all antiseptics. Morphine, cautiously given, may lessen shock. Gelatin subcutaneously or by the stomach or rectum, may prove beneficial.

RESUSCITATION.

Pressure upon the chest over the heart and diaphragm; *manipulation* of the apex of the heart with the fingers; *immersion* of the heart in a one half of one per cent. of *saline solution*; exposure of the heart to hot or cold air; *puncture* of the heart with a needle; removal of blood from the right heart with an aspirating needle, and the negative pole of a faradaic current applied to any portion of the vagi, will more or less stimulate the heart's action.

THE PERICARDIUM.

Barron Larrey (1798) was the first deliberately to plan the removal of, and to remove, fluid from the pericardial space. This he did by introducing a hollow needle between the seventh rib and the ensiform cartilage.

Romero incised the pericardium, in 1801; with a needle, and aspirated it in three cases in 1819; in two of which recovery took place.

John Leyden (1881) was the first to make an incision in the pericardium to evacuate fluid. In his case the fluid was pus, and the patient recovered.

John C. Warren (1852) was the first American to remove fluid from the pericardial sac successfully.

Trousseau did not give Larrey the credit of being the first to enter the pericardial sac with a needle. He not only adopted the method of Larrey and Desault, but the site of puncture also.

CAUSES OF DEATH—PRIMARY—SECONDARY.

Primary.—Shock, hæmorrhage.

Secondary.—Carditis and endocarditis, pericarditis, pleuritis, pneumonitis, embolism (air or clot), abscess, aneurysm, exhaustion.

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CLINICAL OBSERVATIONS ON BACKACHE.*

By ROBERT W. LOVETT, M. D.,
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The symptom of pain in the back, or backache, is a common one, due to many different causes, of which uterine displacement is a frequent one. In the minds of the laity it is to be associated with kidney trouble. Considered from the point of view of an orthopædic surgeon, there are certain well defined types that present themselves for treatment.

The cases, seen from this point of view, divide themselves roughly into two groups:

(I) Those due to causes existing in the spine itself, and

(II) Those due to causes existing outside of the spine, as in the feet.

CAUSES EXISTING IN THE SPINE ITSELF.

These are either (a) mechanical, or static, to be classed as faulty attitude; or (b) occurring as the result of injury or inflammation.

a. Static causes as existing in the spine:

1. *Faulty Spinal Attitude.*—The normally developed person in good health stands in an erect, well balanced position, with the centre of gravity over the centre of support. This is a self-evident proposition necessitated by general physical laws. The erect position is one of unstable equilibrium; the cadaver does not stand erect, but collapses and falls, and muscular exertion is required to maintain the erect position. But tired persons and persons of feeble muscular development manage to substitute ligamentous for muscular support. The feeble child or tired woman no longer stands with the spine straight and over the legs, but the pelvis is pushed forward overextending the hips and bringing into action the Y ligament which holds the hips locked in slight overextension. To compensate for this forward displacement of the pelvis, the upper portion of the trunk is thrown back, which is done by flexing the dorsal spine, and the dorsal curvature is increased, while the head is run forward. The general attitude is then characterized by a position of

the pelvis which is forward of the normal, the back is rounded, and obviously swung back above the hips, and the head is run forward. In this way the ligaments afford a support which was intended to be given by the muscles, and the expenditure of muscular force is minimized. The attitude is familiar to all in children, where it is spoken of as "round shoulders," and carried on into adolescent and adult life it keeps the same characteristics, and is to be seen and recognized in any crowded street.

The spine was meant to be kept erect and to be supported by muscles, rather than by ligaments. The well developed adult stands with the mastoid process over Chopart's joint of the foot, with the hip joint lying a little in front of the vertical line connecting the two. It is easy to see that, from a mechanical point of view, the relations in standing, walking, and sitting, must be seriously disturbed by the vicious attitude described above.

Inasmuch as the posterior spinal ligaments were not meant to bear continuously the weight of the parts lying above them, it may be easily understood, especially where the nervous resistance of the individual is impaired, that pain may follow from continued ligamentous strain, especially when associated with stretched spinal muscles. In children with round shoulders and lax spines pain is not a common symptom, but in young women who stand in the same way pain is a symptom of not infrequent occurrence, and is familiar under the name of "irritable" or "neurasthenic" spine. The majority of patients of this class will, if carefully examined, show some obviously faulty attitude.

The pain is generally localized at one or more points in the spine; it is apt to be very severe and to be aggravated by exertion. Some stiffness of the spine comes on after a while, and in cases of long standing the diagnosis from such conditions as Potts's disease and arthritis deformans (osteoarthritis) of the spine may be very difficult; an injury may be, and often is, the starting point of the affection. Symptoms of heightened nervous irritability and of neurasthenia are often present, and lead one to question the severity of the pain and the existence of any real trouble in such cases.

The condition does not tend to improve spontaneously, but on the whole to grow worse with periods of improvement. Treatment consists in improvement of the general condition, and in the

* Read before the Pathological Club, of Portland, Me., December 16, 1902.

severer cases, at first, rest on the back for a large part of the day is imperative; and when the patients are erect, some form of light elastic brace, to hold the spine extended, is advisable for a time. How common the condition must be, can be appreciated by seeing how many of these elastic supporting braces are advertised in the backs of the magazines. But the real cure lies in the development of the spinal muscles and in the acquirement of the erect attitude. This must be done by gymnastic exercises, at first of the very mildest variety, later increasing in force and efficiency. These exercises should follow the line of the "setting up drill" of the military recruit and the patient should be taught to hold herself in the correct erect attitude. A confidence in one's diagnosis is essential to successful treatment, for the pain is temporarily made worse by exercise and the same treatment is not suitable for Potts's disease and the neurasthenic spine.

2. *Pain in Lateral Deviation of the Spine.*—In general, what has been said with regard to the antero-posterior deviations in faulty spinal attitude may be applied to lateral deviations from the proper perpendicular. In ordinary lateral curvature of moderate degree, as seen in young girls, pain is not a common symptom; it may exist as a neuralgia, but it is in general incidental and unimportant, except in neurasthenics.

But in young women in cases of slight lateral deviation of the whole spine, due oftenest to a shorter leg on one side, pain in the back or to one side of it is not uncommon. In such cases pain is often situated in one or the other of the sacroiliac joints, or in the loin or around the scapula. So far as my experience goes, the pain is on the convex side of the curve, *i. e.*, on the stretched, rather than on the compressed side. The correction of the short leg, by increasing the thickness of the sole, will, in many cases, do away with the backache. Even if one leg cannot be demonstrated by measurement to be shorter than the other, and if the spine is held to one side, it may be just as necessary to make the sole of one boot thicker than the other to bring the spine into the middle plane of the body. If slight lateral curvature exists and persistent pain is present in the loin or higher up in the back, the ordinary gymnastics used in the treatment of scoliosis are indicated, and the scoliosis should be treated in the usual way.

The height of additional sole for the short leg must be determined by putting a series of pamphlets under the foot of the short leg while the patient's back is exposed, and the requisite amount of correction, which is required to make the spine straight, estimated. The relief in cases where the backache due to a short leg and is corrected, generally follows very soon.

(b) *Causes in the Spine of Traumatic and Inflammatory Nature:*

1 *Sprains of the Back.*—Analagous to the condition of irritable and painful spine just spoken of, and often running into it, is the painful and irritable spine following slight accidents which have caused a wrench or jar to the spine. The condition in its severer forms is familiar to you under the name of "railroad spine." A patient receives a jar in the starting of a carriage, or falls on the sidewalk, or wrenches her back in a stroke of golf, and a painful and irritable condition results which lasts for weeks or months, or indefinitely for that matter. The result seems out of all proportion to the cause, and symptoms of neurasthenia are most often also present. Such cases often figure in the courts, and the condition in the back varies from what might be classed as irritability to a condition which in time becomes practically disabling. This condition is perhaps best classed as the "neurasthenic spine." In four of the cases that I have seen, it has been impossible off hand to make a diagnosis from Potts's disease, and continued observation has been necessary. On the other hand, Potts's disease is at times overlooked and the condition treated as neurasthenic spine, much to the detriment of the patient.

In the treatment, faulty attitude, if it exists, must be detected and corrected, as it may be a factor in keeping up the irritability; and, for purposes of treatment, it may be assumed that a local congestion exists. This is best quieted by recumbency, or at least by restricted use, the spinal movements being limited by a light brace. Gymnastics, massage, and douching tend to restore the circulation, and, in connection with gradually increasing use, to bring about a cure.

Similar to this condition, but more legitimately to be termed a "chronic sprain" of the spine, is what is likely to result from a more serious degree of accident. In these cases, the spine is violently wrenched or bent beyond its proper limit of motion by a railroad accident, or a collision, or a severe fall.

The spine is simply a collection of bones and joints, and these joints are just as capable of being sprained as the ankle, or the finger, or the wrist. We know that an improperly treated sprain of these joints may become chronic and last for months or years. In the same way, the sprain of the spinal joints becomes chronic, and irritability and pain and restricted motion result.

When one considers the treatment that such injuries to the spine receive, one can scarcely wonder at the result. An injured ankle is put in splints or plaster of Paris, and is kept quiet, but the patient with a sprained spine is put to bed on a sagging mattress and painfully turns from side to side as he wishes. When the spine becomes less painful,

he sits up, and the pain and irritability persist sometimes indefinitely.

A plaster of Paris jacket is just as necessary for a sprain of the spine as a fixation splint is for a sprain of the ankle.

The treatment in these cases should be more rigorous than in the preceding conditions. When a chronic sprain of the spine results from an accident serious enough to cause it legitimately, the spine should be fixed by a plaster jacket until the extreme irritability is quieted down; the fixation should then gradually be discontinued while massage, douches, and gymnastics are gradually substituted for it.

In this paper nothing has been said of the "neurasthenic spine" by itself, that is, apart from its cause in faulty attitude or trauma. This is because I believe that practically all cases of painful spines, commonly classed as functional, irritable, hysterical, or neurasthenic spines, will, on careful examination, be found to be caused by faulty attitude in standing, or to have resulted from trauma, or to have their origin in both causes. The bearing of this on treatment is obvious.

Persistent Backache without Obvious Cause.—Before leaving this class of cases, it is necessary to speak of one condition of persistent backache without obvious cause, of which I have seen two cases. Both patients were healthy, well developed young women, and the backache was of a very severe and persistent character.

The patients were not neurasthenic; they stood well, their muscles were good, and no accident had preceded the pain. One had had a retroversion of the uterus corrected without benefit, and the other was pronounced normal by a competent gynecologist.

One I treated by a brace, with gymnastics and rest, without any benefit whatever for a year or more, and then I referred her to a neurologist, who treated her with electricity with similar results. After two or three years I lost sight of her, and in that time her symptoms had been but little, if any, improved. Mobility of the spine was good and there was no suspicion of organic disease of the spine.

The second was referred to me by a neurologist who had treated her by electricity, etc., without benefit. She derived some benefit from a tight leather pelvic girdle with perineal straps, which she still wears. She is gradually improving, but after five years or more of treatment the backache persists, though in diminished degree.

Potts's disease.—Of the inflammatory conditions of the spine causing pain in the back, the two common ones are tuberculosis and arthritis deformans.

Tuberculosis, or Potts's disease, is too familiar to require description. It is of interest to note that the pain is more frequently felt referred to the terminations of the spinal nerves, and is more commonly complained of in the chest, abdomen, or legs, than in the back itself.

Arthritis deformans, or osteoarthritis of the spine, is a chronic inflammation, characterized by the proliferation of new bone around the vertebral bodies. The symptoms are pain and stiffness in the spine, the limitation of motion being generally more to one side than to the other. The patient stands with the dorsal spine generally flexed, and as a rule, with some lateral curvature, or rather leaning somewhat to one side, and the spinal movements are somewhat restricted in all directions. Pain follows exertion or may be spontaneous, and is frequently referred to the ends of the spinal nerves, on account of pressure on the nerve roots.

The diagnosis from chronic sprain of the spine is often difficult, and at times at first impossible. The treatment consists in fixation by a plaster jacket.

CAUSES OF BACKACHE EXISTING OUTSIDE THE SPINE.

In passing to causes of backache outside of the spine itself, one comes to a very interesting group of cases where some mechanical difficulty in the foot is the cause of persistent and obscure backache.

(a) *Real flat foot* is not a very common condition, in private practice at least.

(b) *Pronated foot.*—More common, is a rolling over of the foot to its inner border without much breaking down of the arch; this may be spoken of as "pronated foot." In this condition the weight of the body is transmitted diagonally through the arch instead of straight down, and pain and irritability result. These are the cases commonly described as flat foot, and treated as such by plates. In my own experience they outnumber the cases of real flat foot many times over.

(c) *Contracted foot.*—There is a third condition, very little known and very imperfectly understood, which is often associated with backache. This condition is characterized by a shortness of the muscles at the back of the calf, and for want of a better name may be described as "contracted foot." If the patient sits in a chair and the leg is held horizontally with the knee straight, the foot cannot be flexed dorsally beyond a right angle. In many cases it cannot be flexed to a right angle. When the attempt is made to bend up the foot in this manipulation pain and tightness are complained of in the calf.

The condition is apparently inherited in some cases, and in others seems to be associated with

rheumatism or mild neurasthenia.

The patients are most often women and more commonly young than old women. They turn the ankles frequently in walking, they are unable to skate with comfort, and dancing and bicycling are likely to be followed by pain. At night they are at times kept awake by cramps in the calves of the legs, and standing is more painful than walking. A callus under the front of the foot is common, and the ankles are irritable and tire easily. The arch is most often high, the outer border of the foot may not touch the ground, and the foot rests on the ground insecurely balanced on two islands, one at the heel and one in front of the foot. The toes are clawed and the patients prefer high heels, as a rule. The occurrence of a severe spasmodic pain at the base of the third or fourth toe is not an uncommon accompaniment of contracted foot, and most subjects of this so called "Morton's disease" or "metatarsalgia" will be found to have shortened calf muscles. The most characteristic sign of the affection is the irresistible desire to get the boot off and rub the foot.

Such is the obscure condition which is fairly common, and which of the three common mechanical disabilities of the foot is most commonly associated with backache.

The pain is generally in the small of the back, and is aggravated by standing or stooping forward, although it also results from walking, etc. It is obvious that a patient who cannot bring the foot up to a right angle with the leg must, in standing, be in an abnormal position. The knees must be somewhat overextended and firmly locked back, and the whole leg axis slanted backward. This results in an abnormal distribution of balance in the parts lying above, and an abnormal inclination of the pelvis. The constant attempt at adjustment in the lumbar muscles in an effort at balance is probably the cause of the pain. The pain is not only located in the back, but shoots down into the pelvis and thighs in some cases. This clinical picture is not an unusual one and is one constantly seen. Some cases are referred by gynecologists who have found no local cause for the backache, while others come for the foot symptoms, and have not associated the backache with the other symptoms. At times, trouble in the knees and hips is also present, as in the other two forms of static disturbance of the feet.

Although flat foot and pronated foot are at times associated with backache, it is less common in them than in this condition of shortened posterior muscles. The first two conditions are easily treated by flat foot plates, and the backache disappears if due to that cause.

As to the treatment of the third condition, "con-

tracted foot," it is essential, in addition to supporting the arch of the foot, that the calf muscles should be stretched.

The contraction usually yields readily, and a few stretchings give relief to the symptoms in most cases. It is, however, also necessary to support the under side of the hollow of the foot by a pad of boiler felt or a short steel plate without an inside edge, which is merely a high artificial shank to the boot. The improvement in the symptoms should follow the first treatment. It seems necessary to keep the arch of the foot accurately supported, and the relief from such a support is not, I think, unfairly compared to the relief from muscular irritability of the eye which follows the use of a proper glass in cases of astigmatism.

234 MARLBORO STREET.

COCAINE HERNIOTOMY.*

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When we stop to consider the vast army of ruptured humanity about us, and realize that, at a very liberal calculation, one out of every fifteen males is thus afflicted, leaving out of consideration for the present the large number of females, we find an impetus to press onward, and add what little we can to the relief of this class.

The truss maker and the charlatan are ever on the alert, claiming great things but accomplishing little, and sooner or later the majority of ruptured individuals fall into the hands of the legitimate surgeon.

When we can so perfect our technique that operative procedure will show 100 per cent. of cures, with all risk of anæsthesia, etc., eliminated, then the prejudice, born of dread and fear engendered by unfortunate results, will pass into oblivion, and the laity, as well as the general practitioner, will recognize hernia as a surgical trouble and demand for its relief surgical measures. In reviewing current literature and comparing it with that of a decade ago, we look with pride on the lowered mortality in herniotomy; and yet, even by our most able surgeons, we find numerous cases reported in which all went well until ether pneumonia ensued and the patient died. It means naught to the lay mind whether the patient died from pneumonia or infection—they reason that he was operated on for rupture, and died. Consequently, we must use *every* precaution to effect a cure in as short a time as possible.

* Read before the Society of the Alumni of the City (Charity) Hospital, November 12, 1902.

The object of this paper is to consider the various steps in the radical cure of inguinal hernia by substituting cocaine anæsthesia for general narcosis. For the past year and a half we have had papers published relating the experience of such men as Halstead, Cushing, and others, in the use of cocaine as a local anæsthetic in cases where ether or chloroform or both were contraindicated, falling back on cocaine as an emergency anæsthetic; but not until last June was cocaine used as the selected anæsthetic on a perfectly strong, healthy individual, who could, and would, have taken a general anæsthetic but for the advice of his surgeon. To Dr. J. A. Bodine is due the honor and credit of this initial boldness, and subsequent results show that in it he has added his mite to the ever advancing art of surgery.

The writer has performed fifteen such operations, with such gratifying results that ether and chloroform have been relegated to the past in dealing with the radical cure of inguinal hernia. A very important rule in doing cocaine surgery is that any tissue that can be œdematized can be cocainized; and another important point is that you can use larger quantities of cocaine without danger, when you remember that in morphine we possess a perfect physiological antidote. This I have never seen more beautifully illustrated than in a baby, four days old, whom the old nurse had soothed to sleep with paregoric. I was soon summoned, and finding the respirations five per minute, lost no time in giving hypodermically $\frac{1}{20}$ grain cocaine hydrochloride. Almost immediately the respiration became accelerated, and within an hour the child was in normal condition.

The field of operation having been rendered surgically clean, the patient's attention should be diverted. We might explain to him that a careful examination and dressing would be made, requiring considerable time, and that the operation would be performed the next day. It is advisable to cover his face with a towel, so that he may not see what is going on about him. Every possible precaution must be taken to avoid clicking of instruments, and on no account ever ask your assistant to hand you the knife or scissors, or any instrument; have them passed quietly, without calling for them. I have seen a man, who was thoroughly quiet and composed on the table, jump at the word "knife" and thereafter remain nervous and fearful.

An imaginary line is drawn, beginning about two inches internal to the iliac spine, and extending down, parallel with Poupart's ligament, to the lateral end of the transverse crease above the pubes. In this line we inject into (not beneath) the skin from 30 to 40 minims of one half of 1 per cent. solution of cocaine. All that is felt by the patient is

the initial prick of the needle. Minim by minim is injected until the whole line is œdematized. An incision is now made, absolutely without pain, down to the aponeurosis of the external oblique. These fibres, which run in the same direction as the skin incision, are not cut, but are divided by splitting upon a grooved director or with dull, pointed scissors, and loosened from the internal oblique by the finger tip until Poupart's ligament is exposed. Retracting the outer border we find a pale line, measuring from $\frac{1}{16}$ to $\frac{1}{8}$ of an inch in width, running across the field, usually in the direction of the fibres of the internal oblique muscle. This is the hypogastric branch of the iliohypogastric nerve, which arises from the first lumbar nerve. It is easily picked up with thumb forceps, and a few minims of $\frac{1}{4}$ of 1 per cent. cocaine solution injected into its sheath. This suffices completely to anæsthetize the portion of the internal oblique with which we have to deal, as well as the integument covering the hypogastric region. Below this, and lying just above the external or superficial ring, can be found (usually without much search) the ilioinguinal nerve. This originates, as does the iliohypogastric, from the first lumbar nerve, and after following the cord down under the internal oblique, emerges from the external ring supply filaments to the internal oblique and scrotum. Anæsthetizing this with two or three minims of a $\frac{1}{4}$ of 1 per cent. cocaine solution, we find no difficulty in dissecting the sac of the hernia together with the cords, its veins, etc., from its attachment to the internal oblique and surrounding tissues, so as to allow the index finger to encircle these parts.

We now come to the last, the smallest and most obscure nerve trunk, viz., the genital branch of the genitocrural, which is more uncertain in its direction and distribution than either of the preceding. Originating from the second lumbar, the genitocrural passes down through the substance of the psoas and divides into a genital and a crural branch. The genital branch can generally be located posterior to the cord and supplying the cremaster muscle. This, when found, is cocainized; when not found, we must rely on infiltration to anæsthetize the cord and sac. In so doing a number of these dissections, one readily understands why such a diversity of opinion exists among our textbook authors, one showing the iliohypogastric and the ilioinguinal running parallel throughout their course; another illustrating the ilioinguinal passing behind the cord, etc. A careful dissection of fifteen cases is, of course, insufficient from which to obtain reliable data, but from these my results have been that in all the cases the iliohypogastric followed the same course, the ilioinguinal in two cases penetrated

the fibres of the internal oblique before reaching the superficial ring, crossing the iliohypogastric in the form of an X. In five cases (three males and two females) the genital branch of the genitocrural could not be found; in three cases it was posterior to the cord, and in seven, to the outer side.

So much for the nerves. Going back now to the sac, cord, etc., encircled by the finger. A painless dissection of the sac is accomplished by the fingers separating the sac from the cord downward until its extremity is reached. Every operator has his preference in the matter of treating the sac. Mine has been to follow the Macewen method, which as you know retains the sac, and pulling it with a purse-string suture of No. 4 catgut through the internal or deep ring, anchors it there by carrying this suture through the abdominal muscles and skin about an inch above the upper extremity of the skin incision, there winding the end of the suture around a small piece of sterile gauze. The advantage, as I see it, in this procedure is that we leave an obstruction in the internal ring. On the other hand, if we tie off the sac high up, we are bound to leave a funnel-shaped pouch of peritonæum, which always invites the abdominal contents, and is more apt to be followed by a recurrence. The only exception I make to this method of treating the sac is in the case of a very large sac, which is drawn up with a purse-string suture, would undoubtedly slough and infect our whole wound. A sac of ordinary size, *e. g.*, one inch in diameter by from three to four inches in length, will not slough unless the suture is drawn too tight. A long $\frac{1}{4}$ curved needle must carry this anchor suture through parts that have not been cocaineized, and to avoid this pain, which is very slight, I have at times injected a few minims of a $\frac{1}{2}$ of 1 per cent. cocaine solution into the skin and down through the muscles at this point, which obviates all pain. Five or six kangaroo tendon sutures bring over the internal oblique muscle into apposition with Poupart's ligament, tying these underneath the cord, so as to make the cord lie between the internal and external oblique. A running suture of kangaroo tendon closes the external oblique and interrupted sutures of iron dyed silk worm gut close the skin wound. In no case had $\frac{1}{2}$ grain of cocaine been exceeded in the whole operation.

It will be noticed that this is the Bassini method in all respects excepting the treatment of the sac. In a most interesting and valuable essay, written by Dr. George W. Crile, of Cleveland, which last year was awarded the Alvarenga prize, we find numerous experiments bearing on this subject, the summary of which may prove beneficial to reiterate. He says, "In the clinical use of cocaine, particular attention is called to a most important feature, viz.,

that shock is almost wholly avoided as all afferent impulses are blocked. It is now known that the afferent impulses set up by injury or operation are the causes of shock. These impulses are but slightly modified by general anæsthesia, but those affecting the vasomotor, the respiratory, and the cardiac mechanisms are not controlled; but cocaine absolutely blocks their passage, making a physiological amputation of the part."

In the herniotomy as above described, we have formed a "block" in each of the three nerve trunks, and this has been found to last about thirty minutes."

In my fifteen cases, the iliohypogastric was isolated fifteen times, the ilioinguinal twelve times and the genitocrural nine times. In all cases in which the three nerves were found and injected there was absolutely no pain. In two cases where two nerves were found there was slight pain, but at no time more severe than a pinch; and in one case, an Italian neurasthenic complained of acute pain on dissecting the sac from the cord.

Twelve of these cases were simple inguinal hernia, one was congenital, and two were irreducible epiploceles, in which it became necessary, after freeing the attachment between the omentum and the sac, to tie off and remove, in one case six ounces, and in the other eight ounces of omentum.

The cocaineization of our three nerve trunks, of course, has no anæsthetic effect upon the omentum, and yet no pain will be appreciated in the excision, if careful, steady traction is made and no large vessels happen to be in the loop excised. There is always pain on ligating a blood vessel, unless the parts have been thoroughly anæsthetized. When making traction on the omentum, it will often be noticed that the patient complains of nausea and a dull, sick feeling about the stomach. This I have also noticed in doing appendectomies with $\frac{1}{2}$ per cent. infiltration cocaine anæsthesia.

Regarding the solution employed, it is essential that it be fresh, hot, and sterile. In order to accomplish this, it is my custom to drop a one-grain tablet of cocaine hydrochloride into two drachms of sterile water, and boil for one minute. In a glass we have some hot, sterile water, and the varying solutions are easily made. It has been asserted by some critics that the injection of solutions of any kind into the nerve substance or into the nerve sheath may do irreparable damage, as has been sometimes found following subarachnoid injections. This subject has been taken up most carefully by Dr. Crile, who states that, on examination of such nerves three or four weeks following the injection, no trace of injury or disease of the nerve could be determined, either macroscopically or microscopically.

In conclusion, I would say that the advantages claimed for cocaine herniotomy are: First, that we have eliminated all the dangers of a general anæsthetic to heart, lungs, and kidneys; second, we have cut no nerves, consequently the nerve functions to these tissues remain unimpaired; third, not a single vessel has been ligated, because none of sufficient size for ligation has been divided; and fourth, there is no shock, no nausea, and no straining.

The patient is continued on full diet, and can enjoy a hearty meal immediately after his operation. Thus far, all cases have healed by primary union. The patient is confined to bed for three weeks, after which time he may be about and return to work the following week.

1043 MADISON AVENUE.

THE ESSENTIALS FOR ASEPTIC LABOR.*

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"Close-hung with silence was the darkened room;

Through starlit distances there came to earth

A thread from off God's never-ceasing loom;

To mortals known—the miracle of birth!"

EDWIN CARLILE LITSEY.

When we as "high priests" of the lying-in room, are called upon to bring to a successful issue this "miracle of birth," we owe it as a special duty to our patient, our profession, and ourselves to leave undone nothing in a prophylactic way which will secure the laboring woman against that obstetrical *bête noire*—*septic infection*.

During the past quarter of a century the mortality rate from puerperal fever has been progressively lowered, and at the present time in many hospitals represents but a small fraction of 1 per cent. On the other hand, the number of patients admitted to such institutions as Bellevue, Sloane, etc., already suffering from infection, emphasizes the fact that there is much to be desired in the conduct of labor in private practice, and not only among the poor, but also in families where the question of expense is a secondary consideration.

To-day the consensus of professional experience makes the conduct of labor on aseptic principles strictly obligatory; and further, the laity of this wise generation are learning to distinguish the doctor who alleviates the pangs of labor by the administration of a little chloroform, who "uses instruments" at the right time, and who is "very particular" about his instruments, hands, etc., and will not hold him guiltless who fails therein.

Modern bacteriology has taught us that it is not that which cometh out of the vagina which defileth a woman, but that which goeth into the vagina which defileth the parturient woman. Harmful bacteria under normal conditions (gonococci excepted) are destroyed by the vaginal secretions within forty-eight hours, and we can no longer place the blame on that terrible, mysterious monster of former days—*autoinfection*.

The general practitioner and the hospital interne (accustomed to the elaborate fittings of our modern maternity hospitals), when brought face to face with the varying circumstances and surroundings met with in private work, find it somewhat difficult to select the essential from the non-essential, and adapt themselves thereto.

What are the Essentials for Asepsis in Labor?—

The painstaking practitioner will find that the means for carrying out asepsis in the lying-in room are very simple, provided they are worked out systematically, practised faithfully, and repeated in each case until the habit is formed, when nothing less will suffice. The conscientious care of a parturient and puerperal woman involves the same prophylactic measures against infecting the genital tract as the surgeon of to-day would employ before, during, and after a major operation, *viz.*, clean hands, clean vulva, sterile instruments, gauze, cotton, towels, and boiled water.

Anyone who accepts the charge of a pregnant woman should have, for obstetric purposes only, at least one handbag, of ample capacity, not less than 8 x 16 inches, of any shape to suit his fancy. I have found it convenient for reference and to check off as I fill the obstetric bag, to arrange under three headings those things without which it is not safe to attend a maternity case, or suffer the chagrin of having to send to the office for something left behind, an evidence (to the household at least) that we did not understand our business.

Drugs.

Whiskey, 2 oz.

Chloroform, 100 grammes.

Acetic acid, 2 oz.

Silver nitrate solution,

gr. 10 to oz. 1.

Tincture of green soap, 2 oz.

Hypodermic case, tablets.

Ext. ergot, fl. oz. 1.

Washing soda, oz. 4.

Instruments.

Obstetric forceps.

Artery forceps, 2.

Vaginal dressing forceps.

Needles and holder.

Scissors, small, and bandage.

Tenaculum, single, double.

Chamberlain tube.

Nail stick or file.

Vaginal speculum.

Stethoscope.

Sterile Supplies.

Operating gown.

Cotton ball sponges.

Sterile gauze.

Half a doz. sterile towels.

Rubber gloves.

Two nail brushes.

Rubber catheter.

Silkworm gut, ½ doz.

Tape or bobbin for cord.

Sterile Supplies.—No practitioner can afford to be without one or other of the sterilizers now on the market, the simple working of which leaves no excuse for lack of properly prepared materials, and the sense of comfort and security which the use of sterilized materials affords will more than repay the very moderate outlay of time and money. People

* Read before the New York County Branch of the New York State Medical Association, April 20, 1903.

in well-to-do circumstances are perfectly willing to allow the doctor to order all the supplies from the druggist, ready sterilized, and usually they will pay for the complete outfit, costing from five to twenty-five dollars. For office sterilization, we place the cotton balls and gauze in tin cans, open at top and bottom, and wrap the towels, gown, and instruments in towels or pieces of muslin 16 x 24 inches; these, after sterilization, are placed in the bag and not opened until the hands have been properly prepared at the bedside.

A glance at the list of sterile supplies will at once show that there are but *four* articles, *viz.*, gown, gauze, sponges, and towels, which have to be sterilized *by steam*; the remainder can be boiled in water, but without soda. The instruments can be boiled at the office or at the patient's house, as may be most convenient. This plan makes it necessary to have on hand several gowns and a good supply of towels, with several tin cans or bags containing cotton balls and gauze, sterilized, ready for use, and in proportion to the number of obstetric engagements; these, after sterilization, can be kept in a drawer or closet, to be placed in the bag as soon as it is returned from the last case, in this way keeping it ready for immediate use. The office nurse, maid, or someone should be instructed that in case of an emergency call she is to send the bag to the patient's house by the same messenger who calls for the doctor, thereby saving time and assuring him that everything needful is at hand in this all-important bag.

Much confusion can be avoided and time saved if the attendant or nurse will select a table upon which to spread out, in orderly fashion, the contents of the bag, draw out pins, and open up packages in such a way that after the hands have been cleaned, the gown, towels, gauze, etc., are accessible; after boiling, the instruments should be spread out upon the same towel in which they have been boiled, and every means taken not to permit anyone to touch or handle anything on this table but the doctor himself, and he only after thorough preparation of his hands. The table should be placed within easy reach of the doctor's right hand; the drugs can be arranged in a row on the mantel or a stand, thereby avoiding the necessity of groping through the bag, with soiled or bloody hands, at the expense of everything it contains, but also making it necessary to again wash the hands.

Clean Hands.—Perhaps no term in medicine or surgery conveys so varied a meaning to the profession at large as that of *clean hands*. To very many it implies that the hands have been washed with soap and water in the ordinary way, and then immersed in a solution of bichloride for one, perhaps two, minutes; to another it means that the

hands are soaped and scrubbed, with more or less vigor, and then, to complete the *supposed* destruction of the deadly bacteria, the hands are submerged in some antiseptic solution or other, which clears the conscience (if not the hands) of any sin of omission or previous commission. To Lawson Tait, the real pioneer in aseptic, or clean, surgery, and those who follow the teaching of Koch and many others, especially during the past few years, the term *clean hands* is one fraught with immense significance; hands which have been scrubbed and scrubbed, and can be depended upon to do clean surgery, be it general or obstetric, hands free from contact with any dangerous, alluring, deceitful, poisonous antiseptic drugs.

Hand Cleaning.—For this purpose I first thoroughly anoint the *dry* hands and arms up to the elbows with tincture of green soap, rubbing it into the skin until dry, and again rub in more soap, being particular to work it well under the nails and between the fingers; and then proceed to scrub, scrub, scrub in hot running water until *all the soap has been removed*. This is not so easy a matter as you might imagine, but when all the soap has been scrubbed off, and the nails well cleaned with a nail stick or file, one can rest assured that his hands are clean. Do not stop short of complete removal of all the soap; do not use alcohol to remove the surplus lather, but scrub, scrub in the running water until no soap remains. Perhaps some will say that it takes too much time; but five minutes' scrubbing may make a great difference to your reputation and either save or kill your patient; certainly no one can afford to take such risks for the sake of five minutes' extra care of his hands. It will but rarely happen that matters are at such a pass that one cannot take time for this purpose. I know of no instance which calls for the introduction of the finger or hand into the parturient canal which will not permit of taking time to thoroughly prepare the hands.

Rubber gloves appeal to me as very convenient if one has recently been handling septic wounds, after operations in which the hands have come in contact with pus, though, whenever I expect pus at an operation, it seems much better to put on gloves than to soil one's hands, keeping those members free from pus by every means in my power.

Examinations.—To the trained hand and ear, external examination by palpation and auscultation will, in most instances, reveal all the necessary information as to position, presentation, and progress, especially during the first stage of labor. We must keep in mind the findings of Semmelweis, in 1868, and remember that women who have not been examined, internally, before, during, or after labor, rarely, if ever, have puerperal fever, and make it

a rule that, if the position and presentation are normal and the labor is progressing satisfactorily, the less we examine the safer for our patient.

Internal examinations for diagnostic purposes, if the woman has taken a bath the night before, need not be preceded by hair cutting and cleansing of the vulva or a vaginal douche; but when any operative measures are to be carried out one cannot be too thorough in the preparation of the external genitoanal region, cutting close the hair (shaving is too cruel), anointing well with green soap, and scrubbing thoroughly with a soft brush until all traces of the soap have been removed.

If the patient is seen early in the first stage, it may be well to give a soapsuds enema, but if labor is actively going on, personally, I prefer to remove formed fæces as expressed from the anus than to be annoyed with the fluid contents of the bowel and a too recently administered enema being ejected over everything and everybody within range.

Vaginal douching is unnecessary after normal labor, unless the lochia are of a disagreeable odor, as may be the case on the third day, and then the douche is best made of normal salt solution (1 drachm to a quart); intrauterine douches have *never* been delegated to a nurse, for which purpose the salt solution or 1:2000 permanganate solution is used, and the author's bivalve uterine drain inserted. Other than the above mentioned, I have never used any antiseptic in my obstetric or surgical work, depending solely on the thorough sterilization of everything.

Ofttimes, when discussing this subject with professional brethren, the points herein brought forth have been met with the argument, excuse, or whatever you choose to call it, that "we are too busy, and unable to afford the time for such elaborate preparations and care." When we realize that perhaps more than two-thirds of the labors attended by physicians pay but fifteen dollars or less, to say nothing of the many who promise but never pay, we must admit that the accoucheur does not receive his due.

To the family physician who must look after the welfare of the prospective mother throughout pregnancy, advise as to diet, work, exercise, and sleep, and make frequent urinalyses, answer false calls, driving a long distance, watch and wait for hours, protect the perinæum, and, when the child is born, secure the cord, induce active respiration, deliver the placenta and membranes, perhaps prepare and give an intrauterine douche, hold the fundus, put on the binder, and attend during the puerperium; to this man, who has carried out such a programme, one hundred dollars would not seem more than a fair remuneration for services rendered.

Looking at the matter from the standpoint of the husband and prospective father, referring, of course, to the average wage earner, if we allow one week's wages to the doctor, one or two weeks' wages to the nurse, and one week's income for the baby clothes, drugs, and sundries, the advent of our "little angel" will have consumed all of one month's earnings, certainly as much as the household can spare from the year's total, even if, as is infrequently the case, the head of the house is steadily employed all the year.

We do not question the teaching of Holy Writ, and firmly believe that "the laborer is worthy of his hire"; but our purpose to-night has been, not to find fault with those who are unable to pay larger fees, not to upbraid you for accepting *so little, for so much*; but to instill the fact that, be your fee five, fifteen, or one hundred and fifty dollars, the obligation is the same, that it is your sacred duty in every case to carry out the simple principles here laid down, in the hope that you may, one and all, put into daily practice aseptic labor.

Summary.—When we realize that in recent years, in one hospital, there were delivered 1,000 women, without a death (Price), and in many other series of cases with a morbidity of less than 1 per cent., it behooves the private practitioner to look to his laurels, and study well the methods which have brought about so remarkable a reversal of the relative statistics, and apply the same in his every day practice. That this change is solely due to *aseptic* technique renders the practice thereof not only a necessity but compulsory. When systematized, and practised daily, it can be carried out on very simple lines; the absolute essentials of which are (a) a good-sized hand bag, to be used for this purpose and no other; (b) stocked with the necessary drugs; (c) steam sterilized gauze, gown, and cotton ball sponges (several sets of which must be kept on hand); (d) hand brushes, silkworm gut, rubber gloves, and catheter, ready to be boiled in plain water; and (e) a set of metallic instruments to be boiled in soda solution when needed. As a time saving measure these supplies, dressings, and instruments should be arranged on a table standing conveniently near the accoucheur's right hand, and the drugs placed in a row on the mantel, to obviate soiling the bag and infecting the operator's hands.

The *hand cleaning* can best be accomplished (without antiseptics) by the liberal application of the tincture of green soap, rubbed thoroughly into the dry hands and arms (two or three coats), working the soap well under the nails and between the fingers; then, when they are thoroughly coated and dry, scrubbing with a stiff brush, in running water, until all traces of soap have been scrubbed away.

Before applying the forceps or introducing the hand into the vagina, cut short the hair, soap well, and scrub the vulvoanal region, the thighs, and abdomen as carefully as you have the hands.

Put on rubber gloves if the hands recently have been in contact with septic wounds or pus from any source.

"The laborer is worthy of his hire!" Charge and collect as liberal a fee as the circumstances of the family will permit; but do not fail in any detail, because the fee is small—rather transfer it to a brother practitioner who has ample time and fewer patients, and needs the money more than yourself; a course which will redound to your credit, more than if you lose your patient through lack of careful *asepsis* in labor.

60 WEST FIFTY-SIXTH STREET.

THE EYE IN ITS RELATION TO GENERAL DISEASE.*

By NATHAN D. McDOWELL, M. D.,
ROCHESTER, N. Y.

I shall attempt to speak briefly of the diseases of the eye which occur during the progress of the so called general diseases which the physician is most frequently called to treat.

Many ocular manifestations are seen during the progress of diabetes mellitus, though they are not seen early in the disease. Paralysis of the ocular muscles and those of the lids are not uncommon. Keratitis and iritis are met with, but perhaps the most important change in the eye due to diabetes is the formation of cataract. It is estimated that cataracts occur in about 15 per cent. of all cases of diabetes. The formation of a cataract before forty years of age should always suggest an examination of the urine for sugar.

The fact that the eye is not affected in temporary toxic and traumatic glycosuria, notwithstanding the presence of large quantities of sugar in the urine, would seem to prove that the mere presence of sugar is not the cause of the changes in the eye.

The anæmias are a most fruitful source of asthenopia, and I am convinced that judicious treatment of the anæmia would often render unnecessary, at least for many years, the correction, with lenses, of the small refractive errors. Slight congestion of the conjunctiva with a sensation of dryness or of particles of dust in the eyes may often be relieved by treatment of the frequently accompanying anæmia. Hæmorrhages in the retina as a result of the anæmia present in many general diseases, are not uncommonly met with.

In rhachitic subjects interstitial keratitis and phlyctenular conjunctivitis are often seen, as are also many of the congenital cataracts and those which develop in early childhood.

One of the most frequent eye complications of the disorders of the digestive tract in children is, in my experience, phlyctenular inflammation of the conjunctiva and cornea. This condition is usually first seen by the general practitioner, and may be recognized by the child holding his head down to avoid the light, and by increased lacrymation; and on examination a small red eminence may be seen usually at the junction of the conjunctiva and the cornea. While this disease not infrequently causes serious injury to vision when allowed to progress to the formation of ulcers of the cornea, the improvement of the digestive tract alone is often sufficient treatment.

Constipation and the consequent straining at stool has led to hæmorrhages in the conjunctiva and retina, and, according to Berger, has brought on an attack of acute glaucoma.

In diseases of the liver accompanied by jaundice the conjunctiva is often discolored before the skin is stained and may remain discolored after the skin has cleared. Landolt believes we may trace a more or less definite relation between cirrhosis of the liver and pigmentary retinitis. Inability to see in dim light, subjective yellow vision, and inflammation of the cornea may result from hepatic disease. Xanthoma palpebrarum, the peculiar yellow spots on the lids, is often associated with diseases of the liver. Torpor of the lower bowel is frequently the cause of scintillating scotoma and aching of the eyes.

Gonorrhœal ophthalmia with a destructive keratitis resulting is a well known complication of gonorrhœa. In this connection I should like to digress slightly, in order to report the treatment followed and unusual result obtained in the case of a physician who had contracted gonorrhœal ophthalmia from a baby he was treating. He came to me saying that he had had a more or less troublesome lacrymation in left eye all the afternoon, and thought he had a slight conjunctivitis. Learning that he was treating at that time a baby for ophthalmia neonatorum, I examined some of the mucus from his eye at once and found gonococci. Some of the secretion was examined later by a bacteriologist, and gonococci were found. Within an hour after the doctor came to me, and within a few hours from the first symptom in the eye, he was put to bed, cocaine instilled, and every part of the conjunctiva of left eye pulled down with forceps and bleached with nitrate of silver solution of 20 per cent. strength. Ice cold pledgets of cotton were kept on the eye all

* Read before the Hospital Medical Society at Rochester N. Y.

night. The next morning the conjunctiva was again thoroughly bleached with nitrate of silver solution of 10 per cent. strength, and ice applications were continued half the time. The secretions of the eye were examined daily after this and no gonococci found. In four days the patient was well.

This result shows what a vigorous treatment, if initiated early, may do in this destructive disease.

Iritis often accompanies gonorrhœal rheumatism and gonorrhœal inflammations of the joints.

There are many eye complications met with in the different stages of syphilis. Absolute loss of sight is not often produced; Magnus alleges that about 2 per cent. of blindness is due to this cause. In both the congenital and acquired forms of syphilis the uveal tract, consisting of the choroid, ciliary body, and iris, is usually the part attacked. In Germany it is asserted that over 2 per cent of all diseases of the eye are due to syphilis. A large proportion, perhaps 50 per cent., of our cases of iritis are due to this disease, and usually the attack of iritis occurs during the secondary stage. Often nodules appear on the iris, and are quite distinctive of syphilis, and in the third stage of syphilis true gummata sometimes appear on the iris and ciliary body. Among the late manifestations of the disease are paralysees of the ocular muscles which usually respond promptly to antisiphilitic treatment. Alexander asserts that more than half of the paralysees of the eye muscles are due to syphilis.

The manifestations of congenital syphilis in the eye pursue a milder course than in the acquired form, but are often much more unyielding to treatment. Interstitial keratitis is the most common eye complication of congenital syphilis.

In tuberculosis the eyes of children are more often involved than the eyes of adults. When the conjunctiva is involved it presents much the appearance of trachoma, or else it is in the form of caseating ulcers. Late in the disease tubercles of the iris and chorioid may appear.

Œdema of the lids, conjunctivitis, keratitis, and paralysees of the ocular muscles occur in parotiditis and, like the testicle, the lacrymal gland may be the seat of inflammation.

The larger proportion of eye complications in pertussis have a mechanical origin, and are due to the increased intravascular tension caused by the spasmodic coughing. When paralysees of the eye muscles occur in this disease they are usually due to these hæmorrhages. Convergent squint seems to follow this disease more often than any other of the infectious diseases of childhood.

Malaria seems to be the underlying cause of supraorbital neuralgia in many cases, and the con-

dition of a superficial infiltration of the cornea with narrow radiating streaks, known as dendritic keratitis, is said to be due to malaria, but I have always found it very unyielding to antimalarial treatment. Night blindness occurs in chronic malarial poisoning, and Boas has reported a case of blue vision appearing with a regular periodicity with other evidences of intermittent fever, and disappearing after the administration of quinine. Quinine amblyopia with concentric contraction of the visual field is not uncommon in malarial sections where large doses of the drug are administered. This contraction clears up to some extent, but often much of the amblyopia remains permanently.

Before the introduction of vaccination variola was the cause of much blindness. In Germany it was asserted that 35 per cent. of all cases of blindness were due to it. Now, according to Fuchs, only about 2 per cent. may be assigned to this cause. The skin of the lids is a frequent seat of the eruption, and every portion of the eye may be affected during the progress of the disease. Sight is usually lost by an extension of the inflammatory condition from the conjunctiva to the cornea. Knies thinks that the cornea is never the seat of the primary eruption, and that it may be protected from infection by suitable aseptic and antiseptic treatment.

After the exanthemata accommodative asthenopia often occurs; particularly is this likely to result if there is a preexisting error of refraction. In measles, after the acute catarrhal symptoms have subsided, there is often left a persistent blepharitis, or perhaps a phlyctenular conjunctivitis, which may not be relieved until all refractive errors are accurately corrected.

Dakryocystitis is not uncommon following scarlatina. Clark, to whose article I acknowledge much assistance in securing material for this paper, says, in speaking of diphtheria: "The ocular lesion most frequently met with in diphtheria, and one of much clinical interest, is the partial, or rarely complete, paralysis of accommodation, which comes on rapidly, and at times suddenly, from three to six weeks after the appearance of the pharyngeal lesion, and from two to three weeks after apparent recovery. It is much more frequent in children than in adults, and often appears after diphtheritic infection in any part of the body, and which may be so mild as to have entirely escaped detection. The paralysis is almost always a bilateral though there are exceptions, and it rarely affects the iris." Knies accounts for the last phenomenon by the theory that "a definite ptomaine is produced, and that this has a paralytic action on accommodation while it has no influence on the movements of the pupil."

Rheumatism seems to play an important part in

the causation of many cases of iritis, and following acute articular rheumatism we occasionally have episcleritis, scleritis, and cyclitis.

After typhoid and other exhausting fevers there is sometimes marked weakness of accommodation.

It has been stated that there is a peculiar relation existing between the sexual organs and the eye, and many serious conditions of the eye have been attributed to masturbation. While the importance of this relation may have been exaggerated, I am prepared to believe that masturbation may cause conjunctival hyperæmia and impairment of accommodation. The following bears on this point: A boy at the State Industrial School was recently sent to the sick-call for my examination because his eyes were red. The boy stated that his eyes had been red for a long time and that he had difficulty in reading. I supposed I had to deal with a case of refractive error, but, after using a mydriatic and making a thorough examination, I found that he had no error of refraction. The hyperæmia persisted for several months, though he was treated persistently for a while. Recently he was questioned as to masturbation and pleaded guilty. He promised to reform, was transferred to another division and his trouble has promptly disappeared. During the menstrual period many slight eye diseases, such as conjunctivitis and blepharitis, are prone to present themselves, and in those who are anæmic or scrofulous more serious conditions are sometimes seen, particularly when dysmenorrhœa is present. Retinitis is sometimes caused by the albuminuria of pregnancy, and in such cases the induction of premature labor is justified, for the progress of the eye disease may be stopped by it. While in all forms of nephritis diseases of the retina occur, these changes are much more often observed accompanying the contracted kidney. Through the eye lesions do not occur, as a rule, until the nephritic condition is well developed, yet the almost characteristic picture seen in albuminuric retinitis is often the first indication of nephritis recognized. Cataracts are at times caused by changes dependent upon nephritis.

In *tabes dorsalis* the eye plays an important part, both in the extent to which it suffers changes, such as atrophy of the optic nerve, paralysis of the ocular muscles and accommodation, and also in the assistance the eye furnishes in making a diagnosis of *tabes*.

Atrophy of the optic nerves occurs in about 20 per cent. of all cases of *tabes*, and usually both eyes are affected at the same time. This atrophic condition of the nerve is not a direct extension of the process in the brain and cord, but is a separate manifestation of the disease.

Galezowski has estimated that two thirds of all cases of atrophy of the optic nerve are due to *tabes*. Knies says that genuine gray atrophy of the nerve should always lead one to suspect *tabes*, and that many years may elapse after the appearance of the gray atrophy before other symptoms of *tabes* develop.

Swanzy states that at the beginning of *tabes* we may have subjective phenomena, such as photophobia and a sensation of colored lights and sparks.

Martin says that tabetic patients, when blind, do not generally sway from side to side in closing the eyes and standing with the feet together, a usual symptom in those who are still able to see.

Meiosis is very common in *tabes* and has come to be considered almost characteristic of the disease.

The Argyll Robertson pupil, which consists of the absence of contraction on exposure of the iris to light, though it still contracts in convergence or accommodation, is one of the most valuable of symptoms in *tabes*. In making the test for the Argyll Robertson pupil one should not touch the skin about the eye, as cutaneous irritation may cause contraction of the pupil.

A SUPPOSED SARCOMA OF THE KIDNEY CURED BY X RAY TREATMENT.

By CHARLES H. RICHMOND, M. D.,
LIVONIA, N. Y.

J. R. B., a woman, aged forty years, married, the mother of three children, began losing flesh and strength and looking anæmic during the latter part of the summer of 1902. She suffered somewhat from nausea attended with eructation of fluids, also from dyspnœa. The last named symptom had lasted for a longer period and appeared to have no connection with the present depressed condition, further than that it was somewhat intensified by increasing debility. Physical examination revealed nothing abnormal in the thoracic or abdominal cavity. Urinalysis was attended with negative results. Backward displacement of the uterus, however, existed, together with some inflammation of the uterine neck. A little local treatment for the relief of the uterine irritation was attended with cessation of the nausea and waterbrash. During the latter part of October she thought she was gaining in flesh, and on one occasion remarked to me that her clothing was "getting too tight" for her. I made another abdominal examination and found a hardness over the upper portion of the stomach and immediately below the ribs of the left side. There was flatness on percussion over the space beneath the ensiform cartilage, over the lower portion of the ribs of the left side, the line of flatness extending posteriorly.

At this examination I was uncertain whether the enlargement was in the left lobe of the liver, in the spleen, or was due to something underlying and crowding these organs forward and inward. On subsequent examination it was found by conjoined

manipulation that the growth was deeply seated, extending downward, and the line of posterior dullness reaching as high as the eighth rib. Evidently the tumor was developing with great rapidity. The patient's loss of strength and flesh advanced *pari passu*.

Calling to mind my observation in quite a good many cases of extensive growths in the abdominal cavity, and remembering that of such growths upon the left side, that seemed to grow downward having their origin above, every one that I had seen had proved upon post mortem examination or operative procedure to be enlarged kidney, I came to the conclusion that the seat of the difficulty in this instance was in the kidney, and from the rapidity of its development that it must have been sarcomatous. Indeed, nothing short of a sarcoma could have grown so fast and so speedily have undermined the system. In order not to rely wholly upon my own opinion I took the patient to Dr. William S. Ely, of Rochester, N. Y., for examination, who agreed with me so far as he could give an opinion without the aid of an exploratory incision.

My experience with operations upon sarcomata has been anything but favorable, on account of the extreme vascularity of such growths and their attachments, so that the outlook in this case seemed utterly hopeless. However, as I had known something of the favorable effects of x ray treatment upon lupus and epithelioma I made inquiries of several medical men of prominence regarding its possible effects upon internal growths of a sarcomatous and carcinomatous nature. To these inquiries I could obtain nothing as to definite results, but Dr. Weigel, of Rochester, advised me to employ it as it seemed to be the only treatment the use of which would be likely to offer any reasonable hope of success. Having a Holtz static machine run by hand with an x ray attachment Dr. Weigel suggested that I try my machine for a time and, if benefit resulted, that I afterward send her to him for treatment with a more powerful outfit. He accordingly met the patient at my residence, agreeing in the diagnosis I had made, and gave me such suggestions as were necessary in applying the treatment. Her pulse at this time ranged from 108 to 120, the evening temperature from 101° F. to 102° F.; she had night sweats, had ceased to menstruate, had lost about twenty pounds in weight, was not able to dress herself without help, and measured two inches and a half or three inches more than normal in circumference just below the ensiform cartilage, with the tumor extending downward as far as the crest of the ilium.

I thereafter gave her daily treatments of fifteen minutes each with the x ray, for nineteen consecutive days, beginning December 10th. At the end of this time the temperature was nearly normal—on some days entirely normal—night sweats had lessened, the tumor had apparently ceased to grow and seemed softer, her appetite was good, she slept well, the pulse had somewhat improved, and she was buoyant in spirits. I then sent her to St. Mary's Hospital in Rochester, under the care of Dr. Weigel, Dr. Greenleaf, of that institution, applying the rays when Dr. Weigel could not personally attend to it.

Her removal to the hospital caused a temporary rise in temperature, but after a little it became nor-

mal, she began to improve in general appearance, and soon began to take walks outside the hospital grounds. At the end of nine weeks from the time of going to the hospital—about twelve weeks from the time treatment was begun—the growth had entirely disappeared, so far as could be determined by bimanual examination. She is at the present time, April 1, 1903, at her home apparently as well as before she began to decline, except that she has not fully regained her powers of endurance.

Upon the advice of Dr. Weigel I intend to continue x ray treatment with her two or three times weekly during the next few months as a precautionary measure.

The result of treatment in this case is the most remarkable of anything I have ever witnessed, inasmuch as the patient was failing rapidly in flesh and strength and a speedy fatal termination seemed the only possible outcome.

NOTES ON TWO CASES OF UROGENITAL TUBERCULOSIS.*

By CHARLES GREENE CUMSTON, M. D.,
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At the present time it is generally admitted that there are two types of tuberculosis of the urogenital system, which differ by their starting points only. In one, which is most frequently met with in the male, the disease starts in the epididymis, or if in the female, in the tubes; or, on the other hand, it may arise in the genital apparatus, and from there extend upward by direct infection, or possibly be aided in its extension by the lymphatics, and thus ascending pass from the genital system to attack the urinary apparatus. The second type of tuberculous infection, which is more prone to occur in the female than the male, is commonly called the descending type of urogenital tuberculosis.

The initial focus of the disease is, in this instance, to be found in the kidney, and from there the infection extends down along the ureters and finally reaches the bladder and urethra. From the bladder it may extend to the seminal vesicles and spermatic duct in the male, while in the female it attacks the tubes. In the male it becomes localized in the testicle, while in women the uterus becomes involved.

As clearly demonstrating the pathogenesis of ascending and descending forms of urogenital tuberculosis, I have selected two cases from my notes which seem to demonstrate these two forms in a more or less distinct manner.

CASE I.—The first case was that of a young man, thirty years of age, who had been a sufferer from pulmonary tuberculosis for several years. In

* Reported at the meeting of the American Urological Association at Hartford, Conn., March 4, 1903.

March, 1899, he was referred to me by his physician, on account of a swelling of the right testicle. On account of his poor general condition, operation was not considered advisable; and, into the bargain, by rectal examination the prostate was found greatly enlarged and lobular and very tender. His medical adviser then sent him to a high altitude, where he remained some six months without any visible improvement taking place, and he returned to the city with symptoms pointing to tuberculous involvement of the bladder, consisting of hæmaturia and frequent and painful micturition. He was so ill that no local examination of the bladder was attempted. About five weeks later he died.

At the autopsy, the right kidney was found somewhat enlarged and its capsule was adherent over certain areas. The pelvis of the organ was filled with a dirty yellow fluid, evidently arising from a suppurative process.

The renal parenchyma displayed at the margin of the pelvis numerous tuberculous deposits averaging the size of millet seeds. The pelvis presented important destructive ulcerative changes. The renal end of the ureter did not show any pathological change to the naked eye, other than that it was considerably dilated. The bladder presented a spot, about the size of a ten cent piece, which was deprived of its epithelium, the borders of this area being flat.

The prostate was three or four times its normal size and projected considerably into the urethra. It contained large areas of caseous deposits, and the glandular structures had practically disappeared. The seminal vesicles were very adherent to the surrounding structures and were riddled with foci of caseous material, their centre having commenced to show signs of breaking down. The spermatic cord was completely invaded by small, grayish tubercles.

The right testicle was greatly increased in size, and, on section, presented the same changes as were present in the prostate and seminal vesicles, namely, caseous foci undergoing softening in their centres. The testicle and epididymis were so completely united that they could not be distinguished from each other. The left testicle was both microscopically and macroscopically normal. The prostate, seminal vesicle, and testicle presented the ordinary changes of tuberculosis in its caseous stage, and consequently have nothing of unusual interest, but, on the contrary, the ulcerative lesion in the bladder was carefully examined microscopically. This showed the presence of numerous tubercles indicating that we were dealing with a commencing tuberculous ulcer of the bladder.

The ureter, upon microscopical examination, revealed the presence of numerous tubercles situated in its mucous membrane, and sections of the kidney gave a typical picture of chronic renal tuberculosis. In some parts old tubercles were visible, while in others the process was of more recent date, the latter showing signs of destruction.

Now, in explaining the starting point for this generalized urogenital infection in this case, it would appear evident that it is represented by the old tuberculous lesions residing in the testicle,

which, given the history of the patient, was in all probability the original organ involved.

The patient had been a sufferer for several years with pulmonary tuberculosis and then the seminal gland became enlarged and painful. This inflammatory condition of the testicle was certainly a commencing tuberculosis of the organ, as no evidence of gonorrhœal infection, present or remote, was evident. If the kidney had been the seat of the trouble for a considerable length of time, not only would the affection of this organ have presented more marked changes at the autopsy than were found, but symptoms pointing to the kidney would have been marked.

The manner of the extension of the urogenital tuberculosis in this case was, it seems to me, as follows: The infection of the testicle was transmitted from the primary tuberculous foci present in both upper lobes of the lungs by means of the circulation. When it attacked the seminal gland it remained stationary there for a time, and then it extended slowly up the spermatic cord by means of the lymphatics. It then attacked the seminal vesicle, either by way of the lymphatics, or else by the infected sperm coming from the testicle, if one is ready to admit the fact that tubercle bacilli are found in normal testicles of a man afflicted with pulmonary tuberculosis.

The next organ attacked would seem to be the prostate, and from this point it would appear that the infection traveled toward the ureter directly by the lymphatic system, and more especially concentrated its attack upon the right kidney by direct extension of the process.

The ulceration present in the bladder, I believe did not arise during the ascent of the process, but it was only after the kidney had become involved that the bladder in turn became infected by the urine containing bacilli emanating from the diseased right kidney.

In the case just related, we are evidently dealing with a very typical example of ascending urogenital tuberculosis, and in contrast to this one I will briefly detail the history of another case.

CASE II.—The patient, a young woman twenty-seven years old, was referred to me several years ago for the removal of a large bunch of tuberculous glands situated in the axilla. She gave the history and presented the signs of a cured tuberculous process in both pulmonary apices.

The operation for the removal of the glands necessitated a very extensive dissection, but the patient made an uninterrupted recovery and was discharged to all appearances, cured.

About two years and a half later, she again returned, this time for symptoms pointing to some disturbance of the urinary apparatus. She had, on several occasions, within the last few months lost

considerable blood from the bladder, and at the present time she was complaining of considerable pain both before and after passing urine and a constant desire to empty the bladder.

Cystoscopic examination of the bladder showed an ulcer situated near the left ureteral orifice. Palpation of the left kidney showed that the organ was enlarged and painful. On the right the kidney could not be palpated. From these facts a diagnosis of tuberculosis of the left kidney was made, and removal of the organ was advised and accepted. At the same time, the patient called our attention to the fact that a gland the size of a walnut had made its appearance about a year after the operation in the axilla, and by palpation it could be distinctly felt.

Nephrectomy was done several days later and a large kidney, presenting the typical macroscopical lesions of advanced chronic tuberculous nephritis, was removed. The parenchyma showed numerous caseous foci, and, on section, a few pearly gray tubercles were also discovered. The ureter, which had been removed along with the kidney, was also studded with miliary tubercles, while its mucous membrane showed a marked purulent infiltration. The patient did well for a few days, but she then developed symptoms of an unfavorable nature and died exhausted twelve days later.

Autopsy showed that both upper lobes of the lungs were adherent, and that cicatricial tissue was present. The lungs in general contained air, but the lower lobes contained a larger amount of blood than normally. The right kidney and ureter were perfectly normal. The remains of the left ureter showed that the organ was markedly dilated and its mucous membrane studded with miliary tubercles. Near the orifice of the left ureter several small ulcers were found in the mucous membrane of the bladder. The ulcers were small in size and had an eroded appearance. In the left axilla a caseous lymphatic gland of the size of a walnut was found.

To explain the development of the urogenital tuberculosis in this case is an easy matter. In the case of the man, the lungs were the starting point of the tuberculosis of the seminal gland, while in the case of the woman, it would appear that the tuberculous infection did not directly attack the kidney. A metastasis arose in the axillary glands on the left side in the first place; these were removed as thoroughly as possible, but incompletely apparently, since a year or so later another large gland developed in the site of the former operation. It is my opinion that the infection of the kidney had its starting point in this enlarged lymphatic gland. The process was to all intents and purposes quiescent in the lungs, but the bacilli grew and prospered in the lymphatics of the left axilla. From the gland the bacilli invaded the kidney, perhaps by way of the circulation, as certain German authorities seem to uphold the theory that tubercle bacilli circulating in the blood are secreted by the uriniferous tubules.

In the latter case we have an instance of descend-

ing infection of the urinary system. If the patient had lived it is quite probable that the tuberculous manifestations in the bladder would have given rise to an infection of the genital apparatus, which contrasts with the case of the man, because we have here a descending infection.

The tuberculous lesions of the bladder would have infected the tubes or uterus, either by way of the lymphatics, or possibly by the circulation. The process would have extended first to the peritonæum, and from here the invasion of the organs of generation would have taken place.

Regarding the prognosis, it may be said that the ascending form of tuberculosis is generally more favorable than the descending type, because the operative treatment is more easily accomplished, and also from the fact that an earlier diagnosis is far easier to make.

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HEREDITY AND TUBERCULOSIS.*

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The study of tuberculosis has been, and is at the present time, a subject of intense interest to the clinician as well as to the general practitioner.

Probably no other disease has commanded the attention of so many prominent and distinguished men as this scourge of humanity.

Statistics show that one seventh of the yearly percentage of deaths is due to it, and it is conservatively estimated that 150,000 persons die annually in the United States from some form of consumption. Therefore it behooves us, in order to cope successfully with this condition, to enquire closely into its ætiological factors.

The subject of the ætiology of tuberculosis is a large one. Volumes have been written upon it, and yet we are still at sea concerning some of its most important studies.

The question of the transmissibility of bovine tuberculosis to man is practically settled in the affirmative, but one of the most weighty questions with which scientists have wrestled is still open. We refer, gentlemen, to the hereditary transmission of tuberculosis.

Can tuberculosis be hereditarily transmitted?

* Read before the New York Polyclinic Clinical Society, April 6, 1903.

Most authors answer in the negative. The medical schools of the country, following Cornet, teach that tuberculosis is a non-hereditary disease, and that the foetus begotten from parents, one or both of whom are tuberculous, is only predisposed to tuberculous infection. They maintain that, owing to the weakened condition of the progenitor or progenitors, naturally ensuing after phthisis, the child born is not so capable of resisting the disease as those descending from stronger parents. This certainly is a radical departure from the teachings of our fathers.

Cornet, in his argument, asserts that statistics, or in other words, cases, fail to prove hereditary transmission.

Placental infection is disproved by the pædiatrist, who sees any number of tuberculous children. In his arraignment he states that if placental infection was a fact, you would find the primary focus not in the throat, lungs, or bronchial lymph glands, but in the liver and the glands fed by the portal system. For further corroboration of this theory, he cites the fact that Schreiber's inability to produce a reaction by injecting tuberculin in children from one to seven days old, born of tuberculous parents, would show that there was no such thing as hereditary tuberculosis.

To the uninitiated this all seems reasonable, and in fact, the evidence at the present time apparently substantiates this assertion; but if we dive beneath the surface, we shall find that, after all, statistics, as well as animal experimentation, will prove conclusively that hereditary transmission is not only a possibility but a reality.

Before quoting the cases which have been reported in the literature, which tend to disprove Cornet's arguments, we wish to call attention to the name of Cohnheim, the great pathologist, who was probably the first to suggest the possibility of a direct transmission of tuberculosis to the embryo.

The first case we will mention is the celebrated one of Birch-Hirshfield and Schmorl (1).

A tuberculous mother, twenty-three years of age, died in the seventh month of her first pregnancy. Directly after death, the foetus was extracted by Cæsarean section. Examination of the blood of the umbilical vein, as well as the liver, spleen, and kidneys of the child, demonstrated positively the presence of tuberculous deposits and tubercle bacilli. Further experimentation on guinea pigs and rabbits with the tissues of the liver, proved conclusively the above statements.

Lehman's (2) case was that of tuberculosis of the placenta in a twenty-six year old mother, who died of general tuberculosis. Sections of the chorion showed typical miliary tubercles, and micro-

scopical examination disclosed the presence of the bacilli.

Jacobi (3) reports a case seen in 1861, that of a seven months' foetus from a tuberculous mother who died three weeks after the miscarriage. It showed, on autopsy, large numbers of definite miliary tubercles of the liver, spleen, and base of the right lung.

Sabouraud (4) gave a report of a case of a baby dying eleven days after birth, which showed on section all of the positive signs of a congenital tuberculosis, which could only result from placental infection.

B. F. Lyle (5) reports a case of tuberculosis in which the child lived until the ninth week. The wide distribution of the tuberculous infection, all in the same stage, indicated blood infection, which could only have been transmitted directly from the maternal circulation.

Charrin (6), Berti (7), and Merkel (8), have also shown cases of direct transmission.

In the experimental studies of Bar and Renon (9), they have been able to infect guinea pigs with tuberculosis with the blood taken from the umbilical vein of a foetus, the mother having been tuberculous.

Hergott (10) injected the amniotic fluid of a thirty year old multigravida, into the peritoneal cavity of a guinea pig. He discovered on necropsy, two months and a half later, tubercles, from which he produced pure cultures of tubercle bacilli.

Cases in all respects similar to the before mentioned ones have also been reported by Landouzy, Martin, Aviragnet, Birch-Hirshfield, Schmorl and Loudé.

Queyrat (11) quotes the observation of Johné, of Dresden. A cow was slaughtered (February 20, 1885), and an eighth month's foetus was taken from it. Tuberculous nodules were found in the body and microscopically bacilli were demonstrated.

Malmoz and Browier (12) have also reported two cases which were similar in every feature.

Maffuci (13) conducted his line of experimentation upon ordinary farm yard poultry. He cultivated the tubercle bacilli from phthisical hens, and injected them into fertilized hen's eggs. He found that the process of incubation was not disturbed and that although the bacilli did not multiply, they retrograded into granules. These granules showed, however, the staining characteristics of normal bacilli.

The chick was hatched at full term, but, after a period of twenty days, the fowl died from symptoms of tuberculosis. Autopsy showed perfectly developed bacilli throughout the body, especially in the liver.

Monti, in his lectures, was wont to say that the foetus was always prone to tuberculous infection

providing the mother had a tuberculous placentitis; but that if the placenta was healthy, it acted usually, but with many exceptions, as a preventative filter.

Obstetricians and gynæcologists of wide experience have reported many cases of this condition.

From these cases and experimental researches it is easy to see that placental infection is certainly a fact, and to deny the probability of the same would certainly be as ludicrous as to deny the presence of tuberculosis in the human family.

The liability to transmission through the sperm is the next most important factor, and we will go into it fully.

Distinguished authorities at the present time, among whom we may number Osler (14), assert that the direct transmission through the sperm is, at most, a very remote possibility.

At every ejaculation, they maintain, there are thrown out in the semen, millions of spermatozooids, and when you consider that only one impregnates an ovum, and that there are but very few tubercle bacilli in the entire amount of semen, it seems that certainly spermatic infection must be extremely rare.

Virchow objects to germinative infection, on the ground that the presence of the bacillus must interfere with or arrest the development of the ovum.

This idea, or rather theory, of Virchow's has been offset by Baumgarten when he brings in rebuttal the condition of congenital syphilis and the pebrine disease of the silkworm.

In Monti's work on spermatic infection, in which Dr. Packard assisted, he found that the semen of tuberculous patients, injected into the peritoneal cavity of a guinea pig, produced a general tuberculosis.

Baumgarten and Spano (15), have demonstrated that the seminiferous fluid of tuberculous patients whose genital organs showed absolutely no pathological lesion, contained numberless tubercle bacilli. Jani and Weigert have corroborated this in its entirety.

Klebs (16) considers that foetal infection is ten times more prone to occur through the father than the mother, and, providing both are suffering from tuberculosis, foetal infection is inevitable.

The most important evidence we have in support of spermatic infection has been given us by Friedman (17). He injected small amounts of tubercle cultures into the vagina of rabbits directly after sexual intercourse. Within six or eight days autopsies were held upon these animals. They revealed by the microscope that the bacilli had penetrated, not only the genital tract, but the ovum itself, and were present in its cells.

In the face of such evidence, who will deny that spermatic infection exists?

One of the most important points upon which Cornet and others have based their argument against the non-hereditary transmission of tuberculosis is the work of Schreiber (18).

He reported a series of cases wherein he injected tuberculin in children aged from one to seven days born from tuberculous parents. His results, so far as the reaction was concerned, were entirely negative.

In taking up the consideration of this point, too much stress cannot be laid upon it.

In Otis's (19) series of twenty-six cases of adults, in four out of eight cases, in which the tubercle bacilli were positive in the sputum, there was no reaction, and in the subsequent eighteen cases suspected of tuberculosis, there were six reactions and twelve failures.

Anders's (20) statistics on the reaction of tuberculin as a diagnostic test for tuberculosis, showed 22 per cent. of negative results in adults.

Jacobi (21) maintains that reaction is seldom very marked in children, and that proportionately large doses are required. His conclusion as to the diagnostic feature of tuberculin is that it is not infallible, especially in children.

Therefore, it seems to us that too much weight cannot be placed on the tuberculin test, seeing that we are at sea in regard to the doses Schreiber used.

In summing up the points which have been brought forward in this paper, we wish to emphasize that tuberculosis can be hereditarily transmitted. Although we recognize the fact that the authorities of the present time are against this, we maintain that it is only a question of years when these same authorities will do their utmost to teach the public at large the danger of transmission by heredity, and the criminality of the act of the marriage of tuberculous patients.

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CHRONIC PNEUMONIA.

By E. PALIER, M. D.,

Elsewhere* I have dealt at some length with this malady, and I wish here to report a case which has very recently come under my observation, and which I hope may be of interest from several points of view.

Miss S., nineteen years old, born in Germany. Occupation, domestic. Family history—father, fifty-six years old, has a chronic cough, due to slight bronchitis, which, according to the family's statement, dates from a pneumonia that he had many years before. Otherwise, family history is good. The patient had been in rather good health, excepting for slight worry and some general weakness, owing to a disappointed love affair, up to the appearance of the malady in question. I saw her on account of the malady under consideration in the middle of December, 1902, when she came to my office. She had been then ailing, according to her statement for a few days. She had a temperature of 103° F., pulse 130, headache, lassitude, and slight pain in the lower extremities, with some sore throat. On examination, the throat was found slightly congested, and scattered râles were heard in the lungs. I then considered the case as one of grippe. I saw the patient again about a month later. She had a harassing cough and was extremely weak, though she had been walking about and trying to perform her duties as a servant in a large family as best she could. The temperature was about normal, with some exacerbations in the evening, but the pulse was about 130. On examining the lungs there was found dulness and bronchial breathing on the left side, from under the scapula to the base of the lung, and as far anteriorly under the axilla and under the nipple as the lung tissue extends. Coarse râles were scattered over the other parts of the lungs.

The patient was referred to a hospital for treatment, owing to the lack of a home. Her mistress, who visited her at the hospital, reported to me that the doctors there suspected the case either to be, or likely to develop into, consumption. Of course, I

am unable to vouch whether or not my informant correctly understood the statement of the doctors at the hospital. From the advice, however, given by the doctors to the patient on leaving the hospital, I suspect that there was some truth in my informant's report that the case was regarded by them with suspicions of tuberculosis. While in the hospital the patient, according to her statement, had several attacks of hæmoptysis.

I saw the patient again after she had left the hospital, after a stay there of about two months. There was hardly any change in her present condition from the one she was in just previously to her admission to the hospital, except that there was slight diminution in the bronchial breathing just under the scapula in the affected lung; the rest of the lung was as before. She had the same rapid pulse and weakness, but very little increase in temperature. She also had cough and expectoration of mucus. I prescribed for her sodium benzoate, with guaiacol carbonate for the lung trouble, and put her on nux vomica and iron as a tonic. I also advised fresh air, but not much exercise, as it exhausted her too much.

A gradual improvement in the patient's condition took place. At first, the upper part of the affected lung began to recover, then the anterior portion, and then the base of the lung, and lastly the part above the base recovered. Now both lungs are normal, except that in the previously affected lung; posteriorly, the respiratory murmur is slightly harsher than in a lung that has never been affected. But I must add that I have noticed some harshness of respiration following cases of pneumonia which ran a regular course and terminated by crisis. This harshness sometimes persists for years after the pneumonia. The patient feels well now, save that she gets tired on severe exertion sooner than she did before she became sick. Her sickness lasted about five months.

I have made no examination of the sputum in this case, but there is no doubt in my mind, from the course and termination of the case, that it was one of chronic pneumonia. If it is to be taken for consumption it must be acute tuberculosis, and the distribution of the consolidated areas in the lungs differs greatly in acute tuberculosis, where the areas are scattered over both lungs, and not confined to one lung.

As I have previously stated,¹ this affection is frequently mistaken by physicians for consumption, and they advise exercise, or change of climate, etc. The mistake is a very serious one, for a patient with chronic pneumonia should take as little exercise as possible, only for the sake of the fresh air, and a patient with acute pneumonia, of course, should not exercise at all and stay in bed. Furthermore, for a patient with limited means to leave his city and go for the sake of the climate to a strange place, is naturally a great hardship, and the trip under such conditions will do harm instead of good.

* *New York Medical Journal*, September 16, 1899, Atypical Forms of Pneumonia.

¹ *Loco cit.*

Patients with chronic pneumonia, especially those of limited means, should stay at home, where they have a better chance of recovery, and, with proper care, their chances of recovery are good. Other similar cases that I have seen lasted for over a year and terminated in recovery.

Such cases are not those of pleurisy, as some one suggested when I first published a report of them, for in some no fluid at all is found on aspiration, and in others a drop of serum may be withdrawn with the hypodermic needle. In the case under consideration, if it were one of pleurisy, the patient would surely have undergone some operation at the hospital (which is one of the largest in the city), for the removal of the fluid, but nothing was done for her. Pleurisy with effusion sometimes resembles such cases, but the hypodermic can easily clear up the diagnosis.

I call these cases chronic pneumonia, and not sub-acute, because while their onset is sudden, like an ordinary case of pneumonia, their resolution is very slow, and the term chronic consequently seems to me to be the most suitable one.

Correspondence.

LETTER FROM PARIS.

The Antiquity of Adam.—The Campaign against Tuberculous Disease.—Solidified Fluorine.—Radium.—The Grand Prix Osiris.—The Paris Hospitals.—The Alleged Dishonesty of English Apothecaries.—Liqueurs.—A London Borough Council Milk Supply.—A Quotation from Nougaret.

PARIS, May 9, 1903.

The French mind in its various phases is always interesting and sometimes amusing. With the idea of fixing definitely the date of Adam's birth (?), a well known savant has, for the past fifteen years, been making most extended researches. After making many profound calculations, he has at last arrived at the conclusion that Adam was born (?) upon October 23d in the year 1404 before Christ. The wise investigator has not yet ascertained the exact date of the birth (?) of Eve, but it is whispered that the solution of this problem is now occupying his attention, and that he hopes to be able to reach a definite conclusion on this point—within some years!

The question of tuberculosis is, as I mentioned in a previous letter, probably the most generally discussed matter in France, among the scientists. This is, of course, because of the high prevalence of consumption in the cities. Everywhere one sees the official placards in the official color—white—de-

signed to educate the masses. Dr. Léon Labbé, in his academic début before the Académie des sciences, made an interesting analysis of a recent work of Dr. Kelsch (the director of the School of Military Sanitation) upon Tuberculosis in the Army. The conclusions of Dr. Kelsch vary somewhat from those generally accepted, in which *direct contagion* plays the principal rôle. Dr. Kelsch endeavors to establish the theory that, on the contrary, direct contagion is the exception, and that another cause—self-infection—is the one that oftenest produces consumption among the young soldiers. This self-infection is produced by defective ventilation, bad nourishment, and overcrowding. Although approving the conclusions of Dr. Kelsch, Dr. Labbé thinks that the question of direct contagion should nevertheless be considered very seriously, inasmuch as the measures taken to prevent direct contagion will have a very beneficial effect upon the general hygiene of the soldier.

The Société de préservation contre la tuberculose held a meeting recently. M. Lépine presided, and prominent among the speakers were M. Fumouze, president of the Chamber of Commerce, M. Noblemaire, director of the Paris-Lyons-Mediterranean Railroad; Dr. Weill, Dr. Manton, Dr. Collin, and Dr. Pouralle. After a short allocution in which the prefect of police thanked those who by their presence were encouraging the war against the plague, Dr. Peyrot—senator, and president of the society—insisted upon the necessity of giving to the masses those notions of hygiene necessary for the avoidance of contagion. An educational committee appointed for this purpose was headed by Dr. Armaingaud, president of the French League against Tuberculosis.

At a recent meeting of the Académie des sciences M. Moissan gave an account of the work which he had effected, concurrently with M. J. Dewar, of London, that had resulted in the solidification of fluorine. Fluorine, already liquefied at a temperature of -185° C. was found to solidify at -233° C. produced by the evaporation of liquid hydrogen. Solid fluorine is a body of a yellow color analogous to that of sulphur, and, like sulphur, it loses its yellow tint and becomes white when it reaches a temperature of -252.5° C., the lowest temperature obtained, which is twenty degrees below absolute zero. Even at this extreme temperature, however, its chemical affinity did not cease to exist, and it reacted violently upon contact with hydrogen.

In the matter of radium, it would seem, according to Dr. Lippman, that not only is it the source of its peculiar light, but that it is also a permanent source of heat, very delicate experiments proving that it maintains *itself* constantly at a temperature

above that of its surroundings. As to the cause of these phenomena we are yet in the domain of hypothesis.

On April 1st the Institute of France awarded for the first time the "Grand Prix Osiris" of 100,000 francs. The recipient was Dr. Roux, the under-director of the Pasteur Institute. The Osiris prize was intended by its founder as a reward for the greatest discovery in science or letters making for the welfare of humanity.

I mentioned in another communication the wretched conditions of the Paris hospitals. The Hertford Hospital, for English-speaking people, is kept in pretty fair condition, but unfortunately there is no operating room, and patients requiring serious operations are sent to the wretched Paris hospitals. Now, however, that the real state of affairs is being handled without gloves in the newspapers, things will be remedied so far, at least, as the Hertford Hospital is concerned. The Tenon Hospital and the Hôpital de la Charité are no better than the Hôpital de la pitié, that I wrote of in my last letter. The hospitals are not the only things to find fault with, however. So far as surgical asepsis is concerned, there is too much attention paid to the letter and too little regard to the spirit of the precept. What matters it, for instance, if the hands are sterilized and rubber gloves worn, if the operator persists in holding a bearded face over the incision, talking the while and forgetful of the fact that during ordinary conversation salivary spray may be conveyed to a distance of a yard?

The London *Daily Mail* published on April 9th an article with the attractive heading *The Pirate in the Chemist's Shop*. Mention was made in the article of certain doctors in a large provincial town, who drew up a test prescription including several expensive drugs, and gave it to twenty chemists, with the result that only two out of the twenty made up the prescription honestly. The writer added that prosecutions were instituted and punishment inflicted in consequence. Another man, whose letter the *Daily Mail* did not see fit to publish, asserts that these statements are mere irresponsible and unfounded libels, and the redoubtable Labouchère, in *Truth*, takes the same view; but the *Daily Mail*, persisting in ignoring the subject, leaves the whole matter in a state of delicious uncertainty.

It is instructive to note in the papers the large number of crimes due to alcohol. One seldom sees staggering men on the streets, yet drinking is continuous, the workingman as a rule taking nearly a quart of wine at each meal, besides his apéritives and his liqueurs between times. The French Academy has recently handled the subject of liqueur-drinking in no very gentle manner, by simply apply-

ing the thumbscrews of fact to the pleasant vice, and pointing out that the average liqueur is only a mixture of an essential oil with methyl alcohol, and is highly injurious in every way. Of course "Monsieur Prudhomme" will go on drinking his liqueur as usual; the children will put their two sous pieces into the slot machines to get their little bottle of liqueur, which is the substitute for the American chocolate, and the "buffet" carriages which are attached to all trains—long or short distance—will be crowded as usual.

Apropos of nothing, the Battersea Borough Council of London established an experimental depot some time ago, for the supply of milk for infants in bottles, containing the proper quantity for a meal. The experiment was justified by the results, for during the six months that the milk has been obtainable, the rate of mortality among the municipally fed infants has been 85.5 per cent. lower than among those who obtained their sustenance from ordinary sources.

I will give an interesting quotation from Nougaret's *Histoire des prisons de Paris et des départements*. Of the conciergerie he says: "There were frightful fevers there and you took your chance of catching them. The patients, lying in pairs in filthy beds, were in as wretched a plight as ever mortals found themselves in. The doctors hardly condescended to examine them. They had one or two potions which, as they said, were 'saddles for all horses,' and which they administered quite indiscriminately. It was curious to see with what an air of contempt they made their rounds. One day the head doctor approached a bed and felt the patient's pulse. 'Ah,' said he to the hospital warder, 'the man's better than he was yesterday.' 'Yes, doctor, he's a good deal better—but it's not the same man. Yesterday's patient is dead; this one has taken his place.' 'Really?' said the doctor, 'that makes the difference! Well, mix this fellow his draught.'"

A Case of Dropsy, the Result of Inflammation of the Kidneys, Treated by Laparotomy. By Dr. H. P. Planer. (*Lancet*, April 25th).—The author reports the case of a woman, aged thirty-one years, suffering from extreme ascites due to inflammation of the kidneys, in which he performed laparotomy for the removal of the fluid. Improvement was immediate and progressive. The urine, which had been scanty and albuminous, became abundant and free from albumin. A gamboge pill was given daily on an empty stomach; this relieved the universal congestion of the abdominal organs, and put an end to the constipation that had previously existed. The patient has enjoyed perfect health in every way for nine months. She had previously been tapped several times for the ascites but without any permanent benefit.

Therapeutical Notes.

For Infantile Cardiopathies.—*Nouveaux remèdes* for May 8th ascribes the following to Monin: The digitalines are too active. The following preparations are preferable:

1. Infusion of digitalis, from 5 to 10 centigrammes ($\frac{3}{4}$ grain to $1\frac{1}{2}$ grain) in 150 grammes (5 ounces) of water.
2. Alcoholic tincture of digitalis:
For children below three years of age. 5 to 10 drops;
From three to five years.....10 to 15 drops;
From five to eight years..... 20 drops.
3. Extract of digitalis:
Below three years.....1 to 2 cgms ($\frac{1}{16}$ to $\frac{1}{8}$ grain);
From three to five years.....5 cgms ($\frac{3}{4}$ grain);
From five to eight years.....10 cgms ($1\frac{1}{2}$ grain).
4. Syrup of digitalis (French), administered by teaspoonfuls in the ratio of one or two teaspoonfuls for children below two years of age, and from three to four teaspoonfuls from six to eight years of age.

A Snuff for Coryza.—*Nouveaux remèdes* for May 8th ascribes the following to Hirtz:

- R Powdered starch.....10 parts;
Boric acid.....1 part;
Bismuth sulphate..... } of each $\frac{1}{2}$ a part.
Powdered quinine..... }
- M.

For Constipation.—*Progrès médical* for March 14th ascribes the following to Huchard:

- R Powdered licorice..... } of each 60 grammes
Senna..... } (2 ounces);
Sulphur..... }
Powdered fennel.. } of each 30 grammes (1 ounce);
Powdered sugar.....180 grammes (6 ounces).
- M. One or two teaspoonfuls for a dose.

Or this:

- R Flowers of sulphur..... } of each 5 grammes
Calcined magnesia..... } (75 grains).
- M. For ten powders. One powder every two or three days.

Or this:

- R Calcined magnesia.....80 grammes ($2\frac{2}{3}$ ounces);
Lactose.....40 grammes ($1\frac{1}{3}$ ounce);
Essence of citron.....2 drops.
- M. A teaspoonful or a dessertspoonful in a little water.

Or this:

- R Magnesium salicylate..... } of each 2.50 grammes
Sodium benzoate..... } ($37\frac{1}{2}$ grains);
Powdered rhubarb.....5 grammes (75 grains);
Powdered nux vomica....0.50 gramme ($7\frac{1}{2}$ grains).
- M. For ten powders. One powder twice or three times a week.

The Treatment of Tertiary Syphilis.—Lieutenant-Colonel Zacarias Rojas de Molina, of the Mexican Army (*Journal of the Association of Military Surgeons*, March) uses a saturated solu-

tion of potassium iodide, in progressive doses, with the very best results.

In the employment of potassium iodide it is always very convenient to commence with the smallest dose, increasing it gradually, until the desired effect is obtained. The method which he has always employed is the following:

- R Potassium iodide.....25 grammes;
Distilled water.....25 grammes;
M. Dissolve.

Of this saturated solution he begins by giving 20 drops at bedtime in any kind of vehicle, compound syrup of sarsaparilla being one of the best, increasing the dose from 10 to 20 drops daily until modification of the tertiary manifestations is obtained.

Lately he has had two cases in which the patients were in danger of losing their noses, and he found himself compelled to increase the above mentioned dose to 200 drops every night, in order to arrest the progress of the nasal ulceration, and their noses were saved, thanks to this heroic treatment.

As soon as relief is obtained, he again commences with the initial dose as at the onset of the treatment, continuing until all specific lesions have disappeared.

For Acute Asthenic Pneumonia.—The *Revue médicale* for March 25th, quoting the *Journal de médecine de Paris*, ascribes the following to Professor Grasset:

1. Alternate every hour the two following mixtures with food (milk or bouillon):

Simple elixir....enough to make 120 c.c. (4 ounces).

- R Rum or cognac.....40 grammes ($1\frac{1}{3}$ ounce);
M.

and

- R Ipecac.....2 grammes (30 grains);
Infuse in water.....100 grammes ($3\frac{1}{3}$ ounces);
Reduce to 80 grammes ($2\frac{2}{3}$ ounces) and add
Syrup of senega.....30 cub. cent. (1 ounce).

M.

2. Apply a blister over the affected part without waiting for the seventh day.

3. With the subsidence of the fever, feed the patient well, and three times daily, let him take in milk a teaspoonful of the following:

- R Sodium arsenate.....0.03 gramme ($\frac{9}{10}$ grain);
Tincture of kola..... } of each 50 cub. cent.
Tincture of cacao.... } ($1\frac{1}{3}$ ounce);
Citric acid.....1 gramme (15 grains).

For Blennorrhagic Vulvovaginitis.—The (*Revue Française de médecine et de chirurgie*, 1903, No. 17, ascribes the following to Dalché:

- R Belladonna leaves.... }
Leaves of nightshade } of each 30 grammes (1 ounce);
(morelle, Fr. codex) }
Hyosciamus leaves.. }

Poppy heads.....70 grammes ($2\frac{1}{3}$ ounces).

- M. To be boiled in enough water for a sitz bath and given tepid. In adults, also, injections of the water from this bath may be given.

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NEW YORK IN MEDICINE AT THE AGE OF 250 YEARS.

This week the city of New York has celebrated the 250th anniversary of its organization as a municipality. We of the medical profession must pause to ask ourselves if during this quarter of a millenium the city has grown in medical achievement proportionately to its growth in size, in commercial importance, and in material prosperity. In population and as a centre of finance it is now second only to London, and it is the metropolis of a hemisphere. Perhaps it cannot be said that New York has made such strides in medicine as it has in population, wealth, and commercial undertakings, but we believe it can truthfully be said that it has achieved as much in medicine in the 250 years of its existence as any other municipality in the world.

To make good such a statement as this it is not necessary to show that New York has been the scene of great discoveries or startling changes in practice. All that is needed is to recognize that nowhere else on earth are medicine and surgery practised more intelligently or efficiently, nowhere else is public sanitation better carried on, and, on the whole, we believe, nowhere else is undergraduate teaching in medicine more instructive. It is still true that for certain special forms of study we resort to European capitals, but it is equally true that men from those same cities find something to learn in New York—at least they are good enough to say so when they visit us.

But we must not rest content with keeping pace with the rest of the world; we must become more and more a leader. We must improve and multiply our hospitals, we must be steadfast in the campaign

against preventable disease, we must keep on rooting out quackery, we must make our literature better and better, and we must leave no stone unturned to make New York the greatest centre of medical teaching. We are convinced that all these objects will be attained.

THE GOODSSELL-BEDELL ACT.

The legislature of the State of New York has passed the infamous Goodsell-Bedell bill, and it has received Governor Odell's signature, so that it becomes a law. By this action the State of New York has set itself down as many years behind the times. As Dr. Knopf, that ever vigilant guardian of the consumptive's interests, has graphically put it in a communication to the newspapers, "under the law of 1900, chapter 327, cities of the first class were authorized to erect sanatoria for the treatment of consumptives outside the city limits, such acts and the selection of the site to be subject to the approval of the State and local boards of health. Private property was sufficiently protected by the general laws. The effect of the Goodsell-Bedell law is to make it hereafter practically prohibitive to establish such a sanatorium anywhere in the State. If any board of supervisors of a county or a town board should be opposed to the establishment of an institution for consumptives, the mere adoption of resolutions would suffice to make the creation of such an institution impossible."

We have long been accustomed to legislative manœuvres which compelled the city of New York to pay a large proportion of the taxes that ought to be paid by the rest of the State, and we have almost ceased to protest against those iniquitous measures, but we of the city had not imagined that our rustic beneficiaries would ever have the presumption to claim a monopoly of fresh air. It is preposterous for them to contend that a properly managed sanatorium for consumptives, if established on their territory—and the urban authorities would not tolerate one that was not well managed—would in the slightest degree prove a menace to their own health. Yet there was obviously no object in their pushing this enactment unless they intended to balk the beneficent intentions of the large cities—in short, to play the part of the dog in the manger.

Governor Odell had been warned by two prominent medical organizations, the New York Academy of Medicine and the Fifth District Branch of the New York State Medical Association, also by a high representative of the Masonic fraternity, and by the Charity Organization Society, that his signature to this reprehensible bill would work incalculable harm; but he has preferred to listen to other advice. It is humiliating to think that the governor of the great State of New York should be so duped. Let us hope that he will yet see the error into which he has been led, and exert himself to secure the repeal of the law.

THE ARMY SURGEON AS AN EXECUTIVE OFFICER.

An admirable article is contributed to the April number of the *Journal of the Association of Military Surgeons* by Dr. John Nelson Goltra, a contract surgeon in the army, entitled *The Executive Element in the Training and Skill of the Army Surgeon*. The article is to be admired quite as much for the literary style displayed in it as for the good sense it embodies; and this is exceptional in medical writing. We have always maintained that the American medical man had, as a rule, displayed admirable administrative qualities, as was conspicuously exemplified in the management of the general hospitals during the civil war and for many years in the conduct of lunatic asylums, and we have contended that there was no good reason for excluding physicians from executive positions in boards of health and other bodies dealing with sanitary administration.

The item of executive skill, says Dr. Goltra, is the one of which the least may have been thought by either the appointing power or the appointee when an assignment to some particular duty or field service was made, but when the work has been done, and the account taken, such skill or the lack of it will always be found to have entered largely into the grand resultant of success or failure. A man may be pre-eminent, he says, as a sanitarian, specially skilled in bacteriology and biology, a peerless surgeon, and withal thoroughly conversant with the requirements of the regulations, and yet not wholly fulfill the surgeon general's expectations and wishes when military operations are under way. He declares that

reports of the present sanitary condition and low death rate of troops in the Philippines show that both medical and line officers are making good use of knowledge gained in the severe schooling of the last four years; that still further advances and still better methods of training may be evolved it is the object of his paper to bring about.

One of Dr. Goltra's paragraphs is so graphic that we quote it entire: "A man is only what he is trained to be. However much genius may sometimes come to the aid of the unschooled, it can never take the place of training. It is too uncertain, too rare, and could not, even if possessed, fit a man for these duties. By executive faculty is meant that habit which consists, not in doing the work one's self, but in seeing that the right man does it at the right time and in the right way. Nor, still further, does it consist in giving orders, but rather in establishing such a condition of affairs that each man, whether the range of his responsibility be wide or narrow, gives the orders suitable to his special station, and sees that they are executed. It is not always the man who works the hardest that accomplishes the most. Too much depends upon the direction of his efforts—his business tactics—in other words, his appreciation of the executive principle. It fosters the *esprit de corps*, and by it a man is able to wield strong influence where he is not. For this reason it is essential in the putting into effect of these complex methods used to prevent the spread of contagion. Chance and uncertainty must surely be as far eliminated as may be, for direful possibilities are hovering too near." These are words of which the young army surgeon, in spite of the proud record of his corps, cannot take too much heed.

THE INFLUENCE OF NEPHRECTOMY UPON ABSORPTION AND THE RELATIONS OF THIS INFLUENCE TO THE THEORIES OF OEDEMA.

A recent study which was made under the auspices of the Rockefeller Institute for Medical Research by Meltzer and Salant, of New York (*Journal of Medical Research*, Vol. ix, No. 1; New Series, Vol. iv, No. 1), is of great scientific as well as practical interest in its bearings upon the puzzling questions of absorption and oedema. The

authors were brought to the consideration of their subject by reason of some previous experimental work which they had done in order to determine the influence of nephrectomy on absorption by injecting minimum fatal doses of strychnine into rabbits the kidneys of which had been removed. They found that such animals could gradually receive a good deal more than the usual fatal dose without manifesting any reaction. The possibility that absorption was impaired in nephrectomized animals occurred to them, for the actual effective dose of a drug injected into the blood is equal to the amount absorbed minus the amount eliminated. Hence, in animals without kidneys, *i. e.*, with practically no elimination, much smaller doses would probably produce poisoning. They then had to deal with the question of whether, if the same or a larger dose was necessary to induce toxic symptoms, nephrectomy impaired absorption from the tissues.

The experiments with strychnine did not show a positive answer to this question, and in the present study the authors pursue a different method, and examine the absorption of salt solutions injected directly into the peritonæum of rabbits after nephrectomy, as compared with the absorption of the same solutions in normal rabbits. They found that, contrary to their expectations, absorption from the peritoneal cavity was more active in nephrectomized rabbits than in normal animals. At first they experimented with 0.68 solutions of sodium chloride, which they injected through a small incision into the peritonæum. The quantity injected was about one twentieth of the weight of the animal. After a lapse of time, which was in each case the same for the animal with removed kidneys and the check rabbit, the abdomen was opened and the whole amount of fluid in the peritonæum drained off by inverting the rabbit over a plate. They found, however, on measuring the amount of fluid thus remaining unabsorbed, that there was no appreciable difference between the amount absorbed by the nephrectomized rabbits and that absorbed by the check animals. On consideration, they decided that this was due to the fact, which has been proved experimentally, that nephrectomy increased the osmotic pressure of the blood, although the quantity of the blood was increased, and through this rise in osmotic pressure there was an

increase in the absorption of any fluid which was hypotonic to the blood, *i. e.*, of a lesser concentration. A solution of 1.2 per cent. is decidedly hypertonic (more concentrated) to the blood of nephrectomized rabbits. Their further experiments were therefore conducted with salt solutions of approximately this concentration, in order to eliminate the increased absorption factor of a hypotonic solution, such as one of 0.8 per cent.

They found in this series of experiments that the absorptive capacity of the peritonæum was increased in rabbits after nephrectomy, and that this increase lasted for about twenty-four hours after the operation. Another interesting observation made by the authors was that, while a certain amount of lymph was usually found in the peritoneal cavity of normal rabbits, in none of the nephrectomized animals was any lymph found on opening the abdomen. The interpretation of this is that the increased absorption caused by nephrectomy removes any surplus lymph remaining in the peritonæum after the operation.

Beyond its physiological interest, the question of absorption after nephrectomy has a direct bearing upon the question as to the origin of œdema in chronic nephritis and other conditions. Œdema is an abnormal accumulation of lymph within the tissue spaces, and the amount of lymph is regulated by the amount of transudation from the blood vessels into the tissue spaces and by the degree of absorption from those into the circulation. But little attention has been paid heretofore in the various theories held on œdema to the minus factor of absorption, the interest of Bright, Bartels, Grainger Stewart, Cohnheim, and others having been chiefly centered in the effect of increased transudation.

The present authors, however, emphasize the fact that absorption from the tissues is very important in the production of œdema. Their experiments, showing that removal of the kidneys increases the power of absorption of the tissues, apparently as the result of an increased osmotic pressure in the blood, also seem to prove that double nephrectomy can be of very little assistance in the study of the factors concerned in the production of œdema. The animals do not survive long enough to reach a period in which absorption might be diminished, while in the period following immediately after

nephrectomy the increased absorption will directly prevent the formation of œdema. The latter fact explains why œdema does not occur soon after double nephrectomy. The absence of œdema in the beginning of anuria, either of hysterical or of reflex origin, or due to the simultaneous stenosis of the ureters by calculi or neoplasms, is also thus explained. The first effect of anuria, therefore, is not an increase of lymph in the tissues, but rather an increase of its absorption from the tissues into the circulation, thereby preventing the production of œdema.

The authors of the experimental study under consideration may be congratulated upon the manner in which they have handled a most difficult problem, and for the light which they have shed upon a hitherto but little explored question. Further investigations are, indeed, needed to confirm their results and to clear up some phases of their theme which are still obscure, especially as regards the mechanism of the production of œdema in various diseases of the heart and kidneys; but the present study bears the stamp of thoroughness and conscientiousness which will compel the future investigator in this field to base his work upon the findings of Meltzer and Salant.

"OSTEOPATHY" IN MINNESOTA.

In its June issue the *St. Paul Medical Journal* will say: "The legislature of the State of Minnesota has seen fit to recognize 'osteopathy' and to legalize its practice, and it has given to those who choose to call themselves 'osteopaths' all the rights and privileges of practitioners of medicine. We are a little surprised that, with Senator Horton ready to champion their cause, the 'vitopaths,' the 'rubberpaths,' the 'Christian Scientists,' and the 'massage parlor artists' did not also seek to obtain recognition and to be accorded the right of practising medicine, a right which with the assistance of Senator Horton they might readily have obtained, and which when they find out how cheaply it may be obtained they will probably seek and obtain at the next legislative session, for Senator Horton has another term to serve. . . . So far as the practice of 'osteopathy' is concerned, this law will make but little difference, for 'osteopaths' have practised hitherto without restraint, and would doubtless have continued to do so had they not been legalized by act of legislature. We shall watch certain phases of

this act with considerable interest. The act gives 'osteopathic physicians' all privileges of 'other' physicians, but in Section 8 of the act 'osteopathy' is declared not to be the practice of medicine or surgery. Consequently, while they may treat all diseases and sue for their bills, if we interpret the act correctly, they cannot be sued for malpractice." We are pretty well accustomed to freak legislation in the interest of quacks, and the worst that can come of this Minnesota action, we take it, is that it may serve as a precedent for the legislatures of other States.

SPORTS FOR THE LUNATICS ON WARD'S ISLAND.

We lately expressed the hope that the sports devised for the lunatics on Ward's Island would be indulged in frequently. We are gratified therefore to find that programmes for the patients and employees of the Manhattan State Hospital, East, and the Manhattan State Hospital, West, have been arranged for Decoration Day, May 30th, by the respective superintendents, Dr. A. E. Macdonald and Dr. E. C. Dent. The sports include baseball, lawn bowls, foot racing, the running high jump, the potato race, the running broad jump, the tug of war, throwing the base ball, the sack race, the shoe race, the three-legged race, the wheelbarrow race, the hurdle race, the egg race, basket ball, the shoe hunt, tether ball, the bucket race, golf-ette, a barrel rolling contest, and a nail driving contest. We repeat that we heartily approve of these diversions for the lunatics as well as for the employees.

THE ASSOCIATION OF MEDICAL LIBRARIANS.

Miss M. R. Charlton, of Montreal, representing the library of the Medical Department of McGill University, while admitting the truth of our recent statement that the *Index-Catalogue of the Library of the Surgeon General's Office* and the *Index Medicus* had in great measure brought about the growth of medical libraries in the United States of late years, points out, in a communication to us, that for the last five years the growth of medical libraries has increased much more rapidly than before, and she thinks that this increase has been owing to the exertions of the Association of Medical Librarians, which was organized in 1898. Far from having any disposition to dissent from what our fair correspondent says, we may point to our commendation of the work of the Association of Medical Librarians.

News Items.

Society Meetings for the Coming Week:

MONDAY, June 1st.—New York Academy of Sciences (Section in Biology); German Medical Society of the City of New York; Morrisania Medical Society, New York (private); Brooklyn Anatomical and Surgical Society (private); Corning, N. Y., Academy of Medicine; Utica, N. Y., Medical Library Association; Boston Society for Medical Observation; St. Albans, Vt., Medical Association; Providence, R. I., Medical Association; Hartford, Conn., Medical Society; Chicago Medical Society.

TUESDAY, June 2d.—New York Neurological Society; Buffalo Academy of Medicine (Section in Surgery); Elmira, N. Y., Academy of Medicine; Ogdensburg, N. Y., Medical Association; Syracuse, N. Y., Academy of Medicine; Hudson, N. J., County Medical Society (Jersey City); Androscoggin Me., County Medical Association (Lewiston); Baltimore Academy of Medicine; Medical Society of the University of Maryland (Baltimore).

WEDNESDAY, June 3d.—New York Academy of Medicine (Section in Public Health); Society of Alumni of Bellevue Hospital; Harlem Medical Association of the City of New York; New York Genitourinary Society; Medical Microscopical Society of Brooklyn; Medical Society of the County of Richmond, N. Y. (New Brighton); Penobscot, Me., County Medical Society (Bangor); Bridgeport, Conn., Medical Association.

THURSDAY, June 4th.—New York Academy of Medicine; Brooklyn Surgical Society; Society of Physicians of the Village of Canandaigua, N. Y.; Boston Medico-psychological Association; Obstetrical Society of Philadelphia; United States Naval Medical Society (Washington); Medical Society of City Hospital Alumni, St. Louis; Atlanta Society of Medicine; Obstetrical Society of Philadelphia.

FRIDAY, June 5th.—Clinical Society of the New York Postgraduate Medical School and Hospital; Baltimore Clinical Society; The Manhattan Clinical Society.

SATURDAY, June 6th.—Manhattan Medical and Surgical Society, New York (private); Miller's River, Mass., Medical Society.

Change of Address.—Dr. Jonathan Wright to 44 West Forty-ninth Street, Manhattan, New York.

Queens-Nassau Medical Society.—The annual meeting of this society was held at Johren's Hotel, Mineola, L. I., on Tuesday, May 26th.

Typhoid Fever in Philadelphia.—There has been an increase of seventy-seven new cases of typhoid in Philadelphia within the forty-seven hours ending at noon, May 18th.

Memorial Hospital, Brooklyn.—A suit has been brought against the Memorial Hospital for Women and Children in Brooklyn by the Dime Savings Bank, for foreclosure of a mortgage of \$50,000.

The Fumigation of Money.—Owing to the dread of smallpox in St. Paul, Minn., the commissioner of health, Dr. Justin Ohage, has requested the banks to fumigate their greenbacks, to avoid the conveyance of contagion by dirty bills.

The Association of Military Surgeons.—At the business session of the association, held in Boston last week, Medical Director Wise, U. S. A., was appointed president of the association, and Surgeon-General Walter Wyman, of the Marine and Hospital Service, vice-president.

A Milk Crusade in Baltimore.—The Baltimore Md., Pædiatric Club held a meeting in the hall of the Medical Chirurgical Faculty in Baltimore, on May 21st, to initiate a crusade for pure milk.

Overflow Tents for Bellevue.—Three overflow tents are in process of erection on the hospital lawn at Bellevue, one for children and the other for adult patients, from whatever wards may be overcrowded.

Grippe Epidemic in Riverhead, L. I.—An epidemic resembling grippe is epidemic in Riverhead, L. I., more than one hundred cases being reported within the two weeks ending May 24th. No deaths have occurred.

Manhattan State Hospital.—Dr. Calvin B. West, of Syracuse, has been appointed on the staff of Manhattan State Hospital, on Long Island, having successfully passed the civil service examination for the position.

Eastern Dispensary, Baltimore.—The annual meeting of the board of directors of the Baltimore Eastern Dispensary was held on May 19th, and the following officers were elected: Mr. W. F. Airey, president; Dr. D. W. Cathell, vice-president; Mr. Alfred Jones, secretary and treasurer.

Glanders in Newark.—Two men have been attacked with a disease supposed to be glanders in Newark, N. J. One a stableman who was employed in a stable in which glanders appeared some months ago. The man is dead. Another is dying from the same disease. Five hundred horses have been attacked.

Physicians to Appeal to the President.—The East Side Physicians' Club, Dr. Julius Sotom presiding, held a meeting on May 19th, at which resolutions were passed to appeal to President Roosevelt to protest to the Russian Government against the outrages at Kishineff, and to demand punishment for the guilty.

The Red Cross to be Reorganized.—In an appeal just issued by Clara Barton, president of the National Red Cross Association, announcement is made that "the plan of reorganization includes the formation of a finance committee consisting of men of national reputation, who shall have entire charge of the funds of the Red Cross."

The Goodsell-Bedell Bill.—The New York Academy of Medicine and the New York State Medical Association have passed resolutions requesting the governor in the name of justice to withhold his signature from this bill, and a number of eminent physicians of the State have written to the governor to the same effect. These efforts have, however, proved unavailing as the bill has now become law.

The Women's Medical College of Philadelphia held its commencement on May 21st, when an address was made by Surgeon-General George M. Sternberg, U. S. A., who said that there should be no prejudice against women in professional life, many of them having attained a high rank among the scientific physicians of the country.

The University of Maryland Medical School.—The ninety-sixth annual commencement was held on May 19th, in Baltimore, Md., Dr. Bernard Carter, provost of the university, presiding.

The Michigan Board of Registration.—The next meeting for examination will take place on the second Tuesday in June. Applicants should secure blanks from the secretary of the board, Dr. S. B. Harrison, Sault Ste. Marie, Mich.

Unsanitary Railroad Coaches.—The State board of health of Kentucky has recently appointed a committee to investigate the sanitary condition of railroad coaches, as the precautions against the spread of disease are not considered as complete as they should be.

War to the Death on the Mosquito.—At a luncheon given by William C. Whitney, at the Sheepshead Bay Clubhouse, on May 22nd, a compact was made by the guests, among whom were representatives of the Federal, State, and city governments, that they would not rest till the mosquito had been driven from that part of Long Island.

"Spotted Fever."—Cerebrospinal meningitis, which attacked several men on the receiving ship, *Minneapolis*, has broken out aboard the monitor *Puritan*, which had been used as an auxiliary receiving ship, owing to the crowded condition of the navy yard at League Island. On Wednesday, May 20th, two landsmen were found to be affected with this disease, the cause of which is supposed to be the crowded condition that has existed on board the ships. All the men on both the *Minneapolis* and the *Puritan* have been ordered to shore camps. This makes a total of sixteen cases of the disease.

Board of Medical Examiners for Texas.—The Board of Medical Examiners (regular) which has just recently been appointed by Governor Lanham, will hold a meeting at the Dinkill Hotel, Austin, Tex., beginning June 15th, for the purpose of organizing and electing officers for the next two years, and for the examination of any applicants who desire to begin the practice of medicine and surgery in Texas, and for the transaction of such other business as may come before the board. For further information, address Dr. M. M. Smith, secretary, Austin, Tex.

The Latest Thing in Medical Congresses is the Congress of Thalassotherapy, which was opened recently at Biarritz, under the presidency of M. de Saint-Arroman, representing M. Chaumié, minister of public instruction. Among the names of those officially connected with the congress or present at the meeting we notice Professor Albert Robin, Dr. Combes, M. Baudouin, Professor Liebreich, Professor Winternitz, Professor Treub, Professor Loewenstein, Professor Hiller, and many other well-known names. About 400 took part in the meetings and there were over 600 present at the opening session. The principal subject of research by the congress was the influence of the sea climate on tuberculosis.

Recruiting for the Navy Suspended.—Recruiting for the navy has been temporarily suspended, owing to the prevalence of contagious diseases at the various stations and on board the receiving ships on the Atlantic and Pacific Coasts.

Free Clinics by Professor Kehr.—Announcement has been made by the German Hospital that Professor Hans Kehr, of Halberstadt, Germany, is in the city and will hold clinics for charity patients at the hospital. Applications may be sent to Dr. Wilhelm Meyer, at the hospital.

A New Medical Practice Act for Louisiana.—At the meeting of the Louisiana State Medical Society, held on April 28th, a resolution was adopted that a committee be appointed to prepare and submit to the next State legislature a new medical practice act. This measure was necessitated by the fact that it is almost impossible to secure a conviction under the present law.

A Doctor's Automobile Blows Up.—Just as Dr. Silas C. Blaisdell, surgeon-in-chief, of the Eastern District Hospital, alighted from his automobile outside his home in Bedford Avenue, Brooklyn, recently, the machine exploded with a terrific noise that shook the neighborhood. Many windows were broken and pieces of the automobile were hurled fifty to a hundred feet in all directions. Dr. Blaisdell was, fortunately, not injured.

Leprosy and Fish Eating.—Mr. Jonathan Hutchinson, a former president of the Royal College of Surgeons in London, England, who has recently made an exhaustive investigation in India as to the cause and prevention of leprosy, has written to the *London Times* on the subject. He is of opinion that the Catholic fast days are responsible for a large number of cases of the disease, and says that he has observed that leprosy increases in proportion to the success of Catholic missions. He quotes the census returns in support of his theory. He also believes that the disease is non-contagious, as the Indian Jain, who is a vegetarian, is exempt, while Catholics suffer fearfully.

Recent Medical Legislation in Nebraska requires all physicians who locate there for the practice of medicine or surgery after August 1, 1903, to pass an examination before the State board of health. This law applies to every physician of whatever school. The board of health has absolute control in setting the standard of requirements for all applicants. This power permits reciprocity between examining boards from other States. A law was enacted at the last session of the legislature defining unprofessional conduct on the part of a physician who has been legally qualified to practice in Nebraska. The office of medical inspector of the public health was made legal and an appropriation allowed for the salary and expenses of one man whose whole time must be given to the State. Boards of health may now be organized as needed in each county, with legal authority to enforce medical inspection and sanitary laws.

The Association of Medical Librarians.—The sixth annual meeting of this association was held Saturday, May 16th. A large number of librarians and physicians representing the medical libraries throughout the country assembled in the morning at the Library of the Medical Society of the County of Kings, Brooklyn, N. Y., and after an inspection of the building, were entertained at luncheon at the Union League Club by the local members, Dr. W. Browning, Dr. J. M. Winfield and Mr. A. T. Huntington. The scientific session was held in the afternoon at the New York Academy of Medicine, the president, Dr. W. Osler, in the chair. Papers and discussions were contributed by Mr. C. P. Fisher, of Philadelphia; Dr. T. G. Lee, of Minneapolis; Mrs. G. W. Myers and Dr. E. H. Brigham, of Boston; Mr. J. S. Browne and Dr. W. S. Dennet, of New York; Mr. A. T. Huntington, of Brooklyn, and others. The officers elected for the ensuing year are as follows: President, Dr. William Osler, of Baltimore; vice-president, Dr. Abraham Jacobi, of New York; secretary, Mr. Albert T. Huntington, of Brooklyn; treasurer, Dr. George D. Hersey, of Providence; executive committee, Mr. John S. Brownne, of New York; Mr. Charles P. Fisher, of Philadelphia, and Dr. James M. Winfield, of Brooklyn; manager of the exchange, Miss M. C. Noyes, of Baltimore. The association will hold its next meeting at Atlantic City, N. J., in June, 1904.

Official News.

Infectious Diseases in New York:

We are indebted to the Sanitary Bureau of the Health Department for the following statement of cases and deaths reported for the two weeks ending May 23, 1903:

DISEASES.	Week end'g May 16.		Week end'g May 23.	
	Cases.	Deaths.	Cases.	Deaths.
Measles	392	16	448	15
Diphtheria and Croup.....	366	44	455	55
Scarlet fever.....	380	18	288	27
Small-pox	0	0	1	0
Chicken-pox.....	98	0	97	0
Tuberculosis	315	151	305	148
Typhoid fever	50	11	46	12
Cerebro-spinal meningitis..	0	0	0	0

Army Intelligence:

Official List of Changes in the Stations and Duties of Officers serving in the Medical Department of the United States Army for the Week ending May 23, 1903:

GREENLEAF, HENRY S., First Lieutenant and Assistant Surgeon. Granted leave of absence for thirty days.

SHEPARD, JOHN L., First Lieutenant and Assistant Surgeon. Relieved from duty at Fort Apache, Arizona, and ordered to the U. S. General Hospital at San Francisco, Cal., for duty.

Naval Intelligence:

Official List of Changes in the Medical Corps of the United States Navy for the Week ending May 23, 1903:

BROWN, E. M., Assistant Surgeon. Detached from the Naval Hospital, Norfolk, Va., and ordered to the Naval Hospital, Newport, R. I.

GEIGER, A. J., Assistant Surgeon. Appointed assistant surgeon from May 6, 1903.

HOLLOWAY, J. H., Assistant Surgeon. Ordered to the *Baltimore*.

MICHEL, R. H., Assistant Surgeon. Ordered to the Asiatic Station via the *Solace*.

MORRIS, L., Passed Assistant Surgeon. Ordered to the *Minneapolis*.

WEIBER, F. W., Surgeon. Granted sick leave for two months.

Public Health and Marine-Hospital Service Health Reports:

The following cases of smallpox, yellow fever, cholera and plague, have been reported to the surgeon-general, Public Health and Marine-Hospital Service, during the Week ending May 23, 1903:

Smallpox—United States.

Place.	Date.	Cases.	Deaths.
Alabama—Mobile	May 3-16	13	
California—Los Angeles	May 3-10	1	
California—San Francisco	May 3-10	4	
Florida—Chipley	May 8-16	9	
Florida—Jacksonville	May 8-16	7	
Florida—Pensacola	May 8-16	5	
Georgia—Atlanta	May 6-20	4	1
Illinois—Belleville	May 11-18	9	
Illinois—Chicago	May 8-16	8	1
Illinois—Galesburg	May 8-16	3	
Indiana—Ellwood	May 10-17	7	
Indiana—Evansville	May 1-16	6	
Indiana—Indianapolis	May 8-16	6	1
Indiana—Kokomo	May 8-16	1	
Iowa—Des Moines	May 8-16	1	
Louisiana—New Orleans	May 8-16	7	1
Maryland—Baltimore	May 8-16	7	
Massachusetts—Lawrence	May 2-9	1	1
			doubtful.
Michigan—Detroit	May 8-16	33	
Michigan—Grand Rapids	May 8-16	2	
Michigan—Port Huron	May 8-16	1	
Minnesota—Winona	May 8-16	2	
Missouri—St. Louis	May 3-17	17	
Nebraska—Omaha	May 8-16	1	
New Hampshire—Manchester	May 8-16	1	
New Hampshire—Nashua	May 8-16	1	
New York—Elmira	May 8-16	1	
New York—Rochester	May 7-14	2	
Ohio—Ashtabula	May 8-16	1	1 imported from Toledo.
Ohio—Dayton	May 2-16	6	
Ohio—Toledo	Apr. 18-May 16	31	1
Pennsylvania—Pittsburgh	May 2-16	48	7
Pennsylvania—Philadelphia	May 8-16	35	1
South Carolina—Charleston	May 2-16	1	
South Carolina—Georgetown	May 20	1	
Tennessee—Memphis	May 8-16	3	
Utah—Salt Lake City	May 8-16	5	1 imported.
Washington—Tacoma	May 4-11	2	
Wisconsin—Milwaukee	May 8-16	3	

Smallpox—Insular.

Philippine Islands—Manila Mar. 21-Apr. 4 | 11 | 2 |

Smallpox—Foreign.

Austria—Prague	Apr. 18-May 2	11	
Belgium—Antwerp	Apr. 18-May 2	6	
Belgium—Brussels	Apr. 25-May 2		4
Brazil—Rio de Janeiro	Apr. 19-26		2
British Guiana—Demerara	Apr. 25, Present	and	spreading rapidly.
Canada—Quebec	Mar. 2-9	2	
China—Hongkong	Mar. 26-Apr. 3	4	1
Colombia—Bocas del Toro	Apr. 28-May 5		1
France—Paris	May 1-8		1
Great Britain—Birmingham	Apr. 25-May 2	5	
Great Britain—Bristol	Apr. 25-May 2	3	
Great Britain—Dublin	Apr. 30-May 7	23	3
Great Britain—Leeds	Apr. 25-May 2	14	
Great Britain—Liverpool	Apr. 25-May 2	69	4
Great Britain—Manchester	Apr. 18-May 2	17	
Great Britain—Newcastle-on-Tyne	Apr. 25-May 2	1	
Great Britain—Nottingham	Apr. 18-May 2	2	
Great Britain—Sheffield	Apr. 18-May 2	6	2
Great Britain—Sunderland	Apr. 25-May 2	1	
India—Bombay	Apr. 14-21		73
Italy—Milan	Mar. 1-31	1	
Italy—Palermo	Apr. 25-May 2		1
Japan—Kobe	Mar. 27-Apr. 11	3	
Mexico—City of Mexico	Apr. 26-May 3	7	10
Russia—Moscow	Apr. 18-25	5	1
Russia—Odessa	Apr. 19-May 2	4	1
Russia—St. Petersburg	Apr. 4-25	58	12
Russia—Warsaw	Apr. 11-18		3

Yellow Fever.

Brazil—Rio de Janeiro	Apr. 12-26		34
Colombia—Panama	May 7-14	3	1
Mexico—City of Mexico	Apr. 26-May 3		1
Mexico—Tampico	May 8-16	1	1
Mexico—Vera Cruz	May 2-16	11	5

Cholera—Insular.

Philippine Islands—Manila	Mar. 21-28	1	1
Philippine Islands—Provinces	Mar. 21-28	164	93
Philippine Islands—Provinces	Not previously reported,	14	14
Philippine Islands—Provinces	Mar. 28-Apr. 4 ..	201	141
Philippine Islands—Provinces	Not previously reported,	521	261
Philippine Islands—Provinces	Apr. 4-11	64	35
Philippine Islands—Provinces	Not previously reported,	547	291

Cholera.

Straits Settlements—Singapore	Mar. 21-Apr. 4 ..	13
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Plague—Insular.

Hawaii—Honolulu	May 10	1	6
Philippine Islands—Manila	Mar. 21-28	6	6
Philippine Islands—Manila	Mar. 28-Apr. 4 ..	6	6

Plague—Foreign.

Brazil—Rio de Janeiro	Feb. 1-28	5	2
China—Hongkong	Apr. 12-26	1	1
India—Bombay	Mar. 27-Apr. 3 ..	28	24
India—Karachi	Apr. 14-21	1,320	1,320
Australia—Brisbane	Apr. 4-19	372	340
Mexico—Mazatlan	May 14	1	1

Public Health and Marine-Hospital Service:

Official List of Changes of Station and Duties of Commissioned and Non-commissioned Officers of the Public Health and Marine-Hospital Service, for the Seven Days ending May 21, 1903:

VAUGHAN, G. T., Assistant Surgeon General. Detailed to represent the service at meeting of the Association of Military Surgeons at Boston, Mass., May 20 and 21, 1903.

PERRY, J. C., Passed Assistant Surgeon. To report at Washington, D. C.

DECKER, C. E., Assistant Surgeon. Granted extension of leave of absence, on account of sickness, for fourteen days, from April 24th.

WILSON, R. L., Assistant Surgeon. Granted leave of absence for seven days, from April 28, 1903, under provision of paragraph 191 of the regulations.

McLAUGHLIN, A. J., Assistant Surgeon. Granted leave of absence for two months, from May 1st.

WARD, W. K., Assistant Surgeon. Granted leave of absence for three days, from May 14, 1903, under provisions of paragraph 191 of the regulations.

FORD, C. B., Acting Assistant Surgeon. Granted leave of absence for fourteen days, from June 3d.

FRASER, A. C., Acting Assistant Surgeon. Granted leave of absence for forty-five days, on account of sickness, from April 27th.

MARSH, W. H., Acting Surgeon. Granted leave of absence for seventeen days from May 8th.

WETMORE, W. O., Acting Assistant Surgeon. Granted extension of leave of absence for fourteen days from May 15th.

WIGHTMAN, W. M., Acting Assistant Surgeon. Granted leave of absence for three weeks, from June 7th.

WILSON, W. W. W., Acting Assistant Surgeon. Granted leave of absence for fourteen days, from May 14th.

SCHLAAR, W. F., Pharmacist. Granted leave of absence for three days, from May 10, 1903, under provisions of paragraph 210 of the regulations.

Boards Convened.

Board convened to meet at San Francisco, Cal., for physical examination of an officer of the Revenue Cutter Service. Detail for the board: Passed Assistant Surgeon W. C. STIMPSON, chairman. Assistant Surgeon C. W. VOGEL, recorder.

Board convened to meet at Washington, D. C., May 25, 1903, for the physical examination of candidates for cadetship in the Revenue Cutter Service. Detail for the board: Assistant Surgeon General W. J. PETTUS, chairman. Assistant Surgeon General H. D. GEDDINGS, recorder.

Board convened to meet at Washington, D. C., June 15, 1903, for examination of candidates for admission as assistant surgeon in the service. Detail for the board: Assistant Surgeon General G. T. VAUGHAN, chairman. Surgeon C. T. PECKHAM. Passed Assistant Surgeon H. S. MATHEWSON, recorder.

Births, Marriages, and Deaths.*Married.*

GIBBONS—STUBBS.—In Chicago, Illinois, on Wednesday, May 13th, Dr. Morton Raymond Gibbons and-Miss Mary Stubbs.

HAVERSTICK—BURGESS.—In Columbia, Missouri, on Tuesday, May 12th, Dr. G. W. Haverstick, of St. Louis, and Miss Julia Burgess.

MORRIS—RODLEY.—In Memphis, Tennessee, on Monday, May 4th, Dr. George C. Morris, of Washington, D. C., and Miss Morrie Rodley.

STUART—ANDROS.—In New York, on Friday, May 15th, Dr. A. Rhett Stuart, of Washington, D. C., and Miss Carolyn Andros, of Troy, N. Y.

Died.

ANDREWS.—In Honolulu, Sandwich Islands, on Saturday, May 9th, Dr. G. P. Andrews, of Detroit, Mich.

BOUCHER.—In New York, on Thursday, May 21st, Dr. Gustavo Boucher, in the fifty-seventh year of his age.

BURDETT.—In Jersey City, N. J., on Thursday, May 21st, Dr. John B. Burdett, in the seventieth year of his age.

GAYLEY.—In Kensington, Maryland, on Saturday, May 16th, Dr. Samuel A. Gayley, of Philadelphia.

MORTON.—In Cape May, N. J., on Wednesday, May 20th, Dr. Thomas G. Morton, of Philadelphia, in the sixty-seventh year of his age.

RUSK.—In Malta, Ohio, on Saturday, May 16th, Dr. Daniel Rusk.

SAUER.—In Baltimore, Maryland, on Wednesday, May 20th, Dr. Andrew J. Sauer, in the thirtieth year of his age.

SCHMIDT.—In St Paul, Minnesota, on Sunday, May 17th, Dr. Edgar T. Schmidt, in the forty-eighth year of his age.

WENDT.—In Paris, France, on Monday, May 25th, Dr. E. Charles Wendt, of New York, in the forty-fifth year of his age.

WHITE.—In New York, on Monday, May 25th, Dr. Octavius A. White, in the seventy-third year of his age.

Obituary.

OCTAVIUS A. WHITE, M. D., LL. D.,
OF NEW YORK.

Dr. White, who died on May 25th, in the seventy-eighth year of his age, had for many years been prominent in the medical profession of New York. His specialty was that of gynecology, but he was known as an all-round practitioner of unusual attainments. He was a South Carolinian by birth, and was a Confederate surgeon in the civil war. Many an old Federal soldier, who was a prisoner of war, remembers with gratitude Dr. White's kindly and skillful ministrations. From the time of his coming to New York, soon after the close of the war, he was persona grata in this community. He was a man of commanding personality, and he was much admired by all who knew him, whether physicians or laymen.

EDMUND C. WENDT, M. D.,
FORMERLY OF NEW YORK.

When Dr. Wendt left New York, some years ago, he was a handsome and promising young man with a penchant for writing. The latter years of his life were spent in various cities of Continental Europe, whence he occasionally contributed to some of our American journals. His death occurred in Paris, on May 25th—at his own hand, it is reported, his act being attributed to mental alienation. He will always be kindly remembered by New Yorkers who knew him in his younger days.

Pith of Current Literature.

PRACTICE OF MEDICINE.

Intestinal Indigestion (Dyspepsia). By John C. Hemmeter, Ph. D., M. D. (*Medical News*, April 18th).—The chief point in diagnosis will be, as a rule, to determine if the complaint is an intestinal neurosis or a bowel disease with a distinct anatomical substratum. These latter diseases are most frequently one of the various types of enteritis. Careful examination of the stools will often help one to arrive at a just conclusion. Since disordered gastric digestion is, in the author's opinion, very often the cause of intestinal dyspepsia, it is necessary to know what the latest experiments have shown to be true. One must remember that purely gastric conditions are in themselves capable of producing diarrhoeas closely resembling those due to certain forms of enteritis. Such gastric conditions are, achylia gastrica (complete loss or suppression of gastric secretion) and heterochylia (varying gastric secretion). For the recognition of such dyspeptic diarrhoeas test-meal analyses are indispensable, and stool examinations are necessary. To Pawlow we owe our knowledge of most of the important points in gastric digestion that have been determined within recent years. A summary of his most important discoveries follows: (1) The gastric HCl is the most essential stimulus to pancreatic juice formation. (2) The stomach secretes an enzyme, chymase, which does not itself digest food, but which accelerates the action of the pancreatic ferments. (3) The most efficient way of counteracting dyspepsia due to pancreatic insufficiency is to bring about a healthy appetite. For appetite is the best stimulus to normal gastric secretion, which in its turn is the best stimulant to pancreatic secretion. (4) For every kind of food a definite gastric secretion is formed of specific composition. Pawlow has further shown that there are two kinds of gastric secretion, the one "psychical" (due to impressions from without the stomach) and the other chemical (due to direct irritation of the stomach wall). Of the two the former is the more powerful. It transforms substances that are in themselves incapable of stimulating the stomach to secretion into substances that are capable of doing so.

Dr. Hemmeter calls attention to his own discovery of a ferment in the saliva, the function of which is to accelerate the digestive power of the gastric juices. The practical conclusion to be drawn from all this is that if we are desirous of having a good intestinal digestion we must see to it that the mouth and stomach are in good condition. In considering dyspepsia the author limits himself mostly to those forms which are due to qualitative and quantitative abnormalities in the diet. Such forms of indigestion fall naturally into two main classes: (1) Dyspepsia due to excessive intake of carbohydrates. In this class of cases bacterial "fermentation" will occur with the production of organic acids. The acidity thus produced may be so great that the action of the pancreatic juices and of the bile will be interfered with. The principal resulting symptoms will be: diarrhoeal discharges, anorexia, acid eructations, and

the vomiting of sour masses. The character of the stools is diagnostic and can only be confounded with the catarrhal stools of an enteritis. Mucus is found in both, but the jejunal stool is very rich in bile pigment, has only a slight faecal odor, and is generally acid in reaction. In catarrhal stools will be found epithelial and round cells derived from the mucous membrane of the intestines. (2) Dyspepsia due to the excessive intake of proteid and albuminous food. In this class of cases "putrefactive" fermentation takes place. The diagnosis is to be made from the results of the microscopical examination of the faeces. (a) If the nuclei of the muscle fibres are present there is insufficiency of pancreatic secretion. (b) An excessive quantity of muscle fibres in the stools shows merely intestinal indigestion without indicating the seat of the trouble. (c) The presence of an excessive quantity of connective tissue fibres in the stools after a meal of raw scraped beef, indicates imperfect gastric digestion. (d) Fat in the stools, in the form of soap, is of no diagnostic significance. Droplets of neutral fat and fatty crystals are of pathological significance. *Treatment:* (1) Diet. It is not possible to succeed with a strict diet of any kind. Such articles of food should be forbidden as go through the intestinal canal undigested. (2) Constipation should be treated according to its cause; whether produced by spasm or by atony. This can only be determined by trial. (3) General neurasthenia. This should be treated by electricity, hydrotherapy, massage, and baths. (4) Insomnia. This will often yield to measures directed to the cleansing of the stomach and rectum. Hypnotics must be avoided as long as possible. (5) Drugs. Intestinal antiseptics are not, in the author's opinion, of very much value. In a general way it may be said that drugs should only be given as a last resort. In all cases of intestinal dyspepsia the aim should be to understand the cause and remove it. The author gives, at the end of his article, nine formulæ that have been of use to him in treating the symptoms of intestinal dyspepsia.

Peritonitis in Typhoid Fever without Perforation, with a Report of One Case Caused by the Bacillus Typhosus, and Another Simulating Acute Appendicitis. By Dr. J. L. Yates. (*American Medicine*, May 2d).—The author reviews his subject very thoroughly, and concludes his article with a very full bibliography. Much of the article is of interest chiefly to the pathologist. The conclusions drawn are tabulated at the end of the report. Those of chief interest to the clinician are: (1) Non-perforative peritonitis usually results from an extension of inflammation through the base of deep intestinal ulcers, but may also arise from the migration of bacteria through an intestinal wall relatively but slightly abnormal. (2) Meteorism thus predisposes to infection of the peritoneal cavity and by decreasing the normal peritoneal absorption furnishes a secondary cause for peritonitis. (3) A hæmatogenous origin of peritonitis is possible in typhoid fever. (4) Non-perforative peritonitis is commonly caused by the typhoid bacillus and the resulting inflammation is usually diffuse and often severe. (5) The inception of such a peritonitis is clinically indistinguishable from the so called signs

of perforation, and the symptoms in both are due to peritoneal inflammation. The prognosis is probably equally grave in the two forms. (6) There should be appropriate surgical intervention as soon as the peritonitis can be recognized. Enterostomy is indicated when there is meteorism with the peritonitis, or when it affects the prognosis and is intractable to ordinary therapeutics.

Two Cases of Interstitial Nephritis in Congenital Syphilis. With Remarks on Syphilis as an Ætiological Factor in Nephritis. By Dr. G. A. Sutherland and Dr. J. W. T. Walker. (*British Medical Journal*, April 25th).—The authors report two cases of interstitial nephritis occurring in infants aged eight and sixteen months respectively. The diagnosis was first made at autopsy. In both cases the process consisted of a diffuse infiltration of the interstitial tissue of the cortex of the kidney, and in both there was evidence of congenital syphilis. The kidneys were fully developed, and in no way resembled the condition of renal atrophy due to syphilis which has been described by Stoerk. Other observers have reported cases of acute and chronic interstitial nephritis occurring in the syphilitic children, and the author states his belief that the sole cause in many cases is the syphilitic poison. Nor does he limit himself to cases occurring in childhood—hereditary and acquired syphilis may account for many cases of granular kidney of adults.

The Use of Antitoxine in the Treatment and Prevention of Diphtheria. By Dr. R. D. Rudolf. (*British Medical Journal*, May 9th).—1. Every case of diphtheria should be treated with antitoxine. As a rule the diagnosis is easily made clinically, and it is better in such cases not to wait for the bacteriological report, but to inject the serum at once. Then, if the diagnosis is confirmed by the bacteriologist, one has "stolen a march" of several hours on the disease; if the case proves not to be diphtherial, one has at least done no harm. The serum should be administered not only early, but also freely, 3,000 units being an average first dose. 3. This use of antitoxine in no way interferes with the employment of any medicinal or other treatment which may be indicated, but all the latter are of secondary importance during the first few days of the illness. 4. All individuals who are exposed to infection should be given immunizing doses of antitoxine, just as all persons who run the risk of smallpox infection should be vaccinated. 5. Five hundred units is the ordinary immunizing dose, but three hundred seems to be sufficient for children under two years of age. The dose should be repeated every three weeks while any danger of infection lasts.

A Case of Acute Yellow Atrophy of the Liver. By Dr. W. Ferris and W. H. Clayton-Greene, M. B. (*Lancet*, May 2nd).—The authors report a case of acute yellow atrophy of the liver occurring in a woman aged twenty-three years. When first seen she had been suffering from jaundice and general malaise for twenty-three days. Examination showed marked decrease in liver dulness. She grew rapidly worse, developed convulsions which passed into

coma, and died on the twenty-sixth day of her illness. At the autopsy the liver was found to weigh twenty-three ounces, and presented a flabby, mottled appearance. The liver was stained with hæmatin, and the greater part of its substance replaced by an ill-staining granular material representing atrophied liver cells.

Absence of fever until the end was a noteworthy feature of the case. The author holds that acute yellow atrophy of the liver is not primarily hepatic in origin, the liver only suffering with other parts; that there is a hæmic infection with microorganisms or their toxins with subsequent hæmolysis; that there is a combination of toxine and blood pigment to form a poisonous compound which is injurious to the tissues and causes their discoloration; that the liver must be absolved from the charge of forming the pigment, but that it is formed in the blood vessels themselves; and that the source of the mischief must be sought for in some part of the alimentary canal.

SURGERY AND ANATOMY.

The Drainage of the Knee-joint in Acute Suppurative Arthritis. By H. L. Barnard, F. R. C. S. (*Lancet*, April 25th).—Acute pyogenic infection of the knee joint is one of the most dangerous of suppurative diseases. One great reason is the difficulty of obtaining satisfactory drainage. The author calls attention to the fact that there are two pouches in the knee-joint behind, which are not drained when the joint is opened by anterior or lateral incisions; posterior incisions must and should be made, one for each pouch. All really acute cases of suppuration in the knee-joint, with a temperature of 103° F., should be treated by anterior and posterior incisions, especially if they arise from a punctured wound. If the infection arises from self-infection, and is subacute, with a temperature of 102° F. and under, lateral incisions on each side of the patella and irrigation will probably be sufficient. The joint must be treated as though it were an aseptic case, for in self-infection there is usually but one organism present, and that a mild one. Should this partial drainage fail, then the posterior pouches must be opened and thoroughly drained.

Exploratory Puncture in the Diagnosis of Abdominal Hydatid Cysts.—R. Torres (*La Semana Médica*, March 26th) considers puncture of abdominal hydatid cysts dangerous for two reasons: namely, that infection may occur, and symptoms of intoxication may arise. The author states that the hydatid fluid is completely aseptic, but that it is extremely sensitive to infection; hence, despite the most careful asepsis and antisepsis, infection is prone to occur in puncture of the cyst. He quotes the statement of Posadas, that in the large number of cysts treated by him, those only which had been previously punctured contained a turbid fluid, while the fluid of the non-punctured was perfectly limpid. Torres holds, further, that the special danger of hydatid cysts does not depend upon the microorganisms within the fluid, but rather upon the toxi-

city of the fluid itself; Moruson and Schlagdenhanffer having demonstrated that at certain periods of the cyst's evolution ptomaines are developed that give rise to toxic symptoms in the event of a leakage of the fluid into the peritoneal cavity. The author believes that a single drop of the fluid reaching the peritonæum is sufficient to give rise to such toxic symptoms; and such an accident he thinks practically inevitable in the withdrawal of the syringe after puncture of a cyst; having demonstrated through puncture of a bladder distended with water, that some portion of its contents invariably escapes as the syringe is withdrawn. A case in which a well-nigh fatal peritonitis developed immediately after exploratory puncture, is cited; and this unfortunate result, together with the findings of the clinicians quoted, has made the author feel that exploratory puncture should be proscribed, and that a laparotomy is to be preferred as affording a safer means of diagnosis and an opportunity for immediate radical treatment, should this be found necessary.

The Importance of an Early Diagnosis of Cancer of the Stomach, with a View to Radical Treatment, with Remarks on Operative Results, Immediate and Remote. By A. W. M. Robson. (*British Medical Journal*, April 25th).—In this article the author advances evidence to prove: (1) How desirable it is to make an early diagnosis of cancer of the stomach in order that a radical operation may be performed at the earliest possible moment. (2) That it may be needful to perform an exploratory operation, in order to complete or confirm the diagnosis. (3) That such an exploration may be done with little or no risk in the early stages of the disease. (4) That even where the disease is more advanced and a tumor perceptible, an exploratory operation is, as a rule, still advisable in order to carry out radical or palliative treatment. (5) That where the disease is too extensive for any radical operation, the palliative operation of gastroenterostomy, which can be done with very small risk, may considerably prolong life and make the remainder of it much more comfortable and happy. (6) That some cases, thought at the time to be cancer too extensive for removal, may after gastroenterostomy clear up completely and get quite well. (7) That in cases of disease of the cardiac end of the stomach too extensive for removal, the operation of gastroenterostomy may considerably prolong life and prove of great comfort to the patient by preventing death from starvation. (8) That even where the disease is too extensive either for removal or for a gastroenterostomy with a fair chance of success, the operation of jejunostomy may occasionally prove of service to the patient. (9) That where a radical operation can be performed the thorough removal of the disease may bring about as much relief to the patient as does the operation for removal of cancer in the breast, uterus, and other organs of the body, and that in some cases a complete cure may follow.

A Case of Cirrhosis of the Liver with Ascites. By W. W. Keen, M. D., and H. M. Fisher, M. D. (*Philadelphia Medical Journal*, May 9th).—The pa-

tient whose history is reported, was an Italian thirty-two years old, who gave the history of a fairly free indulgence in wine and alcohol. The case was, clinically, one of acute and uncomplicated cirrhosis of the liver. The diagnosis was confirmed at operation. The patient was tapped once before operation. On February 27, 1901, Dr. Keen performed Talma's operation. Recovery was practically uneventful, except that between the date of operation and April 1st, the man had to be tapped three times on account of the rapid reaccumulation of the fluid in the abdomen. He left the hospital on April 4th, and was lost sight of for several months. During this period he was repeatedly tapped. It was only after an interval of about five months after operation that the collateral circulation seems to have been well enough established to prevent the recurrence of the ascites. About ten months after operation the patient's condition was as follows: General condition improved. There was no return of the ascites, but the digestive disturbances still continued. The spleen, which at the time of operation was found to be enlarged, had reached almost to the crest of the ilium and, on account of its size and weight, was giving the patient great discomfort. On the whole the patient's condition seemed to be better than it was even before the occurrence of the ascites.

Notes on the Topographical Anatomy of the Anastomosis between the Portal Vein and the Ascending Vena Cava.—Dr. Giovanni Russo-Travali (*Riforma medica*, April 15th) gives the following data concerning the surgical anatomy of the region concerned in the operation of portal anastomosis proposed by Tansini. This operation, through the splendid results attained experimentally in animals and through its simplicity, promises to become available for man. The incision should be made along the border of the ribs in the right hypochondrium. The abdomen having been opened, the lower edge of the liver is lifted and the colon pushed down, slightly lacerating the hepatocolic ligament. The cysticoduodenal ligament is then exposed, and the part of the duodenum looked for which embraces the head of the pancreas. The hepatoduodenal ligament is next sought. It is the right margin of the lesser omentum, including the cystic duct, the hepatic duct, the common bile duct, the hepatic artery, and the portal vein between its folds, limiting the foramen of Winslow. The anterior layer of this peritoneal structure is then divided and the ducts and hepatic artery are pushed aside to expose the portal vein, which is carefully freed for as long a distance as possible from the surrounding structures, *i. e.*, from the margin of the pancreas to the hepatic sulcus. The vena cava is situated at a deeper plane. It is exposed by pushing aside the hepatoduodenal ligament and the duodenum, and is found covered by the posterior layer of the peritonæum. The vena cava ascends almost vertically in front of the spine at the right margin of the aorta. In the region considered, *i. e.*, at the level of the insertion of the renal veins, the vena cava is very close to the aorta. A few centimetres below the insertion of the renal veins, the right spermatic (or ovarian) vein is inserted into the anterior surface of the vena cava. The sympathetic plexus sends

branches parallel to this vein and crossing the vena cava.

The tract of the vena cava embraced between the renal veins and the spermatic or ovarian vein is the best for the portal anastomosis under consideration. On the right and externally, this tract is in relation with the right kidney and ureter, internally with the aorta, in front with the third portion of the duodenum, and behind with the lumbar vertebræ. The lumbar veins enter into the vena cava at right angles from behind, and this is important to remember when applying the forceps to the wounded vena cava in order to arrest the bleeding. It is also useful to remember the occasional anomaly of the renal vein on the right side, which may be inserted in front of the vena cava, instead of at the side. With these anatomical data, the author believes that the anastomosis of the portal vein and the vena cava may be executed without great difficulty in spite of the deep situation of the parts.

The Mortality in Appendicitis; its Causes and Limitation. By A. J. Ochsner (*Medical News*, May 2d).—The author ends his paper with a large number of conclusions from which we summarize the following: (1) The treatment suggested, while it cannot supplant operative intervention in acute appendicitis, is capable of reducing the mortality by changing the class of cases in which the mortality is greatest after operation, into another class in which the mortality is very small. (2) All cases of acute appendicitis, whatever the final proposed treatment is to be, should be treated as follows: (a) Absolutely nothing must be given by the mouth. The necessary food and water must be given by enema. Absolutely no cathartics must be given. (b) In cases in which there is nausea or vomiting or food and mucus in the stomach, gastric lavage must be employed so as to put a stop to the peristalsis. (3) In case no operation is performed, the patient must be kept on the foregoing treatment until he has been free from pain and otherwise normal for at least four days. (4) The indications for operation in appendicitis are: (a) Patients suffering from chronic recurrent appendicitis should be operated on during the interval. (b) Patients suffering from acute appendicitis should be operated on as soon as the diagnosis is made, provided the infection has not spread beyond the appendix. (c) Patients suffering from an appendicitis in which the infection has spread beyond the appendix and has not become localized, must be put on the same treatment as the non-operative cases until their condition will warrant surgical intervention.

Foreign Body in One of the Main Divisions of the Left Bronchus; Attempted Removal by Posterior Bronchotomy through the Pleural Cavity. By Dr. J. G. Andrew. (*Lancet*, May 9th).—The author reports the case of a boy aged fifteen years, who by accident drew into his respiratory tract a round, flat tin whistle with a central opening. Tracheotomy was performed and although the whistling stopped, the foreign body could not be found. Dulness developed all over the left lung

and the boy's condition grew serious. Skiagraphs were of no service. Posterior bronchotomy was performed, but the whistle could not be found. The patient ultimately recovered. The author's conclusions drawn from this case and a consideration of the subject in general, are as follows: 1. A foreign body in the right bronchus not far below the bifurcation of the trachea, which defies extraction by other measures, is best got at through the anterior mediastinum, the technics as detailed by Pilcher. The exploration of the left bronchus through the anterior mediastinum is anatomically impossible. 2. A foreign body in either bronchus well down near the lung can be reached, if other means fail and the nature of the case demands it, through the posterior mediastinum. With the arm hanging over the table a vertical incision midway between the base of the scapula and the vertebral column, and extending from the upper border of the third rib to the lower border of the seventh rib, should be made, dividing everything down to the ribs. A flap incision is a disadvantage as free drainage is advisable. The ribs, third to seventh inclusive, should be divided subperiosteally, and from two inches to two inches and a half removed from each. Median division of the pleura is an advantage, as its reflection to each side protects the hand from the cut edge of the ribs. 3. By deliberately opening the pleural cavity and inserting one's hand, the root of the lung could be easily manipulated, the bronchus incised, and a foreign body removed with greater certainty and certainly less danger for hæmorrhage than by stripping the pleura from the chest wall. No attempt should be made to close the opening in the bronchus. The danger of subsequent sepsis would be much lessened by only partially closing the wound and packing from the bottom.

A Case of Painless Amputation of the Leg after the Intraneural Injection of Cocaine. By John H. Gibbon, M. D. (*Philadelphia Medical Journal*, May 2nd).—While the author is an enthusiastic believer in this method of local anæsthesia, in properly selected cases, he is not an extremist in his advocacy of its use. If the technics of infiltration, as described by Matas, is carefully carried out failures should be few. At the present time, local anæsthesia, of the kind referred to in this paper, should be limited to those cases in which a general anæsthetic is contraindicated. The method is specially adapted to emergency hernia operations. The work of Crile in this field has been of great importance. A warning is needed for those unfamiliar with the method. Before trying the method in the more extensive operations one must have learnt to use the method successfully in the smaller ones. The solutions of cocaine employed must be freshly prepared and sterile, and the technics must be perfect. The case the author reports follows. A man, aged fifty years, with extensive tuberculous disease of the ankle joint and bones of the tarsus presented himself for treatment. His general condition made amputation desirable, but contraindicated the use of a general anæsthetic. Fifteen minutes before operation he received one quarter of a grain of morphine and a one hundred and fiftieth of a grain of atropine

hypodermically. The sciatic and anterior crural nerves were then exposed by infiltration anæsthesia (Schleich's fluid), and injected with a 1 per cent. solution of cocaine. Anæsthesia was complete in about eight minutes. Amputation was performed at the middle third of the leg and absolutely no pain was experienced by the patient. He did not even know that an amputation had been performed. Examination of the patient, about one year after operation, failed to reveal any secondary nerve changes in the injected nerves.

Remarks on the Operative Treatment of Chronic Facial Palsy of Peripheral Origin. By C. A. Ballance, F. R. C. S., H. A. Ballance, F. R. C. S., and Dr. P. Stewart. (*British Medical Journal*, May 2nd).—In this article, the authors report a series of cases of chronic facial paralysis of peripheral origin, in which an anastomosis was performed between another healthy nerve and the distal segment of the paralyzed facial. Their conclusions are as follows: 1. Peripheral facial palsy is remediable by facial-accessory anastomosis, but the extent of recovery appears to be limited to associated movements in conjunction with the shoulder. In most cases the previous deformity disappears from the face if at rest. 2. For certain reasons the authors recommend facial-hypoglossal anastomosis rather than facial-accessory. 3. The cases suitable for operation are those in which the paralysis has lasted so long that no recovery is to be expected, say, facial palsy lasting six months without any sign of recovery. The sooner the operation is done after this date the better. 4. Suppurative casual condition producing an infective neuritis renders the prognosis after operative treatment less favorable than in cases due to trauma.

Report of a Case of Suturing the Omentum to the Abdominal Wall (Talma) for the Relief of Ascites Due to Cirrhosis of the Liver, Twenty-one Months after Operation. By Thomas R. Neilson, M. D. (*Philadelphia Medical Journal*, May 9th).—The patient was a large man, fifty-one years of age. He had been a free user of alcohol for ten years preceding operation, otherwise his history was negative. He was taken ill in April, 1901, with general weakness, lumbar pains, marked jaundice, and a little later, with ascites and œdema of the legs, feet, and scrotum. Between April 29th and June 6th the patient was tapped three times. The fluid rapidly reaccumulated. Operation was performed on June 22, 1901. At the time, the patient's abdomen was greatly distended. The operation, which consisted in opening the abdominal wall by an incision from the umbilicus to the ensiform and stitching the omentum to the parietal peritonæum, after having irritated the surface of the liver, spleen, and parietal peritonæum by friction with a gauze sponge, was successfully performed under ether anæsthesia. Ascites did not return after operation and the man was discharged from the hospital thirty-four days after operation in excellent condition. Twenty-two months after operation the patient was feeling perfectly well and the ascites had not recurred. The relief of symptoms, in this case, by means of surgical

intervention may, therefore, be considered to have been complete. The author ends his paper by references to the literature on operative intervention for the relief of ascites due to cirrhosis of the liver, and gives percentages showing the results of 122 operations.

OBSTETRICS AND DISEASES OF WOMEN.

A Clinical and Statistical Review of 122 Cases of Albuminuria and 48 Cases of Eclampsia Occurring in the Maternity of the Hospital of the University of Pennsylvania. By Dr. John Cooke Hirst. (*American Medicine*, May 2d).—Albuminuria is the most valuable indication of kidney insufficiency. The determination of the quantity of urea excreted, while of interest, is of no value. The statement has been made ". . . that if the quantity (of urea) falls below 1 per cent. the woman is in danger. This statement is fallacious . . . it is inconceivable how men of clinical experience and average powers of observation can attach undue importance to the elimination of urea as an indication of toxæmia." We cannot give the statistics on which the author bases his assertion, although they bear out his statement completely. (1) The routine treatment of albuminuric patients. The patient is put to bed and her diet is restricted to milk. Large quantities of water are given daily, Basham's mixture in doses of two drachms four times a day is prescribed, and the bowels are kept freely moved with Rochelle salts or with some other suitable cathartic. The urine is closely watched. The majority of cases clear up entirely under this treatment. If the albumin persists or increases in spite of the above treatment, then more energetic measures are adopted. Free purgation is instituted, hot-air baths or hot-packs are given every four hours, alternating them, if desirable, with the administration of one pint of salt solution by hypodermoclysis under each breast. This treatment may always be expected to bring on labor. If, however, labor does not come on, and if the symptoms do not show a decided improvement within forty-eight hours, then labor is induced by using either the Champétier de Ribes bags, or flexible bougies as recommended by Krause. Under the treatment outlined above, out of 122 cases of albuminuria, in only 8 eclampsia developed. (2) The routine treatment of eclamptic patients. One fact is worth noting particularly. Albumin was invariably present in all cases of eclampsia, both before and during the attacks. "The loose statement has been repeatedly made in text-books and articles on the subject, that quite a large proportion of eclamptic patients, some 16 per cent., show no albumin before the onset of convulsions, though it is always present after the attack begins." The general treatment of eclamptic patients is, with the following exceptions, the same as for those having simple albuminuria. The purgation is more vigorous; the hypodermoclysis and hot-packs are pushed, and if the pulse is full and bounding, 15 minims of veratrum viride are given hypodermically, and the drug repeated in 5 minim doses every two hours until the pulse softens. Very rarely venesection may be necessary. Chloro-

form is used to control the convulsions. If the patient is seen far advanced in labor with the os fully dilated and the head well down, there is no question but that delivery by forceps is the proper treatment. The question of forcibly terminating labor when the os is still undilated, is still an undecided one. If this method is used, the author believes that a fair trial should be given to Bossi's dilators.

Cervicovaginal Fistula.—Dr. Ostreil (*Zentralblatt für Gynäkologie*, April 11th) records a case in which he was able to observe the development of the fistula. The patient was a twenty-four year old primipara who miscarried in the fifth month of pregnancy. The cervix was exceedingly rigid, and as the foetus appeared in the thinned segment of the cervical canal it caused a severe horizontal tear of the cervix in its posterior wall, and the birth took place through the laceration. The laceration was tamponed. The course of convalescence was uninterrupted by complication, but a fistula between the posterior wall of the cervix and the vagina remained.

Tetanus After Perineorrhaphy.—Dr. Lajos Gôth (*Zentralblatt für Gynäkologie*, April 11th) reports such a case in a woman, aged twenty-five years, a multipara, who, after four months of nursing, was subjected to operation. The following day, classical symptoms of tetanus appeared with intense exaggeration of the reflexes and an absence of trismus. By exclusion, the author comes to the conclusion that the tetanus was due to the surgical intervention, although no analogous cases can be found in the literature.

Late Period of Extrauterine Pregnancy.—Dr. G. I. Tomson (*Journal Akousherstva i Gienskikh Boliesney*, February) reports two cases of extrauterine pregnancy which were operated on in late stages of gestation, *i. e.*, in the sixth month in one instance, and three years after term in the other. The first patient was a woman, aged twenty-six years, in whom laparotomy revealed the presence of a small female foetus among the loops of intestines. The foetus breathed a few times, but died within a few minutes. A small placenta was removed from the pelvic cavity. The left ruptured tube was ligatured and the moderate hæmorrhage arrested. The patient made a good recovery.

The second patient was a woman, aged thirty-nine years, who had had a swelling in the abdomen for three years. Two years previously she had felt life in the belly, and had had hæmorrhages from the vagina and sudden fainting spells. Menstruation had ceased a year before the beginning of the illness, but had reappeared two months after the term of gestation had ended. On laparotomy, extensive adhesions were found surrounding the tumor, which was situated on the left side of the uterus, was rounded, hard, of the size of an adult's head, and was attached to a broad pedicle, partly between the broad ligament and the descending mesocolon. The growth was removed, the pedicle and vessels ligatured. On examination it was found to be a sac with thin walls containing a nine-months' made foetus, which seemed well nourished. There

was almost no liquor amnii. The sac was in places very closely adherent to the surface of the foetus. The placenta was found adherent to the inner wall of the sac. In the first case, the six-months' foetus could not have been in the peritoneal cavity more than one day at the time of the operation, but in the second case the foetus had remained in the abdomen of the woman for over three years. A few cases have been reported in which foetuses were known to have remained in the abdominal cavity for a longer period of time. Thus Stankievitz reports a case in which the woman bore a dead foetus for eighteen years, and three other cases have been found in literature, in which the fetuses were borne for from twelve to fifteen years. An operation is indicated in these cases as soon as the diagnosis has been made.

A Case of Cæsarean Section for Osteomalacic Pelvis.—Dr. E. M. Sobestiansky (*Journal Akousherstva i Gienskikh Boliesney*, February) reports a case in which the abdomen was opened and the foetus delivered by incising the uterus, on account of the presence of a pelvis distorted by softening of the bones. Osteomalacia is very rare in Russia, and among 10,850 labors there were only three cases noted. The patient was an Armenian, aged twenty-seven years, a quartipara, with a negative previous history. Six months after the third labor, she began to feel pains in the bones of the legs, ribs, and other parts of the body, and these gradually increased and grew worse during the fourth pregnancy. After the fourth labor the patient was wrapped by native women in the skin of an ass, with the idea of curing her disease, but the pains in the bones increased, so that she was unable to do any work or even to walk. The patient lived under the most unfavorable conditions of hygiene imaginable. An x ray picture of her pelvis showed the latter to be distorted and contracted. The arch of the pubis was sharp and projected forward, and the rami of the pubis were so close to each other that the finger could scarcely pass between them. It was impossible under these conditions to think of the normal delivery of a child at term, and Cæsarean section was performed. A living child was delivered through the incision in the womb, and there was very little hæmorrhage from the uterine wall, so that the usual compression by tourniquet or with the fingers was unnecessary. The uterus contracted immediately after delivery, the placenta was removed, and the cavity was wiped with sterile gauze. The uterine wound was sutured with silk, a deep and a superficial row being employed. Both ovaries and both tubes were removed. The child lived and the mother's recovery was uneventful.

On Columnization of the Vagina in the Treatment of Some Diseases of Women.—Dr. F. Boukowsky (*Journal Akousherstva i Gienskikh Boliesney*, February) recommends the use of a procedure called "columnization" in gynecological practice. This procedure is a special form of tamponing of the vagina, which is applied in the knee-chest position. The posterior wall of the vagina is pulled back with a Sims speculum, so that the cervix and a part of the vaginal vault become easily accessible.

A strip of gauze, one yard wide and from one yard to a yard and a half long, sterilized or slightly impregnated with iodoform, is moistened in glycerin and pressed out, so as to remove the excess of fluid. This piece of gauze is then introduced firmly into the vaults of the vagina by the fingers, chiefly into the posterior and lateral fornices, partly into the anterior, so that the cervix is evenly surrounded by a mass of gauze. The upper part of the vagina is also packed in the same manner. Instead of gauze, tampons of sterilized cotton may be used. This procedure was first employed in America by Talliaferro, of Atlanta, in 1878. Coe, Tucker, Jackson, and Potter have written reports on its value. The French gynecologists were the next to take it up. The present author gives the results of five years' experience with this method of tamponing, which he has applied in over 1,000 patients. He finds gauze to be the best material for this purpose, and that ichthyol is the best medicinal agent for impregnating the tampons. The patient was placed in the ordinary gynecological position, her external genitals were scrubbed with soft soap and irrigated with a solution of formalin (1:500). Sims's speculum is introduced, drawing back the posterior vaginal wall and the tampon is applied as described above. The best results with this treatment were obtained in cases of metritis, pure or complicated with retroflexions with adhesions, in exudates in the cavity of the pelvis, and in salpingo-oophorectomies which were suitable for nonoperative treatment.

DISEASES OF CHILDREN.

Acute Amaurosis following Infantile Convulsions. By Dr. H. Ashby and S. Stevenson, M. B. (*Lancet*, May 9th).—From a study of five cases of the above-mentioned disorder, the authors conclude: 1. That there is a form of amaurosis which occurs in infants or young children which is post-eclamptic, due to anæsthesia of the visual centres. 2. That the convulsions, which may be due to various causes, are apt to be severe and accompanied by coma. 3. That the amaurosis may be associated with aphasia and paresis of hemiplegic distribution; the hemiplegia may be permanent. 4. That the amaurosis is for the most part transient. It is possible that in some instances there is hemianopia.

Congenital Displacement of the Hip. By Noble Smith, F. R. C. S. (*Lancet*, May 2nd).—Reviewing the general treatment of this affection the author offers the following conclusions: 1. That in all cases and at all ages some good may be effected by treatment. 2. If the displaced head of the femur has formed a firm bearing against the pelvis, so that no tendency to increase of deformity exists and the difficulties of walking are slight, then we may devote our energies to the counteracting of lordosis by mechanical support, freeing adverse contractions, such as those of the adductors, and equalizing the length of the legs when only one side is involved. Sometimes when *both* sides are affected there may be inequality in length of leg. 3. If the head of the femur is freely movable up and down (telescopic), then some measures must be adopted to prevent increase of deformity, and the least that

can be done is to recommend recumbency or the use of some apparatus to keep the weight off the affected limb. If such measures are taken we may as well also attempt to improve the position of the head of the femur, or entirely to reduce the dislocation. Until the age of seven years all congenital dislocations can be reduced. This is Lorenz's dictum and his view seems correct. In single displacements the time limit may be extended to nine years of age. These limits are not absolute, for much older patients may occasionally have their hips replaced.

As to the permanent results of reduction, the exact degree of success depends upon the condition of the joints. If the head of the femur is very deficient in form and the acetabulum very shallow or misshapen, the result can hardly be as satisfactory as when the bones and other joint structures are less abnormal. In any case, if the bones are kept in place long enough (about two years), a more or less satisfactory result may be expected. In place of the plaster-of-Paris casing used by Lorenz, the author recommends a straight iron scoop-shaped splint fastened on the end of an iron bar which curves around the crest of the ilium. Two such splints are used in cases of double displacement.

NERVOUS AND MENTAL DISEASES.

Neurasthenia: the Wear and Tear of Life. By Dr. G. Rankin. (*British Medical Journal*, May 2nd).—Neurasthenia may be regarded as a derangement of function resulting from exhaustion of nervous energy. The increasing wear and tear of life plays the most important part in its ætiology. It is most common in cities; when it occurs in the country it usually follows a shock of some kind. The cause is unknown, but whatever the ultimate nature of the pathogenic origin may be, the functional disturbances which the disease produces appear to depend upon some primordial alteration of the nerve cells. It is most frequently met with in men between the ages of twenty and thirty years. All forms of excess predispose to its occurrence. It develops gradually and the leading feature of every case is a constant sense of weariedness. The symptomatological grouping may be mostly cerebral in one case, and mostly spinal in another, but no case is ever entirely referable to either the brain or the spinal cord. Two types of the disease are met with:—(a) the sullen, and (b) the excitable or voluble—Charcot's "man with the slips of paper." Dyspeptic symptoms usually dominate the scene. The kidneys are overactive and the urine is loaded with phosphates. Headaches are invariably present, accompanied by hyperæsthesia of the scalp. Vasomotor instability is manifested by flushings, sweatings, cold extremities, and palpitation. The knee jerks are exaggerated and the reflex is not confined to the leg, but may become general. The plantar reflex is feeble or absent, and the toe phenomenon is always flexor. There may be a spurious ankle clonus. Sleep is always disturbed. Common sensation is impaired, in the direction either of hyperæsthesia, paræsthesia, or anæsthesia. Muscular or neuralgic pains are seldom absent. The heart is irritable, and precordial pains and pseudoangina are common. The general

intellectual condition varies; loss of memory and difficulty of mental concentration are its most prominent characteristics. The duration of the disease depends largely on the surroundings and circumstances of the patient. There is always danger of the contraction of one of the drug habits—morphine, cocaine, etc. The sequential dangers to be feared are mostly referable to the nervous system; hysteria in women and hypochondriasis in men are the most frequent complications. Exophthalmic goitre occasionally supervenes on neurasthenia. The majority of cases usually recover, and life itself is rarely threatened. As regards treatment, rest is the first and most obvious indication, and it must always be both mental and physical. A short holiday may suffice, or a prolonged rest cure may be necessary. Electricity is often of value. When vasomotor instability is a prominent symptom ichthyol often steadies the circulation wonderfully. Alcohol must always be used sparingly, if at all.

On the Pathogenesis of the Chorea of Sydenham.—Dr. A. B. Gianasso (*Riforma medica*, April 22nd) had occasion to observe forty-six cases of chorea minor in the Royal Margherita Hospital for Children, in Turin. He believes that only the infectious theory of the disease can satisfactorily explain his observations. Chorea is a neurosis which is induced by hereditary predisposition. The subjects of chorea usually bear the signs of degeneration, and an accidental cause may induce the choreic symptoms in such children. Thus, acute or chronic infectious diseases, rheumatism, etc., may be considered as inciters of chorea. The presence of the various pathogenic germs which have been discovered in the bodies of persons with chorea by Pianese, Cesaris Demele, and others, may be accounted for in the same way. These germs are evidences of a secondary infectious process developing upon a choreic soil. The fever may be a result either of secondary infection or of gastrointestinal changes. While the reproach is deserved that fever that cannot be otherwise explained is accounted for too often by gastrointestinal disturbances, yet it does happen that the digestive tract is responsible for elevations of temperature, and that attention to the bowels and the stomach makes the fever disappear.

The Treatment of Epilepsy.—Dr. Urbano Alessi (*Riforma medica*, April 22d) says that the epileptic, and not epilepsy, should be treated, just as to-day we no longer speak of crime but of the criminal. A great deal has been written on the causes of epilepsy and many theories have been advanced. The consensus of opinion at present is that epilepsy is explained by assuming an abnormal excitability of the nerve centres. It is not a purely functional phenomenon, but probably depends upon molecular disorganization of the cortical centres. Profound and well-marked changes in the metabolism of the body, manifested for instance in the blood, the urine, etc., have been noted in epileptics by various observers within recent years. It is probable that the cortical centres, being the most highly differentiated and most highly organized, are the first to succumb to the general disorganization which goes on in epilepsy. The author believes,

therefore, that a treatment which aims at molecular reconstruction is the rational mode of curing epilepsy. He uses a combination consisting of sodium arsenate, 0.001; zinc phosphide, 0.005; calcium phosphate, 0.08; sodium benzoate and pancreatin, of each 0.20 in each dose, to be given from one to three times daily before meals. The arsenic is a tonic to the nervous system, and facilitates the elimination of nitrogen. The zinc phosphide is a tonic and a sedative and is useful, in virtue of its phosphorus, in giving stability to the organic molecular groups. The calcium salt is added because, according to Sabbatani, it diminishes the excitability of the cortex. In anæmic patients iron is of the greatest importance, and care should be taken that the patient takes enough iron in his food. Pancreatin and sodium benzoate are added to combat intestinal intoxication, and rhubarb is sometimes used to assist in keeping the gastrointestinal tract in good condition. The author reports four cases in which good results were obtained with this treatment. He adds that in cases in which there is a marked hereditary tendency to nervous affections this treatment is of no value, as it is merely reconstructive and cannot affect cells that are already "deeply compromised" through heredity.

GENITO-URINARY DISEASES.

Total Perineal Prostatectomy.—This is considered the operation of choice by D. Jerónimo Peralta (*Revista de Medicina y Cirugía Prácticas*, April 14th) who describes a case successfully treated by this method. The author believes it possible to save the ejaculatory ducts, the removal of which with the prostate constitutes one of the most serious objections to prostatectomy. This he has repeatedly accomplished in the cadaver; though the operation which he describes has not as yet been essayed in the living subject. He states that the base of the prostate may be brought into the operative field by introducing a metallic catheter into the bladder. If the external end of the catheter is carried down and back to the abdominal wall, pressing it well against the pubis, the internal end, and with it the base of the prostate, seminal vesicles, and vasa deferentia, is brought forward and upward to the operative field, where each organ may be isolated and the prostate removed without injury to them or to the peritonæum, if it is remembered that the vesicorectal pouch of the peritonæum dips down within about an inch of the prostate's base and reaches the base of the seminal vesicles, which, in some individuals, the peritonæum invests for about a third of an inch. The vasa deferentia situated at the internal border of the seminal vesicles, describe an acute angle and limit a triangular area, the base of which is formed by the vesicorectal peritoneal sac. After isolation of the vasa deferentia a sound of appropriate size is introduced into each one through a longitudinal incision made in it at a point corresponding to the base of the prostate, and pushed through till it touches the catheter within the urethra. These sounds being entrusted to an assistant, the operator is free to extirpate the prostate without injury to the vasa or ejaculatory ducts. At the close of the operation the sounds are removed and the incision in each vas deferens is closed with a catgut suture.

Proceedings of Societies.

SOCIETY OF THE ALUMNI OF THE CITY (CHARITY) HOSPITAL.

One Hundred and Second Stated Meeting, November 12, 1902.

The President, Dr. G. H. MALLET, in the chair.

(Concluded from p. 960.)

The Radical Cure of Hernia with Cocaine Anæsthesia.—This paper was read by Dr. ALEXANDER LYLE (See page 968).

Dr. W. C. KLOTZ asked Dr. Lyle whether in anæsthetizing the nerves, he injected the cocaine into the nerve trunks or into the nerve sheaths.

Dr. J. B. BISSELL had been very much interested in Dr. Lyle's paper. It had never been his good fortune to see any of these operations. He confessed to being a little doubtful about the smoothness of them all—of getting through a long time herniotomy without giving the patient some pain. Dr. Lyle had appreciated the neurasthenic element in the patient; as in any other operation without general anæsthesia, when the patients heard the click of the scissors or the call for the knife they had pain; consequently it was necessary to have the operation done without attracting the patient's attention very much to that part of it. It seemed to him the drawback would be the amount of time it must take. We all knew that the greater the rapidity and speed with which we operated, the less the gravity of the patient's condition and the less the shock, and this searching for the nerves and making an injection into the sheaths of these rather small nerves must take a considerable time. That, he thought must be an objection. Also he would be a little dubious, in considering the operation, about whether or not pain would not be caused in inserting the deep kangaroo tendons, where one had to pull up Poupart's ligament and produce a good deal of tension, especially in putting in the last suture. As to the treatment of the sac, he preferred the simple, plain, and direct Bassini method to any modification whatever, particularly to Macewen's treatment of the sac. It seemed to him it would add to the time of operation and favor recurrence of the hernia by putting a pad of sac into the abdominal cavity to press down on the hernial canal. He would like to see some of these cases.

Dr. H. H. SCHROEDER understood Dr. Lyle to say that he introduced the cocaine directly into the skin and not into the subcutaneous tissue. Dr. Schroeder knew in days past when he tried cocaine in circumcision (and of course it was injected in those days into the subcutaneous tissue), it always seemed to him that it left a great deal of swelling, and they did not get such good results as after general anæsthesia. It swelled up, anyway, and it seemed to interfere somewhat with the result of the operation and the healing. Perhaps if they had injected directly into the skin tissue and not under the skin, they would have had better results.

Dr. J. B. KENNEDY noticed that Dr. Lyle spoke of pain in cutting the omentum. It was not long ago

since he had operated on a case in which he removed fully a pound of the omentum (he did not have to use cocaine) and there was no pain.

Dr. E. P. MALLET would like to ask Dr. Lyle if he had had trouble in heart depression in these cases. The only operation Dr. Mallett had tried cocaine in was a perinæorrhaphy, but the patient went off into a sort of faint—whether it was due to the nervous condition or to absolute depression of the heart, he did not know, but he was frightened at the time.

Dr. A. LYLE, replying to Dr. Klotz, said that he always aimed to get the cocaine into the nerve sheath.

Dr. Bissell had spoken of time, and also of the necessity of controlling the neurasthenic effect on the patient, to which he would say that the majority of these fifteen cases had been done before the class at the Polyclinic Hospital, and any of the members who were doing that sort of work knew that it was impossible to keep a class quiet. The only manœuvre he had ever used there was simply the throwing of a towel over the patient's head. He came in on a cart and saw the class there, and it was impossible to tell him they were only going to do an important dressing. That he had done in private, but had not been able to do it in hospital cases.

The time consumed had ranged from forty to fifty-five minutes. He had kept a record of that with every case.

He was very glad the doctor had brought up the matter of treating the sac, because it had always been an interesting one to him, for the very reason he mentioned in the paper. If the sac was tied off you were bound to leave a funnel-shaped end, and that certainly invited the omentum, and intestine, and had a tendency to cause a reappearance of the hernia. By pulling up the sac in the Macewen method it did not take five minutes longer, and you had that held up as a plug against the weak point. It was not a pressure on the weak part, because the weight of sac was pulled up by the catgut suturing it fast up through the skin. Autopsies performed on some cases six months or so after this method had been done, as Macewen reported himself, had shown that the sac was completely bound down by adhesions in that part, and was so tough that it was really the strongest part of the peritoneal cavity.

Dr. Schroeder had spoken of circumcision. Dr. Lyle had read a paper a month ago before the Lenox Surgical Society on cocaine work, and one of the gentlemen there brought up that same fact, that in circumcision he had difficulty even with 2 per cent. solutions. It was simply because the cocaine was not injected *into* the skin. The end filaments of the nerves lay immediately in the skin, and if you got the cocaine into the skin you paralyzed these end filaments. If you got it below the skin you did not touch them. That was the important point. In doing circumcisions with cocaine he did not hesitate to do it on very small babies, and there he usually introduced the needle into the skin and also into the mucous membrane, making two separate cuts. The cedema that was produced, as Dr. Schroeder had mentioned, was from using a large quantity. That was necessary if you were going to use it

subcutaneously, but if you used it *in* the skin, a very much smaller quantity was employed; for an ordinary circumcision from ten to twenty minims was all that was required.

Dr. Mallett had spoken of heart depression. He had never seen the slightest sign of heart depression, and he thought it was on account of the small quantity of cocaine used. Over on the Island, while in the hospital, Dr. Kelly used a 10 per cent. solution, and heart depression had been manifested, but when we used only $\frac{1}{4}$ or $\frac{1}{10}$ per cent solution, we did not get heart depression.

A point that was brought up in the Lenox Society he might mention here: If you were going to use a $\frac{1}{10}$ per cent., why not cut the cocaine out altogether and use simply hot water? He had tried that also, and he had found that hot water would not anesthetize the nerves, but that $\frac{1}{10}$ of 1 per cent. of cocaine would.

A Case of Keloid.—Dr. J. ALDRICH showed a man with a new growth on the back of his neck. He had had it for two years. He was twenty-five years old, and a bicycle rider. His attention had been called to it because while wearing a sweater, his neck had become chafed and irritated and he had noticed a pimple. He thought perhaps there might have been more than one, and the result had been a growth, which could now be seen of irregular outline at the border of the hair, hard, firm, and slightly elastic and nodular; it was a new growth of the skin.

He had come to the Vanderbilt Clinic for treatment; it was a keloid. A keloid was a new growth which was especially likely to occur in colored people, and was more likely to occur between the ages of twenty-five to fifty years. It was a connective tissue growth of the skin. It was not generally painful. There was some pain on pressure, but no spontaneous pain, and its growth continued sometimes indefinitely. The prognosis was rather unfavorable and the treatment was variable. Caustics had been tried, the knife had been tried. The explanation given for recurrence was that this connective tissue growth was primarily around the blood vessels, and the vessels were affected beyond the margin of the growth, so that unless a wide cut was made, it was bound to recur. This particular site was not the usual one. The breast was the most common site, and here you could often see them with projections out along the ribs, giving a crab-like appearance. In white people the color was sometimes white and sometimes pinkish. In the colored race it took the color of the skin itself. It was almost devoid of hair at this situation.

As for treatment there was nothing to be relied on. In this particular case they were trying a 10 per cent. solution of thiosinamine in glycerin and water. They injected into the growth 15 minims twice a week. This patient had not been treated long enough to state what the result was going to be; they were not positive that a cure would be effected, but it seemed to be promising. Other things had been already tried.

Dr. H. G. PIFFARD said that it was undoubtedly a keloid. As to the treatment, the first treatment that gave any promise of success was scarification, with the application of acetic acid. That was introduced, he believed, by Sherwell, of Brooklyn, many

years ago. The thiosinamine was a much newer treatment, having developed in the last four or five years, he thought. He ventured on it in one case very agreeably, in which a keloid developed, according to the patient, spontaneously, but according to his belief the patient had tried to cut her throat. There there was decided benefit from thiosinamine. It was certainly the most promising treatment that offered.

Speaking of the treatment reminded Dr. W. S. REYNOLDS of a case they had in Charity when he was there. It was in a young girl. He thought it was cut out, and the more it was cut, the more keloids the patient had.

Dr. A. LYLE had had a case very similar to that in the Polyclinic this summer, on which he had used the x ray, and so far as he could determine, got a very thorough cure. This was the only treatment that was used, so we must attribute the success to the x ray.

Dr. H. G. PIFFARD would like to add to what he had said, that the diagnosis was not always clear whether it was a keloid or hypertrophied scar, and sometimes it was difficult to determine between the two. This was an undoubted case of keloid. Formerly writers made a distinction between spontaneous keloid and that the result of traumatism. Now, keloid had been known to develop from a pin prick. We could never assure ourselves that there had not been some prior traumatism. Of course, hypertrophied scars were traumatic, but the appearance of the two differed very much, and the microscopical appearance differed quite decidedly.

Dr. G. H. MALLETT could confirm what Dr. Aldrich had said about the frequency of keloid in dark-skinned races. In Mexico it was a common thing—a large proportion of the population had marks on their chests. Not infrequently the condition occurred in abdominal incisions after laparotomy, and all methods have been tried for its relief. In one case he thought he had cured it by skin graft, but he had lost track of the case, and had never tried that method since.

Notes on Three Cases of Chronic Ulcerative Colitis Treated by Colostomy, with Demonstration of Specimens.—This was the title of a paper by Dr. MORRIS MANGES. Dr. Manges said that the very thing that made him late in arriving gave a good corroboration of the points he wished to bring out in the treatment of chronic hyperplastic colitis, as given in the card, or, as he would prefer, of chronic ulcerative colitis. He was standing in the railway station at West Point waiting for a train, and while speaking with the post surgeon, Major Glennan, he mentioned the fact that he was anxious to get to this meeting to read a report on some cases of chronic ulcerative colitis. Major Glennan said the army surgeons had considerable experience with diarrhoeal cases and cases of colitis among the soldiers in the Philippines, and had often discussed the probable value of colostomy in the obstinate cases. He said the number of deaths occurring from these incurable cases of colitis in the tropics was something beyond our conception.

What Dr. Manges referred to was possibly a little new, but like everything else it has been done be-

fore in the treatment of chronic ulcerative colitis. Internal medication and topical applications were the usual means employed. What was necessary in the intractable conditions was to give the diseased parts a rest, and it was useless to think that by means of any topical applications we could give through the rectum, no matter how high we believed we might be able to reach, we could reach the seat of the disease; and, therefore it was that surgical procedures by means of an opening in the right iliac fossa offered much in these cases.

Dr. Manges's cases were three in number. The first was that of a young woman, twenty-two years of age, who was admitted into his service at the Mt. Sinai Hospital about three years ago. A more wretched specimen of humanity could not be conceived. Let them picture a patient with the look of pernicious anæmia; add to that, movements of the bowel to the number of twenty or thirty a day, stools most offensive, consisting of mucus and blood, and a person absolutely as wretched as a person could be. They had tried everything, and in desperation had called in the surgeons, who agreed that a colostomy might be attempted. Unfortunately, Dr. Manges was not present at the operation, and instead of doing a right lumbar colostomy, a left was done, but even on the left side the colostomy was followed by very gratifying results. The movements became lessened in number, the patient's general condition improved, and the loss of blood was checked for a while. Through the colostomy wound $\frac{1}{10}$ per cent. solutions of silver nitrate were instilled in large quantities (one quart) twice a day. After a temporary improvement of two months, the old symptoms reappeared, and then (December, 1899) it was decided to do a colostomy on the right side. The patient stood both operations very well, an artificial anus was established, and again a remarkable improvement appeared. Silver nitrate, protargol, solution of suprarenal extract, bismuth in various forms, saline irrigations, etc., were employed through the colostomy wound with more or less good effect; in other words, the patient's colitis symptoms were very much improved. These solutions were injected in large quantities through the entire colon and escaped through the rectum. Her general condition having improved so much, and the hæmorrhages having ceased, the question of the closure of the colostomy wound came up. The visible mucous membrane being unchanged, it was evident that its closure might mean a recurrence of the old symptoms. Dr. Lilienthal therefore concluded to exclude the entire colon from the alimentary tract. This he successfully accomplished in March, 1900. The results were in every way satisfactory. Subsequently, in June, 1900, Dr. Lilienthal resected the ascending, transverse, and descending colon with complete success, and established an anastomosis between the ileum and the sigmoid flexure. The patient was well and was now abroad. A report of the case was published by Dr. Lilienthal in *American Medicine*, April, 1901. If we contrasted her miserable condition of pernicious anæmia and apparently sure death with the good health that she now enjoyed, one could not but feel grateful for the surgical intervention that was practised here.

The other two cases were not so fortunate. The second case was that of a woman, whose symptoms were very similar to those of the first patient. Instead of there being ordinary ulcerative lesions, the disease proved to be tuberculous, but even in this case the amelioration of the symptoms by the colostomy and the local treatment of the entire colon by the injections was quite marked. She finally died of her tuberculosis.

The third case he referred to was one in which the diagnosis was for some time quite doubtful. A man, fifty years of age, had suddenly within the course of five months lost fifty pounds in weight. He had symptoms of severe ulcerative colitis, but there were also vague phenomena at the base of the right lung. Nothing of a positively tuberculous nature could be discovered in this case. Nothing that had been tried was of any value. The case was one of the severe type that all who were familiar with those old civil war dysenteries on Blackwell's Island might remember, and would recall how miserable these poor sufferers were, and how they never could get rid of their intestinal troubles; only, added to this, was a peculiar condition of constant loss of weight without any explainable cause, unless referred to the intestine. Colostomy was proposed and accepted. It was performed, and a condition of the gut was found which was well illustrated here. (Demonstration.) The operation did what it was meant to do. Then, of course, through the colostomy wound medication was carried on as before.

This was very easily carried out. You could flush very large quantities of medicated solution through the entire length of the large intestine, and the patients tolerated it well. If you used a quantity of silver solution and flushed with salt solution afterward to neutralize the silver, the patients did not complain of pain. The untoward effects in this case—the man died two months later—were not due to the operation, but to other conditions the man had. They found at the autopsy that he had a thrombus in his splenic vein, and emboli from there were carried into the longitudinal sinus, as the symptoms led them to suspect (he had convulsions and loss of consciousness), and there was also embolism of the lung, which was followed by abscess, and it was this abscess of the lung which proved fatal and not the local condition. The intestine in his case showed very prettily what was quite characteristic in these cases; it was a chronic papillomatous inflammation characterized by a lymphoid infiltration with ulceration and the formation of peculiar thin bridges or loops of tissue. It was quite a characteristic peculiarity that was present in all three of these cases, and the colon which was excised in Case I presented the same picture that was seen there.

Now the proposal to do colostomy for the cure of colitis was not a new one. Gibson had recently published a paper in the *Boston Medical and Surgical Journal*, in which he analyzed three cases, in two of which the patients were cured absolutely. One case, one of Bolton's, and another one of Frank Markoe's, and the third was a case of his own. In the two cases of Bolton and Markoe complete recoveries ensued; his own patient was tuberculous and died. What Gibson did was that, in performing the operation of colostomy, he formed a

valve in just the same way as in the Kader operation for gastrostomy—an artificial valve was formed, which permitted the placing of a catheter in the opening for the introduction of fluids.

In the *Deutsche medicinische Wochenschrift* of the early part of this year, two cases of most intractable ulcerative colitis were reported. Two cases were cured by means of colostomy. Those of them who saw these cases must agree with him when he made the statement, that nothing was more distressing than the absolute failure of all forms of treatment, so far as we knew now, not only in the cure of these cases, but in their relief.

It might be said that this was heroic treatment, to which he replied that it was not heroic. He thought it was much more heroic to go around with this incurable lesion and the constantly increasing large number of movements. These patients were willing to have anything done for the relief of this condition. Medication was absolutely useless. To attempt to medicate the colon above the sigmoid flexure was a delusion, and even with the proctoscope (Kelly's tube treatment even within the sigmoid was something only possible to those specially skilled.

These patients were bound to die of their lesion, or if they did not die soon they were in such a miserable condition that their life was not worth living.

Dr. RAMON GUIERAS said that he had operated in a case five years ago. The patient was very much improved; in fact he was considered cured. At that time Dr. Guieras had typhoid fever, and the patient passed from him into the hands of a colleague. The opinion of this surgeon was that he was well enough to have the artificial anus closed. He died a few weeks after the operation.

Dr. J. H. P. HODGSON wished to ask what the nature of the stools was in that case after excision of the gut?

Dr. A. M. NEWMAN said that the remarks of Dr. Manges were most interesting to him, for during the past four years, he had seen sixteen cases (although not of the ulcerative type) of colitis associated with and complicating pelvic lesions. Three cases had occurred in the thin and nervous, fat and phlegmatic, types; some of them decidedly acute. All of them he considered difficult cases to treat, and for this reason he wished to speak of a Tyrrell bag holding from four to six quarts of water with a short tube which was introduced into the rectum (this tube was located in the centre of the flat surface of the bag). The patients sat on this bag, and the pressure of their weight forced the water into the colon, taking from half an hour to three quarters of an hour. He believed he had palpitated water in the ileocæcal region. Of these sixteen cases he had seen four cured by the above method. He said cured, as they had not had an attack of colitis for a year and a half, and one of the four had had a colon bacillus cystitis which was very acute, and had lasted for one year.

There was one other case he wished to mention. It occurred in a patient who weighed about 160 pounds (it started with a left salpingo-oophoritis) who looked the picture of health now, but the slightest disturbance or excitement would produce a diarrhoea of mucus (15 to 20 stools per diem) which continued from ten days to two weeks, ending as

suddenly as it began. Medication by any form of irrigation aggravated the lesion; mouth medication had little or no effect.

Dr. J. B. BISSELL said that in spite of Dr. Newman's suggestion he did not think medication held out much hope to these patients. He thought the recourse would have to be to surgery. Three or four cases he had seen had been benefited more by rest of the bowel than by internal medication, and in fact he thought that if any one looked at this specimen, it would be seen how impracticable it was to introduce by the mouth any medicament for such a lesion. He would like to have Dr. Manges state whether any serum antagonistic to the bacillus of Flexner or Shiga, had been invented for that condition.

Dr. M. MANGES, replying, said in answer to the first question about the nature of the stools, that there was nothing specially characteristic about them. They were of the same nature as they were at first, and gradually they noticed that the blood disappeared; they always considered the reappearances of the blood in the stool as a sign of retrogression. The next thing was that the stool contained less mucus, and became more formed. A large part of the stool was deflected through the artificial anus. What Gibson proposed was not so much to deflect the stool as to medicate the bowel; for what he did was to make a small valve-like opening through which a catheter could be inserted, as in the Kader operation. The deflection and the wide opening were entirely different procedures, but the underlying principle was the same. If you wished to medicate the colon, you had to begin, not at the rectum, but at the cæcum. In spite of a large artificial anus, very often you were troubled by a stool through the rectum since it would pass on in spite of the artificial anus.

Regarding Dr. Newman's remark about the Tyrrell bag. It was a good thing in its way, and in some cases it was beneficial. The internal bath, as Tyrrell called it, was not a bad way of medicating the lower bowel, but he thought that you could not get much above the sigmoid. It must not be forgotten that a large rectum with all its ampullæ dilated could hold a litre of water; add the sigmoid and you could see how two quarts of water might be kept below the splenic flexure.

Dr. Newman's case was one of acute mucous colitis, and no matter what you did with these cases, you were dealing with a neurosis—the local condition in the bowel was only one symptom of a general condition, and his remarks did not refer at all to that class of cases. It would be foolish to do a colostomy. What they needed was a rest to the bowel with a mixed diet (it was not necessary to restrict diet in these cases) and an abundance of fat. If this was done and the general condition treated, giving systematic lavage, or better, systematic doses of castor oil, a good deal of good would be done; but it was the general rather than the local treatment. In fact if they could be got to disregard the local symptoms, a great deal of good could be effected.

About antitoxine: There were two classes of cases to which that referred. One was those due to the Shiga bacillus and the other those due to

amœbæ. In the case of the Shiga bacillus we had a right to look for an antitoxine. The work done by Flexner in the cure of dysentery all bore on an antitoxine based on the Shiga bacillus, and he thought we had a right to hope that these acute cases would be cured by an antitoxine.

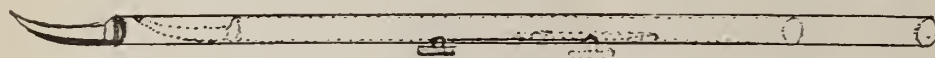
The second class of cases was the ulcerative—those due to amœbæ and those not due to amœbæ. In neither of these groups had we a right to look forward to the production of any antitoxine which would act beneficially? So far as we now knew we were absolutely helpless in the cure of many of them, and for that reason so radical a procedure as colostomy, and, if necessary, excision, was the only thing at our command.

New Inventions.

A NEW PHARYNX KNIFE.

By ALBERT G. POHLY, M. D.,
NEW YORK.

In opening retropharyngeal or circumtonsillar abscesses, especially in children, we often meet with great difficulty in introducing an open knife, as the little patients will invariably move their heads, thereby rendering the operator liable to cut the child's tongue or cheek. I have therefore tried to overcome this difficulty with the instrument here pre-



Dr. Albert G. Pohly's New Pharynx Knife.

sented, which is a simple knife concealed in a holder. The knife may be pushed forward or backward by a little button, which is situated in about the middle of the holder. In operating we introduce the instrument until we reach the abscess, then push the button forward, make the incision, draw back the button, thereby pulling back the knife, and then withdraw same. The knife can be removed from the holder and easily cleaned and sterilized. The instrument was made for me by Knauth Bros.

BOOKS, ETC., RECEIVED.

The Medical and Surgical Uses of Electricity, including the X Ray, Finsen Light, Vibratory Therapeutics, and High-Frequency Currents. By A. D. Rockwell, A. M., M. D., formerly Professor of Electro Therapeutics in the New York Post-Graduate Medical School and Hospital. With Two Hundred and Fifty-two Illustrations. New Edition. New York: E. S. Treat & Company, 1903. Pp. v-56. (Price, \$5.)

The Diagnosis of Diseases of Women. A Treatise for Students and Practitioners. By Palmer Findley, B. S., M. D., Instructor in Obstetrics and Gynecology, Rush Medical College, in affiliation with the University of Chicago; Assistant Attending Gynecologist to the Presbyterian Hospital, Chicago. Illustrated with Two Hundred and Ten Engravings in the text and Forty-five Plates in Colors and Monochrome. Philadelphia and New York: Lea Brothers & Co, 1903. Pp. v-494. (Price, Cloth, \$4.50; Leather, \$5.50 net)

A Manual of Diseases of the Eye for General Practitioners. By Clarence A. Veasey, A. M., M. D., Demonstrator of Ophthalmology in the Jefferson Medical College; Assistant Ophthalmic Surgeon to the Jefferson Medical College Hospital; Ophthalmic Surgeon to the Methodist

Episcopal Hospital; Consulting Ophthalmologist to the Philadelphia Lying-in-Charity. Illustrated with One Hundred and Ninety-four Engravings and Ten Colored Plates. Philadelphia and New York: Lea Brothers & Co., 1903. Pp. iii-412. (Price, \$2.00 net.)

The Art of Living Long. A New and Improved English Version of the Treatise of the Celebrated Venetian Centenarian, Louis Cornaro. With Essays by Joseph Addison, Lord Bacon and Sir William Temple. Milwaukee: William F. Butler, 1903. Pp. 7-214. (Price, \$1.00 and \$1.50.)

A Text Book of Organic Chemistry. By William A. Noyes, Professor of Chemistry in the Rose Polytechnic Institute. New York: Henry H. Holt & Company, 1903. Pp. iii-534.

Om Näringsämnenas Betydelse för Muskelarbetet. Inbjudningsskrift till Åhörande af de offentliga Föreläsningarna med hvilka Skytteanske Professorerna i Våltäthet och Statskunskap Filosofie Doktorerna Simon Johannes Boëthius och Professorerna i Teologiska Prenotioner och Peologisk Encyklopedi, Teologie Doktorerna och Filosofie Kandidaterna, Lars Olof Söderblom, Tillträda sina Embeten. Af Olof Hammarsten. Konigl. Universitets i Uppsala N. V. Rektor.

Experimentella Studier öfver den Intravenösa och Subkutana Saltvatteninfusions Värde vid Akut Anæmi. Akademisk Afhandling som med Tillstånd af Medicinska Fakulteten i Uppsala för Vinnande af Medicine Doktorsgrad. Offentligen Försvaras af Fredrik Zachrisson, Med. Lic., Stockh. A Fysiologiska Institutionens Auditorium, Fredagen den 30. Maj 1902 Kl. 10 F. M.

Miscellany.

The Rôle of Toxines in Inflammations of the Eye.—Dr. Robert L. Randolph (*Johns Hopkins Hospital Bulletin*, March-April) concludes a paper on this subject as follows: 1. Bacterial toxins, so far as tested, when instilled even for many hours

into the healthy conjunctival sac were found incapable of producing inflammation or causing other injury. 2. The same toxins when injected into the tissue of the conjunctiva or into the anterior chamber invariably set up local inflammation, the extent and intensity of the inflammation varying in some degree, according to the species of bacterium yielding the toxine. 3. Bacteria which had not previously been proved to produce soluble toxins were found to produce them, even in young cultures, and it is suggested that injections of bacterial filtrates into the eye, particularly into the conjunctival tissue, constitute a more delicate biological test for the detection of certain toxins than the tests usually employed for this purpose. 4. The experiments recorded in this paper furnish additional examples, in a comparative new field, of the importance of toxins in explaining the pathogenic action of bacteria, and likewise emphasize the ætiological significance of injuries of the covering membrane of the eye in favoring the action of toxins and of bacteria.*

Progress Toward Medical Unity.—In its June issue the *Buffalo Medical Journal*, to which we are indebted for an advance proof, will say: "The American Medical Association during its session at New Orleans, May 5-8, 1903, took the most progressive step in its history. The code of ethics adopted as an admonitory document in 1847, made mandatory by the surreptitious insertion of a clause

in the constitution in 1857, enforced as a blue law with disastrous results to the profession until 1901, eliminated partially in that year and completely in 1902 from the organic law of the association, has at last been given a new name, a new form, a new and, we believe, an entirely satisfactory status.

"It is unnecessary to review the events leading up to this result. The unfortunate misunderstanding at St. Paul twenty and more years ago; the division of the medical profession in the State of New York; the adoption by the American Medical Association of resolutions explanatory of the code; the enactment of salutary medical laws by the different States; the rapid advances in medical education; the reorganization of the American Medical Association; the organization of distinctly non-sectarian lines of societies in affiliation with it; the elimination of the code of ethics from the organic law of the national association; the appointment of a committee to revise the eliminated code; conferences for the reunion of the profession in New York State; the report of the committee on revision of the eliminated code; the submission of a substitute set of 'principles'; the appointment of conference committees; the submission of the final report and its unanimous adoption, make one of the most interesting and important chapters in the history of American medicine. History, however, is of yesterday; we are interested, to-day, only in the precise results of the New Orleans meeting. What has been done?"

"The answer should relate first to the code itself. The changes in this document were many, those of major importance being the following:

"First.—The title 'code of ethics' was dropped and that of 'principles of ethics' was substituted, the House of Delegates thereby relieving the document of even a verbal resemblance to a statutory enactment.

"Second.—A preamble was adopted, stating explicitly that 'the American Medical Association promulgates as a suggestive and advisory document' the statement of principles that followed. This preamble was adopted separately with the distinct declaration by vote that it was to be the preamble of any statement of ethical principles which might subsequently be agreed upon. The House of Delegates thus specifically determined not only that the code was finally and definitely out of the organic law, but that it was out to stay out. This point having been definitely and emphatically determined, the exact phraseology of the principles subsequently to be adopted became a matter of relatively little importance.

"Third.—The restrictive clause relating to consultations was entirely eliminated—an act by which the long standing and offensive barrier to individual liberty in the matter of professional associations is finally and definitely removed.

"Fourth.—The importance of medical organization was emphasized, while no attempt was made to define who were or were not eligible to membership in subordinate and affiliated societies, except that they must be practitioners of medicine under the law. This action by the House of Delegates was really made necessary to give ethical sanction to the active work of organization that its official representatives are stimulating and effecting in several States.

"Fifth.—The adjustment of ethical questions was relegated to the State associations and to their constituent societies, which are invested with the largest discretionary power in such matters.

"Sixth.—All suggestions for the guidance of the public in its relations to the profession were stricken out.

"So much for the 'code' itself—or rather for the 'principles,' as the new document must now be designated. There were, however, other results of equally striking importance. The long and bitter controversy that was expected did not come off. The report of the committee was presented, and Dr. Reed offered a substitute for the code that the committee had published as its report. The House of Delegates very promptly adopted the preamble presented in the substitute, whereby any document that might later be agreed upon would be purely advisory. Thereafter agreement became easy. The conference was held without serious differences arising and with the result that additional changes were made. When, finally, the completed document reached the House of Delegates it was adopted with manifestations of enthusiasm rarely seen in a deliberative body. There were not only sighs of relief, there were shouts of joy, that the troublesome question was out of the way.

"The action was distinctly expressive of the sentiment of the medical profession of the country. Local conditions in the State of New York were not taken into consideration. There was no question of expediency. What was done by the House of Delegates was manifestly that which in its judgment was best for the profession, without reference to incidental or extraneous considerations. The final result could not have been better devised to solve the problems awaiting adjustment in the State of New York, as well as the problems of medical organization of our entire country."

Signs of Masturbation in the Female.—Dr. E. H. Smith (*Pacific Medical Journal*, February) says that "in considering a subject of this sort little attention is given to the animal instinct. Human beings try to ignore that, and especially with regard to their own kind. There is something very seductive about the genitals of all animals, be they human or beasts. Any child carelessly permitted to sit around or go about without well-fitting diaper, or other garments for the part, is prone to meddle with its genitals. This begets the habit of handling the parts. After a time the beginning of knowledge of good and evil prevents such practices in the presence of others. It does not prevent the practice in secret. . . . 'In cases where masturbation is suspected,' " asks Dr. Smith, "'what shall we look for?' In the unmarried woman or in a married woman who has borne children, who has at some time practised masturbation to any extent, the labia majora are prone to gape when the woman is sitting or lying in an unstrained and lazy position. In some there is a flattening of the upper portion of the labia majora, which gives the clitoris an unusually prominent appearance. The labia majora are unusually soft and relaxed. The prepuce is abnormally long, and hangs down like an eyelid affected with ptosis. The labia minora are very much thickened, elongated, corrugated, and usually one is

larger than the other. They are soft and dry and feel like scrotal tissue instead of the slightly moist, firm, normal labia. In some the labia are so much enlarged in general area as to be thrown into scallops and look as though they had been crotched in their place. The matter of one labium minor being larger than the other is easy to explain. The woman nearly always uses the same hand for the manipulation, and thus one labium is subjected to greater violence than the other. The degree of hypertrophy depends on how long the manipulation is practised, how often, and over how long a time the patient has been addicted to the vice. In some the labia present a distinctly elbowed appearance, the elbow being inverted, so that they hang down nearly to the fourchette. They present appearances of recent irritation and increasing hypertrophy in those who have not abandoned the habit, and atrophic changes supervening on an old hypertrophic condition in those who have abandoned the habit.

"A very serious mistake is general as to the location of the parts which play the chief part in the orgasm. The clitoris in the female is usually put down as the part chiefly involved. Whether in the male or the female, the urethra is the part in which the orgasm occurs. In the male it is caused by the passing of jets of semen over the mucous membrane of the urethral canal. In the female, by jets of mucus from the neck of the bladder through the urethra. After an orgasm in the female, however produced, the labia and vestibule are flooded with mucus, which escapes not from the vagina altogether, but largely from the urethra. The reason why males who have suffered amputation of the glans, and women who have been deprived of the glans of the clitoris can still accomplish the sexual act with orgasm, is because the urethra is the seat of the peculiar nerve distribution necessary for its production. This explains the habit of some individuals of passing all manner of objects into the urethra, and even masturbating in that way."

As to the class of patients, the author says that those "who present the most characteristic symptoms and who more often than otherwise fall into the doctor's care in a mental and physical condition ripe for diagnosis, are, as a rule, from twenty-five to thirty-five years of age." As to symptoms, "First of importance is ovarian pain, particularly at menstruation." It is a well-known fact that if a man suffers from prolonged sexual excitement it frequently produces intense pain in the testicles. This gives a clue to one cause of ovarian pain. The congestion attending menstruation augments the pain. Overindulgence in any form of sexual act will cause more or less pain or tenderness in the ovaries. Severe pain at menstruation, in an otherwise healthy girl with no developmental defect, is a strongly suspicious sign of masturbation.

"Next in importance is the disturbance of the intestinal functions, intestinal indigestion, distention with gas; wakefulness, as a consequence, is common in these patients. A peculiarly obstinate constipation is a most common accompaniment. During the manipulation of the genitals, the sphincter and levator ani muscles are contracted to the utmost. It is a part of the process whereby an orgasm is pro-

duced. The result is a tonic contraction of the sphincter ani muscle. Constant taking of laxatives or cathartics adds to the trouble by destroying the muscular tone of the rectum and colon. An examination of the rectum in these cases shows the mucous membrane relaxed and frequently in deep and multitudinous lax folds, filled with glairy mucus; the sphincter will scarcely admit the well-oiled finger. Lastly, the damage to the nervous system varies with the nervous type of the individual and the extent of the vicious practice."

On the same subject Dr. Robert L. Dickinson (*American Gynecology*, September, 1902) says: "The type, or full development, of the deformity consists in a finely wrinkled and deeply pigmented enlargement of the labia minora and hypertrophy of some adjacent structures. Thickened, elongated, curled on themselves, thrown into tiny, close-set, irregular folds that cross at all angles, as in a cock's comb, the lesser labia protrude in all positions through the larger labia. The pigment deposit varies with the general type of coloring. One labium is sometimes greater than its fellow. The follicles are often conspicuous as whitish spots, the prepuce commonly, and the fourchette occasionally, participate in the corrugation and duskiness or one of these may alone be affected. At times a wrinkled band runs off to the labium majus. Certain veins near the clitoris stand out. At the mouths of each urethral gland a flap-like protrusion may be seen. Greater power and size of the pelvic floor accompany the other hypertrophies. Distinctive increase in the size of the clitoris may be present, but contrary to the general belief, it is infrequent. There may be enlargement and changes in the areolæ or in the breasts, resembling those of pregnancy. At a later stage flabbiness of the labia minora or pigment spots denotes atrophy of the structures once enlarged, but the hall-marks never disappear. Some part or the whole of these alterations occurs in about one third of those women who suffer from pelvic disorders. One fourth of the patients presenting hypertrophies belong to the neurotic class. These alterations are due to oft-repeated, prolonged sexual excitement, irrespective of coitus or gestation. Pressure or friction causes them. Pregnancy produces increase of size and some surface irregularity, but never the fully developed changes here specified." As to the causes of hypertrophies about the vulva, the author says: "A sufficient number of histories have been volunteered or frankly stated in typical cases of abnormal enlargement, to warrant the belief in the writer's mind that all much-enlarged deeply wrinkled nymphæ are the result of numberless congestions or tractions. In 127 instances (30 per cent. of the cases here studied) full admission has been made. Therefore, it is fair to suppose that the same findings in the remainder are due to the same cause, even though categorically denied, as with seven patients showing very marked enlargements. Denial with subsequent avowal is often encountered. Pressure, as with crossed thighs, is as productive of the hypertrophy as is friction. It is probable that, inasmuch as the increase in size occurs chiefly in the labia minora, it is to them that the irritation is applied."

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AIDS TO CYSTOSCOPIC PRACTICE.*

By FERD. C. VALENTINE, M. D.,
NEW YORK.

Those engaged in teaching cystoscopy keenly regret the time necessary to convey to their pupils the seemingly peculiar changes in location and appearance produced by "inversion of the image." Most medical men who come for instruction in cystoscopy are too long from school to recollect the fundamentals involved. To all in this position, time is a most important element. They are consequently impatient with the fact that to render cystoscopy valuable, they must return to first principles which, to most practical men, are tedious and annoying.

It was to supply a means that would promptly overcome these difficulties that I devised the apparatus I now have the honor of showing. The first of these, which I call *The Box Phantom* consists of a small square box at the bottom of which (Fig. 1)

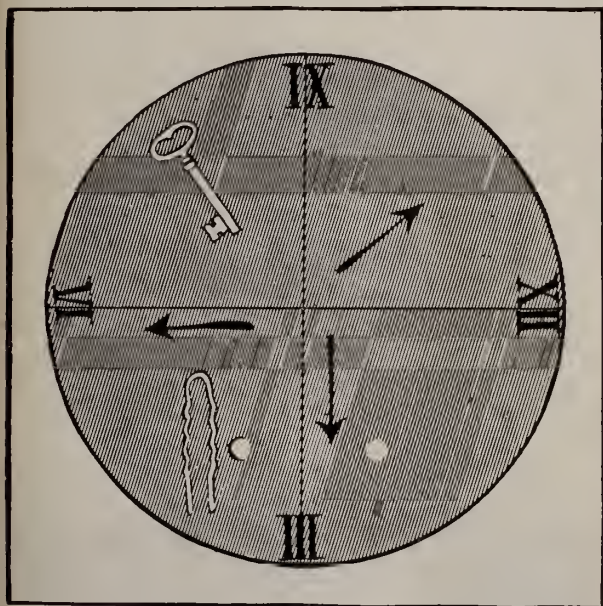


FIG. 1.—Schematic bottom of Valentine cystoscopic box phantom.

is a schematic circular device, separated into four segments.

At the extreme of each radius is a figure just as it appears on a watchdial. In two segments are depicted arrows pointing in various directions, a key

and a hairpin. Near the front of the picture are two holes intended to simulate the ureteral orifices. The right side of the box has a metal support to hold the lid at an angle of forty-five degrees to its open surface. The inner surface of the lid has a mirror. In the front of the box is a hole, representing the urethral lumen.

The method of using this box phantom may be concisely offered as follows:

1. Hold the box in the left hand, as shown in Fig. 2.

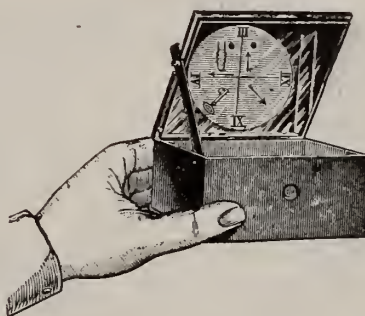


FIG. 2.—Valentine cystoscopic box phantom.

2. Observe the inversion of the images. The III which is nearest you in the design at the bottom of the box, is farthest from you in the mirror; the IX which is farthest from you in the drawing, is nearest you in the mirror. But neither VI nor XII has its position changed; their constituent letters, however, are reversed. Thus VI, in its mirrored image, becomes IV, and XII is reversed to IIX. The other intermediate inversions that



FIG. 3.—Manner of studying the location of the points in the bladder by means of a ureteral catheter inserted into the Valentine cystoscopic phantom.

* Presented before the American Urological Association, December 3, 1902.

occur, can better and more quickly be understood by comparing the objects in the schematic drawing, with their images in the mirror.

3. Insert a slender pencil or a catheter (Fig. 3) or an applicator, such as was elsewhere¹ recommended in urethroscopy, or the ureter-cystoscope simulacrum (described farther on in this paper) through the orifice in the front of the box (Fig. 2).

4. With the point of any of the above described articles, successively touch all the things depicted in the drawing and insert it into the holes representing the ureteral mouths.

In all these exercises, *do not look at the drawing*, but be guided exclusively by its parts as they are reflected in the mirror.

The advantages of this phantom which I desire especially to emphasize are:



FIG. 4.—Large Valentine cystoscope phantom.

1. No cystoscope is needed for practice.
2. The phantom does not need water-filling for use.
3. It can be used for practice at all times and in all places, whenever a few moments of leisure occur.
4. It is far more effective for individual or class demonstration than would be any number of black-board or other drawings.
5. It is an exceedingly cheap apparatus.

When practice has made the student familiar

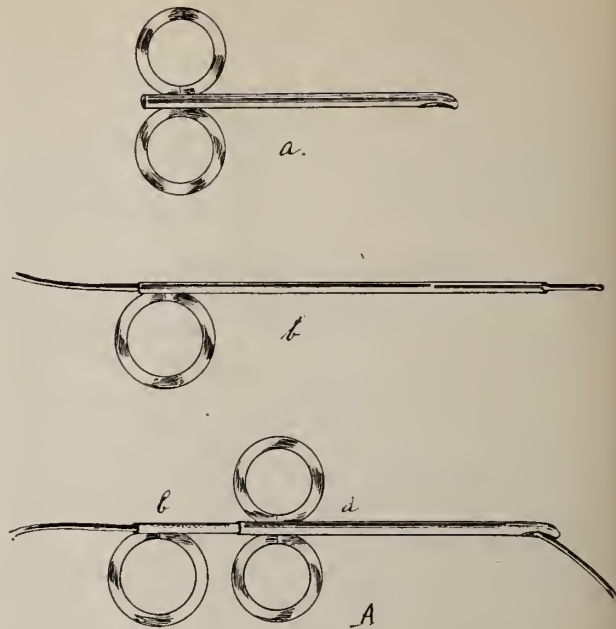


FIG. 5.—Valentine's ureter-cystoscope simulacrum.

with the inversion of the images in the schematic drawing, he is prepared for further study of cystoscopy with

The larger phantom. This consists of a heavy wooden stand, containing a rubber hemisphere in which the lower two-thirds of the bladder are depicted as they appear in life (Fig. 4). A mirror, movable in all directions, shows the images of the lower two thirds of the bladder, just as this region appears through the cystoscope. The various anteroposterior and lateral angles at which the mirror is turned to the hemisphere below it, show the distortions in which each point appears, as it is conveyed to the eye by the cystoscope. Practice with this device is identical to that described above in connection with the small box phantom (Fig. 2), except that the instruments used are inserted through the orifice P (Fig. 4).

When the student has acquired familiarity with localization of the various parts of the bladder in this phantom, he may safely use a cystoscope for that final practice which is preparatory to examination of the bladder in the live subject.



FIG. 6.—Practice of ureteral catheterism with the Valentine simulacrum and small phantom.

¹ *The Irrigation Treatment of Gonorrhoea, its Complications and Sequels.* William Wood & Co., New York.

In practising with the cystoscope on this phantom, it will be well to fill it with water, so as to cause it to resemble as closely as possible cystoscopy in the living. The presence of foreign bodies in the bladder may be simulated by placing such foreign bodies in the phantom. Intravesical growths may be represented in their natural shape and size by pieces of meat attached to the walls of the phantom with bits of modeler's clay.

No attempt to use the cystoscope on a living human being should be made before the student has learned intelligently to inspect all parts of the bladder of the phantom while avoiding contact of its walls with the beak of the cystoscope. The reasons therefor are:

1. The beak of the cystoscope may burn the mucosa severely and dangerously.
2. The mere touch of the cystoscopic lamp to the vesical mucosa changes its appearance, and conduces to misleading conclusions.



FIG 7.—Practice of ureteral catheterization with Valentine's simulacrum and large phantom.

The ureter-catheter simulacrum. This cheap little instrument is intended for the practice of ureteral catheterism, without the dangers to the patient or the instrument that expensive cystoscopes would entail. The simulacrum (Fig. 5) consists of (a) a short metal tube somewhat resembling a female catheter, with large rings attached to its

proximal end; (b) a straight tube with one ring at its proximal end.

A in Fig. 5, shows tube *b* inserted into tube *a*; a ureter-catheter traversing tube *b* and projecting from the eye in tube *a*.

This instrument is used as follows:

1. The index and middle fingers of one hand are passed through the rings of tube *a*; the thumb of the same hand is passed into the ring of tube *b*.
2. The thumb, index, and middle fingers of the other hand grasp the catheter close to the proximal end of tube *b* and project it.
3. The thumb through the ring of tube *b*, when flexed, gives increasing curves to the catheter as it emerges from the eye of tube *a*. This demonstrates the use of the slide ureter-cystoscopes, as devised by Casper and Kollmann.

For practice in ureteral catheterism with the small box phantom, the opened lid of the phantom is placed against a firm support, such as a wall, or (as shown in Fig. 6) against a microscope case. Beneath the anterior margin of the phantom a book is placed. The simulacrum is held as above described, while its tip is made to traverse the orifice in the anterior wall of the phantom. Guided exclusively by the image in the mirror, the point of the ureter-catheter is guided to the holes that represent the ureteral orifices.

Practice of ureteral catheterism with the large phantom (Fig. 7) is performed in the same manner as with the small phantom. When skill with the simulacrum is acquired, the ureter cystoscope may be used for the same purpose, as a legitimate predecessor of ureteral catheterism in the living subject.

The phantoms and simulacrum above described, were made for me by C. G. Heynemann, of Leipzig.

PYELOTOMY WITH SECONDARY NEPHRECTOMY ON THE LEFT KIDNEY, PYELONEPHROLITHOTOMY ON THE RIGHT.*

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BELLEVUE HOSPITAL MEDICAL COLLEGE.

It is rare that the surgeon meets with a case of kidney disease in which operative interference becomes an essential emergency, and for these reasons I report in detail this case.

CASE.—The patient, when seen by me on May 9th, 1902, was in shock, countenance pale, perspiring, with a pulse of 160, temperature of 104° F.; there were marked indications of tumefaction in the

* Read before the Society of Alumni of Bellevue Hospital, May 6th, 1903.

left side, and an immediate history of obstruction for four days; excruciatingly agonizing pain, generalized, but most marked in the entire left half. The tumefaction extended to the iliac fossæ. There was constant vomiting, and a history of attacks of vomiting for three or four days. Little or no history could be obtained from her at that time, but with the family's aid we were able to obtain these facts: That she was about thirty-one years old, married fourteen years, and for twelve years had been a patient sufferer from terrorizing attacks of pain limited to the left side, radiating downward toward the genitals; that her urine was cloudy at times, with a sediment, and occasionally she found some small gritty masses, and even small stones the size of hempseed; that to their knowledge she had never had any pain on the right side, and that the present attack appeared to them something vastly different, more protracted and severe, than anything seen before. The last urine passed by her had been saved, and upon holding the receptacle to the light several small calculi were seen, varying from a millet to a hempseed in size; there was also considerable pus. A

improvement in the temperature and pulse, but the vomiting persisted. There was then a gradual evidence of sepsis, and feeling that the kidney itself prevented proper drainage, and that possibly the kidney was also a cause of the temperature and pulse increasing, nephrectomy was decided upon. This was done on May 14th, the fifth day after the first operation. Her urine at the time was loaded with sediment; some oxalates, pus, and considerable albumin were found; specific gravity, 1010. The perpendicular incision was joined with an almost transverse one, the kidney hurriedly exposed, pedicle clamps applied, the kidney cut away and pedicle tied, removing the clamps; the cavity flushed with salt solution, and two sutures placed in the anterior end of the transverse wound, and a large gauze pack and drain used. Forty minutes' time was occupied in each operation with 100 cubic centimetres of ether in the first, and 150 cubic centimetres in the second operation. The kidney, upon macroscopical examination, was found congested, and throughout the calices a sandy deposit was observed, and twenty-one small stones, the largest being the size of a hemp-



F[7]. 1.—Full size photographs removed in Dr. Erdmann's case of pyelonephrolithotomy. The arrow, A., marks one of the facet articulations.

diagnosis of nephritic colic with perinephritic abscess was made, and owing to her condition immediate operation was suggested. This was accepted, and within two hours the first operation was performed. Upon examination under gas ether anæsthesia, the area of tumefaction and boggiess was made out to extend down into the left iliac fossa, and with it a distinct enlargement in the left hypogastric and lumbar regions could be palpated. Feeling the urgency of the case, and respecting her condition in an operative sense, not suspecting a condition of the kidney that would demand removal, we made the oblique incision usually made for nephrorrhaphy. Upon incising the transversalis fascia there was an escape of nearly eight ounces of turbid, brown, urinous smelling, purulent fluid. Upon further exploration by dissecting away the fatty capsule and exploring the dorsal surface of the kidney we exposed a rent in the pelvis of the kidney large enough to allow of the introduction of the index finger. Several small stones were removed, none larger than a hempseed. The cavity was sponged out and gauze packing and drain used. For twenty-four hours there was an

seed were found. Unfortunately the specimen was lost before a microscopical analysis was made. An accurate estimate of the amount of urine passed in the forty-eight hours following was not noted, but it was observed that a fair quantity was being passed involuntarily. On the third day after operation twenty-four ounces were obtained and several voidings involuntarily and with defecation. There was a gradual improvement in the patient until about the middle of her fourth week, when she had an attack of pain in the right side, vomiting, and collapse, and almost a perfect picture of the condition when first seen by me presented itself. This condition subsided under morphine and hyoscine hydrobromide, etc. The urine was cloudy but not purulent, with some blood. A diagnosis was made of calculus and possible pyonephrosis in the right kidney. From this time on, until her discharge on July 5th, her recovery was slow and complicated with one or two mild right-sided attacks of pain and vomiting. Urine at the time of her discharge relatively clear.

Some time in October of the same year, I saw her

at her home in a very severe attack of pain on the right side. The urine had been cloudy and a small calculus was found; left side somewhat sensitive. The x ray was suggested, with a view of detecting the size, position, and number of the calculi, so that if operative interference was necessary, the kidney or ureters could be approached with a degree of certainty. This was refused. I saw her again two weeks later with the same result. Finally she consented to an x ray picture being taken, which was done by Mr. Caldwell at the Briggs Laboratory with a return picture of an immense calculus in the kidney pelvic region extending into the kidney substance, and also several other smaller sized calculi in the kidney substance. Operation was advocated, although the gravity of the undertaking was explained to her. She refused, but after two more attacks, each more severe than the last, she asked for operative relief or death. The urinary report was November 14th, specific gravity 1028, acid, turbid amber, slight trace of albumin, hyalin casts, red and white cells, pus, kidney and bladder cells, uric acid crystals, streptococci.

She was operated upon on November 15th, and although the urine report showed the above condition, I advised giving gas and ether. The oblique incision for removal of the kidney was made so as to give ample room for free exposure and handling. Before exposure of the kidney it was found considerably enlarged, nodulated, deeply congested, and upon palpation calculus crepitation was evident, and a large calculus could be mapped out invading the hilum and extending into the substance proper. As the calculus was found in the pelvis of the kidney, it was deemed advisable to do a pyelonephrolithotomy, extricating the stone or stones through the pelvis and ureter. An incision was made in the pelvis and ureter in the axis of the ureter, a forceps passed up into the kidney substance with blades closed, then opened so as to dilate the kidney space occupied by the calculi. The large calculus was removed, then the finger was introduced and the smaller faceted ones removed. In the specimen you will see I have mounted three portions as one. These are glued together at the points of facet articulations.

One of the facet articulations can be seen in the photographs at the arrow A. The photographs are full size of the calculus.

In addition we found three small calculi and one fairly large one. The large stone when thoroughly dry weighed three drachms, while the four small ones weighed seven grains.

Bleeding was profuse but readily controlled by pinching the pedicle of the kidney between the fingers and thumb of my left hand. The kidney cavity was flushed out with salt solution, and sterile gauze packing was introduced. The kidney was then replaced and a pack of sterile gauze was made to surround the upper and lower poles and also the ventrad surface, using the lumbar region for counter pressure, and in addition a large compress pad was placed on the abdominal wall over the usual kidney site, and firm strapping employed to keep all in place and maintain firm compression of the kidney proper. The saturation of the dressings in the course of the first day satisfied us that urine was

being excreted in ample quantity. The patient reacted nicely and passed the first urine by catheter twelve hours after the operation, having been previously catheterized negatively twice in this period of time. She voluntarily voided two ounces at the end of the first eighteen hours. Her convalescence, while not smooth, was positive after the first day. She was discharged from the hospital December 18th, having been up and about for the ten days previous. All evidence of ureteral or hilum fistula had disappeared about the third week.

Her urine at present is clear, acid, specific gravity 1018. No pain has been observed since her discharge except on her left side in the region of the supply of the twelfth intercostal nerve.

The analysis of the calculus by Professor Mondel, of Carnegie Laboratory, showed it to be made up largely of calcium phosphate. There were traces of magnesium phosphate and calcium oxalate, with considerable uric acid.

BLEPHARITIS MARGINALIS.*

By DUDLEY S. REYNOLDS, A. M., M. D.,
LOUISVILLE, KY.

One of the commonest forms of blepharitis marginalis, seen in persons of every rank and station in life and of all ages, is that in which there is slight thickening of the borders of the lids. The anterior margins are dry and red, and the lash, on close inspection, is observed to be thin, while the cuticle between the hairs is covered with minute scales of desquamating epidermis. This condition seems aggravated by constipated bowels, by the loss of sleep, and by fatigue of any kind. For convenience I will designate this Class A. Cases of this kind are frequently observed to disappear almost entirely under correction of errors of refraction, of intestinal constipation, and of any form of malnutrition or debility; while, on the recurrence of any of these abnormal conditions or the use of the ametropic eyes without glasses, the local affection in the margin of the lids reappears. This is a condition that seems to be least susceptible to the action of any of the mercurial ointments. In fact, the fungus present in the hair follicles seems incapable of producing much thickening and excoriation until some hyperæmia is set up; then the blepharitis takes on active symptoms. In cases seemingly cured by correcting errors of refraction, etc., close inspection will disclose a small, sheath-like elevation of epidermis around each hair in the lash. I believe the fungus in the follicles in such cases may be entirely eradicated, and permanent recovery secured for many of them, by the periodical application of pure carbolic acid. I apply it with a needle, first preparing the acid by adding about ten minims of

* Read to the Western Ophthalmologic and Oto-Laryngologic Association, at Indianapolis, Ind., April 10, 1903.

alcohol to the drachm of crystallized acid, and agitating sufficiently to dissolve all crystals. This will usually remain in liquid form as long as it is kept in a well stopped vessel. Into this fluid, I dip the point of the needle, and, holding the lid firmly with the fingers of the other hand, I scrape off all the detachable scales between the lash, making the application as nearly direct and complete as possible to all the hair follicles of the margin of the lid. By repeatedly dipping the needle into the acid and scraping the skin, taking care that none shall be allowed to run over the free border, the application can be made so thorough and complete as to whiten all that portion of the skin containing the lash. This creates a little temporary smarting, which is not severe, and which lasts not more than two or three minutes. About the fifth day after each of these treatments a crust of epidermis exfoliates and should be removed, and a little yellow oxide of mercury ointment applied. The application of the carbolic acid should be repeated about once in ten days, in ordinary cases. In the course of about three months, it will be observed in most cases, especially in young persons, that a heavy and luxurious growth of lash has come on, and with it entire disappearance of all the manifestations of blepharitis. I have observed that most of these patients seem permanently cured, after a lapse of five or ten years.

As an illustration of the intractable nature of this disease, I invite attention to the following case:

Miss D., aged thirteen years, came to me August 22, 1899. The margins of the lids of both eyes were slightly thicker than normal. On close inspection it was observed that the anterior margins were covered with fine scales of desquamating epidermis. There were no signs of hair where the lash should be, in either of the upper lids, and but a few fine, short hairs along the margin of the lower lids, and these were scattered at long intervals. She had for two years been under the constant treatment of eminent specialists, and had been told by one of my ablest confrères that she would never again have any lashes. The family were anxious, and I felt the necessity of being cautious about making a prognosis. I asked for two weeks' time in which to form an opinion as to the probability of a regrowth of lash. I applied the phenol in the manner described, to the right upper and lower lids. She was unwilling to have the application made to the other eye at this time, so we had to wait; meantime using the yellow oxide of mercury ointment to the left eye, with friction, once every day. August 25th, the crusts exfoliated from the lid of the right eye, and the yellow oxide of mercury was applied, with friction, with the edge of a Daviel spoon. At the end of a week from the date of the first treatment, a magnifying glass disclosed evidences of the return of a few lashes, and I made an encouraging prognosis as to the right eye. The

left, which showed no signs of improvement, was then subjected to similar treatment.

During the fall, I was permitted to apply one more treatment of this kind to each eye, and before Christmas she had a good growth of rather heavy lashes, with almost total disappearance of the itching of the lids, and roughness of cuticle, which had greatly annoyed her for months before she came to me.

In the spring of 1900 I did not see her. About the first of June the lash suddenly fell out. She returned, and at intervals during the summer of 1900 she received treatment with the phenol, and soon enjoyed a luxurious growth of lash, which was the envy of all the girls in her school.

In September, 1901, it was thought that the upper lash looked thin, so I applied the phenol to both eyes. The lash became more luxuriant, and no further trouble came, until September, 1902, when, the patient having gone to Cincinnati to live, wrote me that her lashes had again fallen out. I referred her to Dr. Derrick T. Vail, and do not know how she is since.

Class B.—The cases which present an excoriated, glazed, red, rounded appearance of the tarsal margin, with no sign of lash, are seldom seen with both eyes affected to the same degree. It often happens that one eye may be placed in Class A, while the other presents an aggravated condition, with a tendency to fissure at the external canthus. Constitutional disturbances and errors of refraction are alike provocative of aggravated symptoms in these cases. I have never observed much relief from local treatment with ointments; and, for that matter, nothing approximating curative results from any sort of treatment, excepting the phenol, applied as described in Class A. I have frequently observed, where the lid is very greatly thickened, the margin rounded off, and of a bright red, glazed appearance, absolutely free from any sign of lash, that after two or three applications of the phenol, at intervals of ten days, great reduction in the thickening of the lid is secured, and a fair growth of lash begins to appear; and, by the continued prosecution of this plan of treatment, with constitutional correctives, absolutely complete recovery occurs in many persons under forty years of age. It is especially efficacious in children, who are always averse to systematic rules for applying ointments.

Class C.—Another class of cases is that in which an abundant accumulation of inspissated sebum mats the lashes together in groups. When the crust is removed, it is usual for most of the hairs of the lash to come away with it, disclosing an ulcerated condition of the lid, which destroys the hair follicles. This condition is sometimes associated with great thickening of the margin of the lid, and dilated veins are often seen coursing over the surface of the lid, just under the skin. On everting the lid,

a relaxed and flabby condition of the retrotarsal conjunctiva appears. There is profuse lacrymation, and sometimes photophobia. The crust is best removed, after an application of simple petrolatum, with a cotton mop, made by rolling a bit of cotton on the end of a probe, and dipping it into the ointment, and smearing the lids in contact with the upper boundary of the lash. After a little rubbing with this mop, the crust becomes loosened at the upper edge, and may be lifted off with the dressing forceps, or turned out with the end of a small probe. The ulcer, which is sometimes deep and of conical form, should now be cleansed by pressing into it a clean cotton mop; and, after removing all the moisture, a small portion of phenol should be applied to the bottom of the ulcer. Keeping the lid separated, to prevent any flow of tears carrying the phenol between the lids, it will soon be observed that the whitening produced by the phenol has disappeared by becoming incorporated with the tissues. The patient may now have a piece of gauze, smeared with petrolatum, laid over the closed lids, and a bit of cotton wool on the outside of the gauze, secured with a few strips of plaster, laid from the cheek to the forehead. This dressing should not be disturbed for twenty-four hours, when the treatment may be repeated, if necessary, as at first, excepting that it will be observed no crust has reappeared in the lash, and therefore, no preliminary treatment is required. The ulcer, however, should be carefully dried and again treated to an application of the phenol. In some cases a single treatment will be found sufficient to cure the ulceration. By this plan of treatment, some of the worst cases may be entirely cured within ten days. Always bear in mind, however, the necessity for close attention to constitutional correctives.

There are many cases of ulcerative blepharitis marginalis that are undoubtedly due to inherited syphilis, and no plan of local treatment, unassociated with constitutional measures, will be found availing. The syrup of hydriodic acid is a priceless remedy in such cases, and may be given with the food to children of all ages, without risk of disturbing the gastrointestinal system.

It should not be forgotten that most of the ulcers in this class of cases are broken down gummatous formations. They are sometimes seen in the ciliary margin of the lids, and sometimes in the meibomian margin. In this class of cases, the ulcer should be thoroughly dried, filled with a portion of yellow oxide of mercury powder or a crystal of the red oxide.

There are cases, however, in which a minute pustule occupies a single hair follicle or several contiguous follicles, but these cases are so distinct in

appearance and so easily recognized by the unaided eye, as to make the diagnosis certain. It is often seen that a single hair is surrounded by a yellowish white opaque substance, which, when the hair is pulled out, is found adhering to it. Fortunately, this infectious folliculitis of the ciliary margin of the eyelid is not very common, as it invariably destroys the hair bulb in each infected follicle. Bathing the eye in a solution of sodium chloride, fifteen grains to the ounce of water, quickly terminates this infection.

There are many complicated forms of ulcerated blepharitis marginalis, each of which requires distinct modifications of local treatment, and so I do not wish to be understood as asserting that the local application of phenol is to be indiscriminately made. It is certain that it could not suffice in cases of tarsoadenitis, or in those cases where the cicatricial contractions from previous ulceration may have obliterated the hair follicles. It would be useless in malposition of the puncta lacrymalia, nor would it be found sufficient in cases complicated with phlyctenular disease.

In the cases in which alopecia is present without ulceration or apparent desquamating conditions, or such as may be due to parasitic, or microphytic causes, in persons who have neither syphilis nor leprosy, the application of phenol often produces brilliant results. I have never seen hair restored in palpebral alopecia in a subject of general alopecia. In syphilitic subjects, where the hair has fallen from the brow, eyelids, and head, all efforts at restoring it to the lids by local applications have failed in my hands, nor have I seen the lash reappear in syphilitic cases under any form of constitutional treatment.

Not attempting to exhaust the subject, I have endeavored to portray a few well known conditions wherein the modifications of local treatment I have suggested seem more advantageous than the methods hitherto employed or commended by our standard authors.



The Dietetics of the Oyster.—The *Lancet* for January 3rd, as the result of an investigation of the English "native" oyster, accompanied by analyses of the organic and mineral constituents respectively, arrives at the conclusion that the oyster contains all kinds of nutrient matter, which exist therein in a very assimilable form. The oyster dissolves most readily in water, and next in diluted gin, thus justifying the predilection many oyster eaters, in England at any rate, have for this beverage, as an accompaniment to the bivalve. The cooking of oysters render them tough and not easily digestible.

A CONSIDERATION OF THE OPERATIVE METHODS FOR THE CURE OF ASTIGMATISM.

By A. E. DAVIS, M. D.,

In the issue of the *New York Medical Journal* for February 7, 1903, is the report of a case of Astigmatism Cured by Operation, which, it seems to me, calls for some words of consideration, and perhaps even of warning. The case was that of a young woman, aged twenty-seven years, who had suffered for some years with headaches and fatigue of the eyes and had failed to get relief, although she had consulted a number of oculists, before she came under the care of Dr. George J. Bull. Examination showed the patient to have corneal astigmatism against the rule (indirect) 0.8 D. 80° right; and 0.7 D. 90° left. The patient accepted right — D. O — 50 D. cyl. axis 75°, bringing vision of $\frac{6}{18}$ to $\frac{6}{5}$; accepted left — 1.75 D. cyl. axis 90°, bringing vision $\frac{6}{18}$ to $\frac{6}{5}$. There was a marked insufficiency of the internal recti muscles of 6° to 8°.

Complete tenotomy of the left external muscle relieved the muscular insufficiency, and incidentally (and I say incidentally advisedly, as *primarily* the operation was performed to relieve the muscular insufficiency) "cured" the astigmatism in the left eye. The patient was now able to see $\frac{6}{5}$ vision left eye. With the correcting glasses the vision in left eye was made worse. It seems, therefore, in this instance fortunately as it happened, that the astigmatism of 1.75 D. was relieved by a tenotomy of a rectus muscle. Now, tenotomy of the recti muscles for the relief of astigmatism is certainly a radical procedure. One would be led to believe from the title of the above article referred to, that the tenotomy, *primarily*, was for the cure of the astigmatism, when, as a matter of fact, the relief of the astigmatism was only incidental. The author says the operation should be undertaken only in exceptional cases, with which we heartily agree; in fact, the present writer would say that it should never be undertaken as a primary operation. In conclusion the author observes: "The importance of this case depends, not upon the cure of the astigmatism, but upon the light thrown upon other questions. If a tenotomy of one of the straight muscles of the eye can have the effect observed in this case, it is obvious that the tension of the external muscles has an important bearing on intraocular tension. It has often been remarked, though the coincidence has never been explained, that inverse astigmatism, sometimes progressive, is singularly common in glaucoma. I venture to suggest that the cause of this curious coincidence may be found in the posi-

tion and relative tension of the ocular muscles." Furthermore, the author purposes to study his glaucoma cases to determine whether we cannot give relief to that condition by tenotomy.

In comparison with this case of Dr. Bull's may be placed one reported by the late Dr. H. D. Noyes, in the *Transactions of the American Ophthalmological Society*, 1874, pages 128 to 131, entitled, Astigmatism Produced by Tenotomy of the Recti Muscles.

This patient was a young woman also, aged eighteen years, with myopic astigmatism against the rule (indirect) in the right eye, as in Dr. Bull's case, and with the rule in the left eye. Her chief complaint was on account of double vision for distant objects. There was insufficiency of the left external rectus muscle (paresis) which took 3° prism, base out, to correct. The insufficiency was of the external rather than the internal, recti muscles, as was also the condition in Dr. Bull's case. When first examined, no astigmatism was found, but three months later the patient accepted — 2 D. O — .75 cyl. 65° = $\frac{20}{20}$ right; and — 2 D. O — .75 cyl. 10° = $\frac{20}{20}$ left. Six months later it took 8° prism, base out, to correct paresis of the left external rectus muscle. Dr. Noyes performed a tenotomy of the left internal rectus muscle without success, and three weeks later he divided each internal rectus with resulting single binocular vision, and with complete comfort to the patient for two years. Shortly afterwards, in 1871, the patient went abroad, and had the left internal rectus muscle cut again, and came back with cross-diplopia requiring 6° prism, base in, to correct for the near point. One year later, in 1872, the patient accepted the following glasses: — 2.50 D. O — 1.12 cyl. 10° = $\frac{20}{20}$ right, — 1.12 D. O — 1.62 cyl. 20° = $\frac{20}{20}$ left; and in 1874 the patient accepted the following glasses:

— 2.50 D. O — 2 cyl. 180° = $\frac{20}{20}$ right;
— 1.12 D. O — 3.25 cyl. 175° = $\frac{20}{20}$ left.

The author concludes as follows: "The case in my judgment throws light on the ætiology of astigmatism."

Further, Dr. Noyes called attention to the very common association found to exist between myopic astigmatism and muscular insufficiency, and asks the question: "Although astigmatism is clearly regarded as a congenital error of the eye, ought we not to set down a certain number of cases as the result of defective muscular equilibrium?"

The results obtained, as well as the conclusions drawn, from the above two cases are of much interest. In each instance the operation was performed *primarily*, to relieve an insufficiency of the ocular muscles. In one case an astigmatism was

"cured," in the other an astigmatism was "produced." Both observers were of the opinion that the external recti muscles of the eye exert pressure on the eyeball, which observation, I believe, will be concurred in by most oculists. It has been the sad experience of most of us to see vitreous squeezed out of an eye during a cataract operation, by traction of the straight muscles on the eyeball, the lids being held entirely free from the eye. Fortunately this is a rare experience, but a very impressive one. Furthermore, I have observed and reported¹ one case of corneal astigmatism with the rule, in the case of a young man, who could increase it to the extent of $1\frac{1}{2}$ D. in the right eye, and to 1 D. in the left. The ophthalmometer showed astigmatism .50 D. in each eye, with the rule $90^\circ + 180^\circ$ —. By voluntary effort, and when the lids were held away from the eye, the patient could increase the astigmatism in the right eye to 2 D. and in the left eye to $1\frac{1}{2}$ D. Under the influence of a strong cycloplegic he could still increase the astigmatism in the right eye to $1\frac{1}{2}$ D. and in the left eye to 1 D. Without question, this increase in corneal astigmatism as demonstrated by the use of the ophthalmometer, was due to the action of the straight muscles.

In this same paper² I reported a case in which a cataract operation had been successfully done, where the patient could voluntarily change the astigmatism to the extent of .50 D., even after a cycloplegic was instilled and the lids held from the eyeball.

But tenotomy of the recti muscles is not the only operation that has been suggested as a cure of astigmatism, some others, such as paracentesis of the cornea, section of the cornea, and galvanocauterization of it, have all been tried with varying results. Dr. Borsch, in his thesis for the degree of Doctor of Medicine, Paris, 1900, relates the results of his study of astigmatism while chief of clinic of Dr. de Wecker. Dr. Borsch finds in the inconvenience of glasses to correct the astigmatism the justification for advising means for removing the defect. He spoke of certain remote dangers to the eye from wearing glasses, such as are common to all defects of the eye requiring their use. The patient has to turn his head to see objects placed a little eccentrically to the line of vision. He cannot undertake certain professions. The glasses may break and injure the eye of the wearer. If he forgets his glasses his work is painful without them, etc. Diminution of the curvature of the cornea by paracentesis, as suggested by Bates, Faber, Schlötz, Pflüger, are mentioned as operative means. Pflüger's method is to remove part of the periphery of

the cornea parallel to the limbus in the region of the arcus senilis; also a simple incision of the cornea with a lance-shaped knife is suggested.

Lucciola says that he found the refraction augmented to a various degree after evacuation of the aqueous humor. But he thinks these cases infrequent, and that the diminution of the astigmatism by paracentesis, when the cornea is sound, is about 1 dioptré.

Dr. de Wecker has observed a diminution of astigmatism of 5 D. in a case of keratoconus in which he operated to ameliorate the astigmatism. He made repeated incisions in the meridian of greatest curvature, which he found to be from 75° to zero on the nasal side.

Chibret has reported eighty-five cases operated on by making a small upper flap combined with sphincterectomy. The author then alludes to the diminution of astigmatism caused by cataract operations, and to the fact that the diminution ceased to go on after six weeks.

After reporting cases of his own and observations made on animals, he records his conclusions. The incision in the cornea which will in some cases cure astigmatism, is made with a Graefe knife without opening the anterior chamber, and again by an incision which opens the chamber, and again with a galvanocautery, producing a cicatrix at the depth of the cornea.

For an astigmatism of less than 3 D. the author believes an incision with the knife to be sufficient; for one of more than 3 D., with the galvanocautery, making a deep cicatrix is necessary; parallel to the limbus and at each extremity of the meridian (Daws). In hypermetropic astigmatism, the incision should be made in the meridian of greatest refraction, to change hypermetropic astigmatism into simple hypermetropia; in myopic astigmatism in the same meridian to attempt to neutralize the astigmatism and produce emmetropia. In the operation for cataract where astigmatism exists, a corneal incision should be made with a view to curing the astigmatism. Most of the incisions (flap?) should be in the centre of the cornea (Bates). Eserine and pilocarpine should be used after the operation.

No one of these proposed operations for the cure of astigmatism (tenotomy of the recti muscles, paracentesis, section or cautery of the cornea) in my opinion is a justifiable procedure, except in the most extreme cases of astigmatism, as in keratoconus, where the condition of the patient cannot be rendered much worse whatever is undertaken. Tenotomy of the recti muscles *primarily* for the cure of astigmatism should never be undertaken. The hundreds, even thousands, of times it has been

¹ *Manhattan Eye and Ear Hospital Reports*, 1895.

² *Loc. cit.*

done in strabismus cases without any effect on the amount of the astigmatism usually present in such cases, shows the operation to be wholly unreliable in this respect. And that it would prove of benefit in extreme cases of astigmatism is still less probable. That tenotomy of the recti muscles may give relief in that grave disease, glaucoma, is yet to be tried; and until it is tried, it seems to me unscientific to theorize about it. I sincerely trust that it may prove to be of the benefit in these cases, which is hoped for from it. Of the doubtful feasibility of the other operations—paracentesis, section of the cornea, and galvanocauterization of the cornea—it is only necessary to cite a few cases of astigmatism following section of the cornea for the extraction of cataract, to show how uncertain we are as to the amount of the astigmatism produced in this way. Following the extraction of a cataract we frequently have astigmatism against the rule (indirect) of 6 to 8 D., and at times as high as 22 D. This large amount of astigmatism usually diminishes rapidly, and at the end of six weeks rarely amounts to more than 5 or 6 D. In one case I have seen 12 D. of astigmatism remain permanently, the patient accepting 11.50 D. cylinder with a $\div$ 4 D. sphere, and wearing the glasses with comfort. I have seen astigmatism of 4 to 6 D. (indirect) disappear entirely, and 3 D. astigmatism with the rule change to 2 D. against the rule. Again I have seen an astigmatism of 4.50 D. with the rule (direct) follow the extraction of a cataract, although it was only .50 D. (direct) astigmatism before the operation, the section being made above as usual.

We see how unsatisfactory, therefore, are the results obtained in this way. Usually, we have diminution of curvature in the meridian of the cornea at right angles to the section, but not always so. Furthermore, the amount of this diminution in curvature is of such variable quantity, that it renders the operation wholly unreliable. As observed earlier in this paper, only in extreme cases, as in keratoconus, where the patient cannot be made much worse, is operative procedure of any kind justifiable for the relief of astigmatism. As a practical every day measure it is not at all to be considered. All low or moderate degrees of astigmatism are easily corrected with glasses without risk or danger to the eyes; and even in the higher degrees, the discomfort of heavy glasses (a discomfort greatly lessened by Toris Cases) is much to be preferred to the dangers of an operation. Besides, corneal astigmatism in many cases is not of a constant character, but varies in amount and axis. It is an easy matter to change the glasses in such cases after a few years, but operative measures

would be a very serious thing, and would likely complicate matters, and easily destroy an eye.

Speaking from personal experience, I may say that the astigmatism in my right eye has changed from .50 D. to 1.75 D. in the last five years. And I have cases on my case-books where the corneal astigmatism has changed from .50 D. to 2 D. in the space of ten years' time. A word of warning is necessary, therefore, I think, to those contemplating the cure of astigmatism by operative measures. Surgical procedure can never be justifiable when glasses can be worn with any degree of comfort.

THE MANAGEMENT AND PROPHYLAXIS OF INTESTINAL DISEASES IN INFANTS DURING THE SUMMER.*

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When asked to take part in the evening programme I stated that my remarks must be in the nature of a review, a condensation of previous contributions on the subject. What I shall have to say will be the conclusion arrived at after an observation of somewhat over three thousand cases of summer diarrhoea which were treated to a conclusion of the illness. This number comprises private, hospital, and dispensary patients, covering a period of fifteen years. Of this number 853 were out-door patients at the Babies' Hospital.

As the disease is seen at its greatest severity and fatality among the tenement classes, these dispensary cases will be taken as a text. If I were asked what is the chief, the most important therapeutic feature that has been demonstrated, I would not mention drugs, baths, lavage, or change of climate. More important than all these measures in the management of summer diarrhoea is a *change in the diet*, that change being a substitution of a carbohydrate, in the nature of a cereal gruel, for the milk food.

We not only order the milk to be discontinued at once when a sick child is brought to us, but we instruct our mothers in advance to discontinue the milk at the first sign of the illness. They are told (and pamphlets are given them with instructions as to the summer care of children) to stop milk, give a dose of castor oil, and a barley water diet until they can bring the child to us. Time

* Read before the Medical Society of the County of New York, April 27, 1903.

and time again, as a result of these instructions, tenement babies have been brought to us well on the road to recovery. Dispensary patients, hospital patients, and private patients are all under this standing order.

Our high class milks furnish as fertile a culture field in an affected gut as grocery milk, and, whether pasteurized or sterilized, we have been obliged to discontinue their use. Simple dilution, we have learned, does not answer any better. In order to get the best results, milk must be removed entirely from the dietary. The milk must be removed early, because abundant autopsy experience, which we enjoyed early in our career, while feeding diarrhoea cases on milk, showed us that the earliest fatal cases, those dying from the intensity of the toxæmia, show practically no lesions. Lesions were found in the advanced cases in which the bacteria and their products had had opportunity to produce their effects on the intestinal walls.

If the milk is continued until gross lesions develop, we have a much more difficult case to handle. We must not allow this to happen, and this we prevent by removing a putrefactive culture field and substituting a carbohydrate, a fermentative medium. As necessary as the earliest possible removal of the milk is the necessity of not resuming it too soon.

Some writers tell us to resume milk after twenty-four hours, others after three or four days. There can be no time allowance. Each case must be treated individually. The milk must not be resumed until the temperature is normal, and until the stools are thick and but two or three in twenty-four hours, and then in very small amounts, beginning with one or two drachms in each feeding and watching the effect on the temperature and the stools. In some cases an abstinence from milk for a few days is all that is required; usually after a sharp attack a week or two weeks must elapse.

Every year we have half a dozen or more children who cannot return to a milk diet until cold weather arrives. I have a child under my care at the present time who thrived on milk until last summer when he had a very severe milk poisoning. After having repeated trials the child is to this day made ill by one teaspoonful of milk.

As a milk substitute we have used egg albumin water in many cases, and have learned that it is not a desirable sick food. It is but little better than milk. Children fed with it are slow to recover and run a higher temperature than the carbohydrate cases. We have used beef juice and animal broths and have learned to use them with

extreme care, as they often act as an active laxative and keep up the discharges.

We have used the wine peptone preparations and have learned that they also may increase peristalsis and are often undesirable. We have used the beef preparations on the market and have learned that, with beef juice and broths, they must be used in very small amounts on account of their laxative properties. We employ them simply as flavoring material.

We have used the carbohydrates extensively, usually in the form of barley or rice, gruel, plain or dextrinized, and have learned that, regardless of the age of the child, they are excellent. They furnish us, when flavored with salt or sugar or the above mentioned beef products, the best obtainable milk substitute. They are given in the same amount as the child was accustomed to receive in ounces of milk in health, but at more frequent intervals.

Half an ounce of the cereal to a pint of water is the usual strength. Raw starch, such as rice or pearl barley, should be cooked for three hours. The flavoring used should be alternated, in order to change the taste, so that the child will not tire of the substitute.

Exclusive cereal gruel feeding in summer diarrhoea, as practised and taught and advocated in the medical press by the writer from time to time during the past ten years, is becoming the recognized dietetic management of the intestinal diseases of summer, as is made evident by the contributions on the subject which have appeared during the past year or two; though a few well known pædiatrists still adhere to a modified or reduced milk diet in the dysenteric diseases of children.

Knowing well these pronounced views as to the desirability of maintaining a reduced milk diet in these cases, I was not a little interested in an article by Hastings, which appeared in the *Boston Medical and Surgical Journal* of January 15, 1903, entitled, A Synopsis of Ten Weeks' Service on the Boston Floating Hospital. Referring to the dietetic management of the cases in question he states:

"Usually, babies which come to us with gastrointestinal trouble were started on rice water. This method of treatment started on one service, was soon adopted by other visiting physicians. It was proved that a baby could be fed for two weeks on nothing but rice water and only lose one-half ounce in weight. The solution was made from flaked rice, such as may be bought at any grocery store, and according to the directions printed on the package, the product was therefore partially dextrinized since this rice had been cooked." Further on in the article, still considering diet, the doc-

tor continues that in the dietetic treatment he had accepted the dictum to cut off milk. "Rice water or barley water are better than our mixture A, each of which is about one of milk to five or six of water and our experimental approval is unqualifiedly given to rice water. There is no practical harm and at least a theoretical advantage in the use of dextrin." Hastings's opinions are based upon 690 cases.

With a milk diet continued, we have demonstrated that drugs are of little value. On a cereal diet we have proved that there are a few drugs that possess considerable worth.

Calomel in small, frequent, repeated doses is given, if there is a tendency to vomit. Castor oil is given by preference on account of its prompt washing out effect. Two teaspoonfuls should always be given. Salol, resorcin, eudoxine, tannigen, and tannalbin have been used in many cases and found wanting or proved objectionable on account of disturbing the stomach. A drug which we have found of considerable value is bismuth subnitrate. It must be given in large doses, ten to twenty grains every hour. In order to be of service, it must be converted into bismuth sulphide in the intestines, forming black stools. When this does not occur, it will be of no service, and sulphur in one grain doses must be given with it.

Opium is used when there is tenesmus and straining, which usually means small frequent stools. It is also of use when there are many large watery stools. In cases in which there are but five or six stools in twenty-four hours, opium is not given, as this number is necessary to maintain a proper intestinal drainage. The injudicious use of opium by locking up the intestines will do much toward bringing about a fatal issue. The worst possible treatment of summer diarrhoea is milk in the food and opium in the prescription.

When opium is indicated Dover's powder is preferred, in $\frac{1}{4}$ to $\frac{1}{2}$ grain doses at two hours' interval for a child from six to eighteen months of age. In its administration it is never combined with other drugs, for the reason that instructions are always given to discontinue or diminish its use as soon as the number of stools lessens, which may be no indication for discontinuing the other medication, for example, the bismuth.

Irrigation of the colon is an excellent measure which has been overdone. In the very active cases, those having from ten to fifteen passages daily, the bowels are effectively washed out and do not require interference. Irrigation is indicated in cases with high temperature and an inactive bowel; in other words, the cases to be irrigated are those in which there is something to be washed out. A small adult rectal tube should be used and this

should be felt in the descending colon, otherwise, we do not know but that the tube has *doubled on itself*, with the water escaping a few inches beyond the sphincter.

After having used solutions of tannic acid, silver nitrate, boric acid, and normal salt in hundreds of cases, I am convinced that the normal salt solution possesses all the advantages of the other drugs referred to. It is simpler and much safer. It is rarely necessary to use more than two washings daily, usually one answers. I have used the normal salt solution as cold as 70° F. in the high fever cases, and as hot as 110° F. in those with low temperature and extreme prostration.

The salt solution is particularly useful in the cases in which there has been rapid loss of flesh on account of the excessive loss of fluid. In this, after the washing, I endeavor to have half a pint or more of water retained. Repeatedly I have known a child to retain ten to twelve ounces. The water will be held best when it is placed well up in the descending colon, the child resting on its right side with the buttocks slightly elevated.

Other than above, our cases are treated symptomatically; when the heart needs assistance, strychnine and strophanthus have served us well. Alcohol I rarely give in gastrointestinal disorders.

For the fever and restlessness, sponging with alcohol and water, equal parts at 80° F. is ordinarily employed. Packs are rarely used, for the reason that children with severe diarrhoea bear packs badly. In fact, packs are less well borne in diarrhoea than in any other diseases of childhood.

In the very acute severe cases of gastrointestinal infection with frequent vomiting, many large watery stools, and marked prostration, small doses of morphine hypodermically, $\frac{1}{30}$ to $\frac{1}{60}$ of a grain, guarded by atropine, have proved useful in reducing shock.

The serum treatment of the Shiga bacillus cases will doubtless be given a thorough trial during the coming summer. The cases which have been treated in this way by the writer are too few to establish an opinion as to its merits.

We have proved conclusively that diet, stomach washing, and gavage, or forced feeding, are the only measures of value in vomiting. The use of drugs is a loss of time.

PROPHYLAXIS.

The best prophylactic agent against summer diarrhoea is a well baby properly fed all the year round. A child who has repeated attacks of intestinal indigestion during the winter and spring is very apt to have a great deal of trouble the following summer.

During the first year of my service at the New

York Infant Asylum, Mt. Vernon, I was assistant to the late Dr. Clarence E. Kimball. While making rounds one morning in early June, the doctor pointed out apparently well children who, he remarked, would probably succumb to intestinal disease during the coming summer, and that they would be the earliest cases to go down before the first hot wave. His opinion was based upon a knowledge of repeated attacks of digestive disturbances caused, in many instances, by the mother giving unsuitable food to the child, which she had stolen from her own table. As the summer advanced, the accuracy of the observation was startling and made an impression which I have never forgotten. At that time sterilized milk was the diet for children ill with diarrhœa, and helped not a little in making the doctor a true prophet.

Three thousand nine hundred and eighty-eight children under five years of age died with gastrointestinal diseases in Greater New York between June 1st and October 4th of last year, which, it will be remembered, was a cool summer, as favorable a summer as we could hope to have.

The deaths during the corresponding period in 1901 were 4,760, so that the average loss of life of children under five years of age, from diarrhœa cases, in Greater New York for the four months mentioned, would range between 4,500 and 5,000 annually.

The statistics of all cities of considerable size show about the same death rate.

At the out-patient service at the Babies' Hospital, among 853 cases there were thirty deaths, a mortality of 3.5 per cent.; this among exactly the class of patients who furnished the large city mortality. At the New York Infant Asylum during the past summer, there were 278 children under observation during the period from June 1st to October 4th with 92 gastrointestinal attacks and two deaths (see *New York Medical Journal*, November 22, 1902).

That such results are possible among children of the tenement is borne out by Dr. William H. Park in some very interesting observations made during the past summer. In June of last year, fifty tenement children, ranging from three to nine months in age, were selected by a physician for the experiment. These children were fed on the Strauss milk. They were visited two or three times a week by a physician whose duty it was to look after them. The mothers were carefully instructed as to the food and feeding apparatus. With the first sign of illness the physician in charge was to be notified at once when suitable treatment was instituted. Among these fifty tenement children, all under one year of age and selected at random, there was not one

death. Other groups of children fed on grocery milk showed results that were vastly different.

We have proved that the large mortality from summer diarrhœa is preventable. Seventy-five per cent. of these children die needlessly. Hospitals and homes can help a little, but are very inadequate. Floating summer hospitals are of considerable service, but comparatively few can have these benefits. They are but temporary, at best, and with them the mortality remains high; less than it formerly was, but there is room for much improvement.

The lives of these children will be saved when each child is treated in its own home, as becomes a human being of its size and age, and not until then. The individual infant requires really very little; *decent food, decent dwelling, decent care* solves the problem.

First, cow's milk. It is possible, during the months of July and August, for a mother with eight cents in her hand to exchange it for a quart of safe milk. The milk committee of this society will not certify to its safety. We do not give it to our own children. Safe milk is not to be had at that figure. Many can pay but five or six cents; some can pay nothing at all. *Safe milk must be supplied*, free or at a possible price to each.

Second. Indifferent milk purchased at eight cents a bottle, to be kept from getting absolutely poisonous, requires ice. Ice many cannot afford. *Ice must be furnished*.

Third, and equally important. The average tenement mothers, and many in better circumstances, do not realize the care required in keeping the feeding apparatus clean. They do not know the dangers of exposed soiled napkins, they are ignorant as regards bathing, fresh air, and most of the details of infant management. Mothers must be taught. Private individuals and semiprivate institutions have demonstrated that the requirements mentioned under the three headings are practical. If Mr. Nathan Strauss can furnish safe milk to several thousands of children, the municipality can supply hundreds of thousands.

The *New York Herald* has done most commendable work in supplying ice to the poor.

The workers in the College Settlements bear out our experience that the mothers are teachable and anxious to learn.

The credit of the low mortality at the Babies' Hospital is due more to the mother than to ourselves. We direct and teach; they execute, and they do it well and in the face of tremendous obstacles. The assertion that these people are thoughtless, indifferent, unteachable, and generally hopeless, is made by those only who know nothing of which they speak.

Fifty tenement mothers under Dr. Park's physician, properly fed and cared for fifty babies, which were all alive on October 1st.

The remedy rests with the State or municipality. The offspring of the poor are wards of the State. It is the duty of the municipality to make a safe food possible to thousands of infants whose parents are able to pay a moderate price.

A retail dealer sells contaminated milk; now and then he is caught and fined \$10 or more. The wholesaler who supplies him deducts the amount of the fine from the next invoice and the sale of diluted contaminated milk is continued as before. Violations of the law in this respect will only be stopped when imprisonment is made the only penalty.

How ridiculous for men in exalted positions in church and State to become hysterical over race suicide, reduced birth rate, etc., when the State and municipality allow thousands of children to die every year for want of pure food, from the want of courage to exercise authority or show sufficient interest to supply life saving methods which private individuals have proved possible.

In order to lower the death rate from summer diarrhoea in Greater New York, *greater power, more money* must be given to the health department, which does most excellent work with its present means. Greater New York must go into the milk and ice business. There must be milk laboratories or stations; one for a certain number of the poor population where pasteurized milk and cereal gruels can be obtained free, or at a small cost, to those who can pay.

There must be an ice station managed under the same requirements. There should be a district visiting physician and a district visiting nurse, the size of the district depending on the population; the milk and ice to be supplied as indicated on the order of the physician or nurse. The size of the districts should allow the physician and nurse to see their patients at least three times a week.

The duty of the physician would be to prescribe suitable food, to instruct the mothers what to do on the first sign of gastrointestinal trouble, and to care for the patient when ill if required. The dangers of the slightest gastrointestinal disorder in summer should be made plain; at the repeated visits changes as required should be made in the feeding.

It would be the duty of the nurse, not only to tell, but to show the mother how to do the various offices, by doing them before her, as is done in the college settlement work; how to clean a nursing bottle and nipple, how to bathe and air the baby. She should instruct the mother to wash her hands with soap and hot water after changing the napkin, and to place

the napkin out of the way of flies in one of the covered tubs in water. At succeeding visits, oversights on the part of the mother can be seen to.

In conclusion, I repeat that it has been proved that the deaths of from four to five thousand children that occur every summer in Greater New York are preventable.

RENAL DECAPSULATION FOR PUERPERAL ECLAMPSIA.*

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The purpose of this communication is to present renal decapsulation as a further resource, additional to those already at our command, in the treatment of puerperal eclampsia of renal origin. The renal origin of the eclampsia is insisted upon, as renal decapsulation is manifestly out of place in the absence of evidences of involvement of the kidneys. A discussion of the ætiology, symptoms, and treatment other than by renal decapsulation, of puerperal eclampsia is beyond the scope of the present paper.

Renal decapsulation was first proposed and performed by the writer (1, 2, 3) for the cure of chronic Bright's disease. The encouraging results obtained (2, 4) led to a tentative extension of the operation to other diseased conditions of the kidneys, such as acute hæmorrhagic nephritis, acute pyelonephritis with miliary abscesses, and polycystic renal degeneration (5). It needed but the occasion to suggest the application of renal decapsulation to the treatment of puerperal eclampsia of renal origin.

The occasion offered in a case of puerperal eclampsia in the management of which I was asked by my friend, Dr. James R. Wood, to cooperate.

CASE.—The patient, a primipara, aged twenty-three years, married in August, 1901. Her last menstruation ended on June 22, 1902. A severe attack of typhoid fever confined her to bed during the entire month of October, 1902. During the following two months she appeared to be as well as could be expected. In January, 1903, slight œdema of the lower extremities and albuminuria were noted. On February 11th, the face became puffy, the patient manifested pronounced uræmic symptoms, and the urine on boiling became solid with albumin. The percentage of albumin proved beyond the capacity of the Esbach albuminometer to determine. Innumerable small hyaline and granular casts, with a few epithelial, composite, and waxy casts, were found on microscopical examination of the urine.

During the following two days the uræmic manifestations, headache, nausea, vomiting, mental confusion, drowsiness and mild coma became gradually more pronounced, in spite of various measures of treatment carried out by Dr. Wood. The first con-

* Read before the American Gynecological Society, Washington, D. C., May 13, 1903.

vulsion occurred very suddenly on Friday, February 13th, at 10.30 p. m. It was of severe character and protracted duration, but was finally controlled by chloroform by a hastily summoned neighboring practitioner. A second convulsion occurred at 3.20 a. m., and a third at 7.30 a. m. of the 14th; both were again controlled by chloroform.

I saw the patient for the first time with Dr. Wood at her home on February 14th, at 10.30 a. m. She was in a drowsy and semicomatose condition, complaining, at more conscious moments, chiefly of headache and nausea. There was moderate œdema of the face and lower extremities, the temperature was normal, but the pulse, though not increased in frequency, was full and hard, and respiration was perceptibly quickened. The fœtus was alive, as denoted by heart sounds and movements. The cervix was long, hard, and firmly closed; there were no indications of beginning labor. In the interests of mother and child the induction of premature labor was decided upon, conditionally on the advent of a further convulsion.

A fourth severe convulsion occurred at noon of February 14th, and at 3 p. m., the child, being still alive, although the heart sounds were perceptibly feebler than in the morning, accouchement forcé was begun. The patient was placed upon the table, but immediately after coming under the influence of chloroform a fifth severe convulsion, lasting fifteen minutes, occurred. The long, rigid and well closed cervix was incised on either side to its full length, the membranes rupturing during the process. The forceps was applied to the head of the child, which presented in right occipitoposterior position, and delivery of fœtus and placenta was completed in the course of a little over an hour. The uterus was at once lightly packed with gauze to secure contraction and guard against hæmorrhage. The child, a boy, was born alive, but breathed only a few times after delivery and could not be revived. Hæmorrhage was insignificant, although the incisions of the cervix tore rather deeply into the substance of the uterine body, and the patient was returned to bed in good condition.

On the following day, Sunday, February 15th, no further convulsion having occurred since forced delivery, although the patient still continued drowsy and semicomatose, the two cervical incisions were closed by interrupted sutures of chromic catgut, nine sutures being required on each side. A small laceration of the vagina near its outlet was also repaired.

On Monday, February 16th, at 2.30 p. m., forty-six hours after delivery, the sixth convulsion occurred. This was followed at 5 p. m., 5.30 p. m., and 10.30 p. m., by four further severe convulsions, chloroform being each time required for control. The eleventh and last severe convulsion took place on the morning of Tuesday, February 17th, at nine o'clock. The urine, which in great part was voided unconsciously, continued laden with albumin and casts, although to a slightly less degree than before delivery, and the patient between the convulsions was permanently in a semicomatose condition.

At this stage of the case, after consultation with Dr. Wood, and in view of the failure of all other means to prevent recurrence of the convulsions,

renal decapsulation was proposed for the purpose of obtaining control of the uræmia. The patient being semiconscious and not in condition to reach a decision for herself, the matter in all its aspects and bearings, including its novelty and untried character, was laid before the husband, a man of far greater than average intelligence, who thereupon requested that the operation be performed.

On February 17, 1902, exactly seventy-two hours after delivery, the patient was for the third time placed upon the operating table. Chloroform was administered by Dr. Wood, and, with the assistance of Dr. W. G. Vincent, I performed decapsulation of both kidneys in exactly twenty-three minutes, counting from the first incision to completed closure by suture of both wounds. The kidneys were found in a condition of acute or subacute inflammation, slightly enlarged, turbid from cloudy swelling, fatty and slightly soft to sight and touch. There was not the slightest indication of a tight fit, let alone tension, of the capsule proper, which was easily separated from the entire surface of each kidney, cut away close to the renal pelvis, and removed *in toto*.

There was no further convulsion after operation and all the graver symptoms of uræmia rapidly disappeared, so that two days later the patient, although weak, was in her normal mental condition. Recovery from that time on proceeded much as in a normal puerperium. The wound over each kidney, as well as the cervical and vaginal wounds, healed by primary union. The patient was kept in bed for three weeks as is my custom after the performance of renal decapsulation. Since that time she has been up and about and enjoying as good health as ever.

Chemical and microscopical examinations of the urine, made daily for two weeks after operation, showed rapid and progressive improvement in the condition of the kidneys. On February 28th, eleven days after operation, fairly frequent hyaline and granular, with occasional epitheliated and waxy casts, and one fortieth of 1 per cent. of albumin were noted. A month later a faint trace of albumin and an occasional hyaline cast represented the only abnormalities in the urine. At the present writing, eleven weeks after renal decapsulation, the urine is very nearly normal and the patient otherwise in the enjoyment of perfect health.

The history of the case may be epitomized as follows: Primipara, aged twenty-three. Typhoid fever during the fourth month of pregnancy. Symptoms of nephritis first noted during the seventh month. Uræmia and eclamptic seizures near the end of eighth month. Five severe convulsions within sixteen hours, followed by forced delivery during fifth convulsion. Freedom from convulsions for forty-six hours after delivery. Then return of convulsions, six severe convulsions, not counting minor manifestations, occurring in eighteen hours. Decapsulation of both kidneys. No further convulsions, and rapid restoration of complete health.

The case narrated is believed to represent the first

instance of operation upon the kidneys undertaken with a view to the cure of puerperal eclampsia. The idea of treating puerperal eclampsia of renal origin by decapsulation of the kidneys is the logical outcome of the success attending renal decapsulation, at the hands of the writer, in chronic Bright's disease and other conditions of the kidney, as already alluded to. A further idea underlying the adoption of the treatment described in the present case, is based upon the acknowledged efficacy of phlebotomy in the control of uræmic seizures, whether occurring in or out of the puerperium. If blood letting is good in itself, why should not the abstraction of blood directly from the kidneys, which necessarily accompanies renal decapsulation, prove still more efficacious?

Renal decapsulation was performed in our case for convulsions beginning sixteen hours before delivery and persisting three days after the completion of labor. It is admitted that our patient *might* have recovered without renal decapsulation, but the indications, deepening uræmia and increasing violence of the convulsions, certainly did not point that way.

The practical deduction from the happy result obtained is that we possess in renal decapsulation an additional potent resource in the treatment of puerperal eclampsia of renal origin. Personally, I should not hesitate to apply it again in a similar instance. I would even go further and propose a trial of renal decapsulation in puerperal convulsions of nephritic origin occurring prior to the beginning of labor. The mother would certainly be benefited, and the occurrence of premature delivery or the necessity of inducing it might possibly be averted.

My clinical experience has amply demonstrated that renal decapsulation is the most powerful, and practically a uniformly successful, means of increasing the urea output of the kidneys and of thus counteracting the dangers of uræmia. My own line of work does not often bring me in contact with obstetrical cases or cases of puerperal eclampsia. Those of my colleagues, however, who are connected with lying-in hospitals could speedily determine the value of renal decapsulation in puerperal eclampsia of renal origin, and to them I recommend a trial of the procedure.

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TORSION OF THE TESTICLE.*

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Torsion of the Testicle is a rare condition. Owen gives a report of one case and a résumé of thirteen cases found in medical literature. In eight cases the right testicle was involved, and the left one in five cases. Only about one-half of the surgery manuals mention the condition, and with your permission I will give the following, which is the best description of the trouble; after which, I wish to report a case occurring in my own practice.

Torsion, or axial rotation, of the spermatic cord sufficiently describes the nature of this accident. It is one of sudden development, usually affecting the cords of undescended testes, though by no means confined to these. The cause of this twist has not been formulated. It is probably dependent upon congenital malformation (since Owen has pointed out that a testis properly placed in the scrotum and possessed of a normal mesorchium cannot be twisted). The twist may be either to the right or to the left and, in accordance with its extent and the degree of constriction to which the vessels are subjected, the symptoms are slight or severe. In slight cases the epididymis alone becomes infiltrated. In severe cases the entire gland with the epididymis becomes gangrenous, exhibiting extensive blood extravasations.

Symptoms.—The symptoms of torsion are those of epididymitis or orchidoepididymitis. They occur suddenly, often without apparent cause, and during active muscular exertion. When the rotation is sufficient to produce complete strangulation the symptoms are violent and rapidly progressive.

Diagnosis.—A positive diagnosis is rarely possible without direct exploration through an incision, the symptoms suggesting an excessively acute orchidoepididymitis or a strangulated hernia. Since torsion commonly affects an undescended testis—this is

* Read before the Quincy Medical and Library Association, February 13, 1903; also before the Tri-State Medical Society, at Hannibal, Mo., April 3, 1903.

often complicated by hernia—the differential diagnosis may be extremely difficult. The inguinal tumor is painful, swollen, sometimes reddened and œdematous, and gives no impulse on coughing; it develops quite suddenly after exertion. Vomiting and tympany are by no means uncommon. These symptoms are so like those of strangulation, indeed are so indistinguishable from those of that condition, that immediate exploratory operation is indicated. When the testis occupies a normal position there is little likelihood of confounding a twist of the cord with hernia, unless the latter has been a previous complication, since the cord can be felt above the swelling and the inguinal canal is free from hernial sac or contents. The diagnosis of torsion will, then, depend mainly upon the suddenness of onset, the severity of symptoms, and the absence of other sufficient causes for acute inflammation. Moreover, the epididymis may be found in front of the testis, and in one case a nodulation corresponding to the twist was felt.

Prognosis.—If untreated, the testicle will either atrophy or become gangrenous, gangrene depending upon hæmatogenous infection of the devitalized area.

Treatment.—Reduction should be affected by manipulation or by operation. Manipulation was successful in a case reported by Nash.

CASE.—A boy, nineteen years old, during exercise, was seized with a sudden severe pain in the right testis. Very shortly the gland became swollen and extremely tender, with the epididymis in front and a knotty condition of the cord perceptible. Suspecting from the position of the epididymis and the condition of the cord that the case was one of rotation, Nash attempted reduction by turning the gland to the left; this increased the patient's pain, and the testis would not stay in position. Rotation to the right was then tried. This gave immediate and perfect relief, and the gland remained in place with the epididymis behind. The patient recovered promptly.

This case emphasizes the importance of immediate treatment. When the patient is not seen early, and when the inflammatory phenomena are pronounced, incision is indicated. This should expose the testicle and cord. If the gland is black and gangrenous it should be removed. Otherwise the cord should be untwisted, one lateral surface of the testicle secured to the scrotum by several sutures, including the proper tunic of the gland and the deeper layers of the skin, and the wound closed. When the testicle is greatly swollen and discolored, even though it is not absolutely certain that gangrene has taken place, it is advisable to remove it if the testis on the other side is healthy. The cases of hæmorrhagic infarct reported by English, and attributed by him to thrombosis of the pampiniform plexus, were possibly instances of torsion.

CASE.—On February 4, 1902, I was called to see C. K., aged sixteen years, who was suffering with intense pain in the right groin and right testicle, which had come on very suddenly. I found a distention of the right inguinal canal and great tenderness of the right testicle. By manipulation with the patient on his back with knees flexed, I reduced a hernia, but the patient still complained of pain in the testicle. On closer examination, I found some enlargement of the epididymis and it was turned toward the front. I turned the testicle about one-half way around on its axis, and he got immediate relief. I put a truss on the hernia and he had no further trouble until January 7, 1903. While at the water closet at school on that date, the pain returned all at once, more severe than before; two of the larger young men assisted him to my office. He was pale, cold sweat stood on his forehead. He was nauseated, could not stand erect, cried with the pain in his testicle. On examining him I found the testicle enlarged, very tender and the epididymis very much enlarged and turned to the front. No hernia, the inguinal ring seemed normal, no enlargement of cord at ring. I tried to turn the testicle in either direction but could not. His agony was so great I gave him one-fourth of a grain of morphine and one one-hundred-and-fiftieth grain of atropine sulphate and repeated it in an hour. I advised an operation at once. He was taken to Blessing Hospital where I operated on him in the afternoon, *Dr. Hatch* and *Dr. Rice* assisting me. I made an incision over the cord and testicle, and two drachms of bloody serous fluid escaped from around the cord. The testicle and lower portion of cord were black in color, due to a torsion of the testicle causing strangulation. The cord was ligated high up with fine silk and divided below the ligature. I had placed an artery forceps on the cord above the testicle before dividing the cord and removing the testicle. When the forceps was removed, about one ounce of black blood escaped from the testicle and cord. The wound was closed with fine silk stitches, and a sterile dressing applied, held in place with a crossed perineal bandage. The stitches were removed the seventh day; he went home on the thirteenth day. He has not had any pain since the operation. Chloroform was given.

This is the testicle removed, notice how dark it is.

Resignation of Dr. John S. McLain.—The resignation of Dr. John S. McLain as a member of the Board of Medical Examiners in Washington, D. C., has been accepted by the commissioners with an expression of appreciation and thanks for the service rendered the district by Dr. McLain.

Trachoma on the Increase.—Dr. John C. Lester, of the New York Eye and Ear Infirmary, is authority for the statement that trachoma is on the increase in Manhattan, from reinfection. The cases in the public schools are so numerous and so much on the increase that it is impossible to handle them all, and, according to Dr. Lester, there are enough cases to fill four hospitals and keep the staff busy. From 15 to 20 per cent. of the school children are affected by it.

NEURITIS FROM WHOOPING-COUGH, WITH REPORT OF A CASE.

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That neuritis may attend or follow any of the acute infections is established. Those infections which are characterized by prolonged high fever, marked disturbance of nutrition, and great prostration seem to produce the greater number of neuritides. Diphtheria affords a marked exception to this statement. When, however, we reflect upon the profound septic conditions attendant upon this infection, sufficient causes appear for the explanation of the frequency of neural inflammation without assuming a selective action upon the nervous tissues on the part of the specific toxins evolved by the bacillus, although the probability of such action cannot be denied.

Observations are accumulating which tend to demonstrate that neuritides varying in intensity from very mild perineural inflammations to violent attacks accompanied by great suffering and oftentimes permanent loss of function, occur in connection with the acute infections with far greater frequency than formerly supposed. The exact causes of these neuritides have not been demonstrated. It is hoped that investigations will be undertaken along this line and result in a solution of the problem. Indeed, it seems possible to ascertain whether the peripheral nerves possess a special vulnerability to the specific toxins of a given infection, or if they merely suffer from the general failure of nutrition. Is it intoxication, or starvation, or both? is a question that our laboratories should answer.

Clinical men should report their cases bearing upon this question and thus add to the literature the material so necessary to build up greater interest in the practical side of this important subject. It is with this idea that I desire to contribute to a very meagre literature a case of polyneuritis complicating whooping-cough:

J. S., a boy, white, aged four years, was seen at the instance of Dr. L. B. Tuckerman, in the Spring of 1901. The child was born of healthy parents and was the last of three healthy children. No special dyscrasia or neurosal manifestations had appeared in the ancestors or immediate family. The patient was born naturally, and until the beginning of an attack of whooping-cough eight weeks previous to my visit, had always been well nourished and healthy.

His was an unusually violent attack of whooping-cough. The paroxysms were extremely frequent and were accompanied by much vomiting, nose bleed, ecchymoses beneath the ocular conjunctiva, and fever. The bronchial disturbances were not noteworthy severe and no pneumonia or other complication appeared. In the middle of the fourth week it was noticed that he was weak in his legs, and that he shortly began to complain of pain in the toes and ankles, which were slightly swollen and tender to the touch. Dr. Tuckerman assured me that the child positively had not had diphtheria. I am sure that so careful an observer as the doctor was known to be, would not have failed to note the glandular changes and other signs incident to the Klebs-Löffler infection. Thinking that possibly he had a rheumatic complication to deal with, sodium salicylate was prescribed and the feet were enveloped in cotton wool. Soon after this, the little patient manifested sensible loss of hand grasp, with swelling and tenderness of the hands and fingers. Nasal speech developed and fluids were regurgitated through the nose. Now positive that a neuritis was developing, the doctor kindly asked me to see the case. I found all the above symptoms; also diminution of the knee jerks, loss of both plantar reflexes, and some slight loss of touch and pain sense in the feet and hands. The palate was paralyzed. The sphincters were not affected. Shortly he began to recover, and in twelve weeks seemed about as well as ever. I attempted to ascertain the existence of the reaction of degeneration, but the youth of the patient and his general intractability defeated all my efforts. There was never any marked atrophy, but the muscles, especially of the legs, became soft and flabby. The knee jerks were absent for over four months. The case was clearly one of neuritis, and both Dr. Tuckerman and myself were convinced that it unquestionably originated from the violent whooping-cough, since we could exclude all other causes of neural inflammation.

Shortly after seeing this case, the doctor kindly furnished me with some references regarding the occurrence of neuritis in whooping-cough; to these have been added all the literature that I have been able to collect. The case are not many, but will serve, I hope, as a stimulus to the further study of the nervous complications and sequelæ of acute disease.

Various forms of paralysis have been observed to complicate or follow whooping-cough even by the early writers. In the seventeenth century Sydenham (1) made the observation that severe whooping-cough might produce weakness and loss of power in the legs. When, however, we consider the extreme violence of this affection, which is so often characterized by hæmorrhages from the nose, into the conjunctiva, occasionally from the lungs, and even into the arachnoidean space (2), it is indeed surprising that paralysis is such a rare complication as the literature shows it to be. Mansel Sympton (3) and others have remarked upon the rarity of cere-

bral paralysis in the disease where we certainly have in the coughing seizures much increase of vascular tension in the brain.

In the recent monograph of Valentin (4), attention has been called to this rarity of paralysis as a complication of whooping-cough. Thorough search of the literature enabled him to find records of only eighty-three cases from all causes.

Examination of the records proves incontrovertibly that the great majority of these paralyses are vascular in origin. Valentin states that sixty-two of his collected cases were of cerebral origin. There are undoubtedly a small number of cases where the paralysis is unquestionably due to inflammation of the peripheral nerves. Horveno (5), in his thesis, called attention to this small number of recorded cases of undeniable peripheral origin. This inflammation may involve one nerve or many, and may include those of special, as well as those of common, sensibility. Cases showing widespread neural inflammation are extremely rare.

In this short review of the reported cases which seem to have proper claim to be entitled to be considered of undoubtedly peripheral origin, which I desire to append to the report of my personal observation, I shall intentionally avoid mention of the numerous instances of amaurosis, optic neuritis, and deafness, which were due most likely to local inflammatory reactions, hæmorrhages into the delicate structures, or the late effects of meningitis, or possibly were the result of excessive use of belladonna (6, 7, 8, and 9), opium (10) or their salts.

In 1865, Surmay (11), reported the case of a girl, aged five years, who suffered from weakness in the legs following typhoid fever. Convalescence ensued, and in six months the lost power was nearly recovered, when she developed a violent whooping-cough. The weakness and paralysis of her legs returned in a more marked degree; double foot-drop, with almost complete paralysis of the extensors and abductors of the feet and muscles of the toes, took place. From this paralysis she failed to recover. This patient certainly suffered from a polyneuritis, which first appeared as a complication of typhoid fever, and ran a rather mild course, but the occurrence of the pertussis seemed to exert a most deleterious effect upon the already weakened nerve structures. This case affords support to the idea that some people's nerves are specially vulnerable to disturbed nutrition or the action of toxins developed in the course of acute infection. From the literature I recall an instance of polyneuritis occurring as a sequel of pneumonia in a patient who had previously suffered from a paraplegic form of neuritis following a pneumonia in childhood (12).

Jurasz (13), in 1879, observed a two year old

boy who developed symptoms of paralysis of the posterior cricoarytenoid muscles during an attack of whooping-cough. The characteristic inspiratory dyspnœa, with loud snoring sounds, was present, accompanied by suprasternal and epigastric reaction. Because of the isolated character of the paralysis, I believe we are justified in considering this case to be a neuritis of the recurrent laryngeal.

In 1887, Moebius (14) reported the case of a boy, aged three years, who developed weakness in the lower extremities with loss of knee jerks six weeks after the onset of whooping-cough. Sensibility was preserved. Later, the upper extremities became involved, notwithstanding that improvement took place in the legs. The tendon jerks disappeared, the muscles of the neck became involved, the diaphragm was weakened, the abdominal reflexes were enfeebled, but the cremasteric reflexes remained intact. The bladder and sphincters were not disturbed. Improvement was prompt and progressive, but the tendon reflexes were slow to return. Moebius believes this case to have been an ascending neuritis, rather than a myelitis, and bases his deductions upon the non-involvement of the bladder and rectum, as well as on the speedy and complete recovery.

In 1894 Mackey (15) recorded the case of a boy, aged six years, who, while convalescing from a protracted attack of whooping-cough which had followed measles, developed pain and weakness in the arms and legs, also inability to stand or to move the toes. The sciatic nerves were tender on pressure. Paralysis of the extensors of the feet and double foot-drop, loss of knee jerks and plantar reflexes, occurred. General sensibility was preserved; the cremasteric reflexes were unaffected; the muscles became flabby, but distinct atrophy was not observed, although reaction of degeneration developed later. No bulbar or palatal disturbance appeared. The pupils reacted to light and accommodation and the sphincters were unimpaired. The neuritis progressively increased for a time, but improvement slowly manifested itself, and, at the time of the report, the patient had practically recovered, although the knee jerks were still absent.

In 1896, Craig (16) reported a case which he believed to be due to a vascular lesion of the pons occurring in the fourth week of a violent attack of whooping-cough, in a girl three years and a half old. The parents stated that an internal strabismus of the left eye had suddenly appeared. This was some days preceding Craig's examination. He found, in addition, a complete paralysis of the left side of the face. He states that Gowers pronounced the case an infranuclear paralysis. Eschner (17) has expressed belief in the possibility of this case

being an example of a combined inflammatory involvement of the sixth and seventh cerebral nerves. I believe that while the chances are distinctly in favor of this being a vascular lesion, likely a venous hæmorrhage into the medulla, in consequence of the enormous pressure which the venous trunks must sustain in the violent paroxysms of cough, yet it cannot be denied that Eschner's contention is just, and therefore in recognition of his claims I have deemed it proper to place this case among the neuritides of whooping-cough.

André Moussous (quoted by Leroux) (18) reported before the Bordeaux Society of Medicine, on May 12, 1891, the case of a child eighteen months old who suffered three convulsive seizures attended by fever during an attack of whooping-cough. The following day it was noticed that the child was weak in the lower extremities, the muscles of the trunk, and neck. The palate was paralyzed and liquids regurgitated through the nose. Sensibility was unimpaired; the sphincters unaffected; no atrophy took place, nor could reaction of degeneration be demonstrated. It was impossible to determine the condition of the reflexes, on account of the movements of the child. For a time the little patient was in great danger from difficulty in breathing, but finally improvement began and progressed to recovery.

Leroux evidently believed this case to be one of peripheral neuritis. Eschner, however, expresses a doubt in regard to its being peripheral in origin, since "the development of the motor disability following convulsions, the mode of extension and the absence of wasting, of degenerative electric reaction and of sensory impairment at least raise reasonable doubt as to the seat of the disease and its character." I think, however, that the evidence afforded by the embarrassed respiration, the palatal paralysis, the weakness of the muscles of the neck, trunk, and legs, without involvement of the sphincters, is strongly in favor of the case being a rapidly developing neuritis.

Guinon (19), in 1901, reported the case of a girl, aged five years, who developed paralysis of the muscles of her neck, trunk, and legs, also of the right internal rectus of both eyes. All the muscles of respiration, except the diaphragm, were paralyzed. Partial reaction of degeneration was demonstrated in the legs but not in the arms. The knee jerks disappeared, the plantar reflexes were enfeebled, the urine dribbled, and much pain was complained of in the lower extremities. A marked fibrillary tremor of the tongue developed. Improvement was slow but recovery was finally complete, although scarlet fever and diphtheria developed as intercurrent affections.

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612 PROSPECT STREET.

Bellevue Hospital.—A report of the trustees of Bellevue and other charity hospitals for the quarter ending December 31, 1902, shows that 7,721 patients were received during that time, including 79 births and 812 patients remaining on October 1st. Of these 7,105 were transferred or discharged, 599 died, and 908 were still undergoing treatment at the end of the quarter.

A Much Operated-on Woman.—The *Gazette médicale de Paris* for May 2nd, quotes from the *Archives provinciales de chirurgie*, 1903, the record of a woman who, between the ages of eighteen and twenty-eight years, underwent four vaginal operations and three laparotomies, the last being in 1894. But in 1900 she underwent yet another laparotomy, making the fourth in all. Unfortunately, we are not told what were the circumstances calling for these numerous operations.

Therapeutical Notes.

The Treatment of "Heat Stroke."—Dr. Andrew Duncan, joint lecturer in tropical medicine at the London School of Tropical Medicine (*Edinburgh Medical Journal*, March; *Journal of Tropical Medicine*, April 1st) says:

Preventive Measures.—In all cases where the soldier or traveler is exposed to a hot sun, alcoholic drinks should be eschewed, and tea or coffee be the chosen beverage.

The head-covering.—In the writer's opinion, the best protection against the sun is afforded either by the lungi with spectacles or the solar-topi. As an article of military dress, the ordinary cork or wicker helmets are more or less admirably adapted to form sun-traps. The Wolseley Egyptian helmet, the gray topi, the gray Elwood helmet, have all been well spoken of. Lastly, old European residents in Egypt, whenever they go into the desert on a shooting expedition, are accustomed to wear under their helmets a tight jean skullcap, similar to that worn by the Arabs under the turban or tarboosh, and find that it greatly diminishes the penetration of the sun's rays.

Next to the head, it is most important to protect the eyes by the use of neutral-tinted spectacles.

And, finally, the spinal cord must not be forgotten. A thick woollen pad sewn into the coat should be worn.

The dress must be loose round the neck, chest, and abdomen. The material should be a light woollen one, or khaki serge; cotton is not advisable, being a great conductor of heat; wool, on the other hand, is a slow conductor. As regards color, some experiments formerly made at Aldershot showed the least absorbing color for the direct heat of the sun to be white, then gray, yellow, pink, and black. After several attacks of severe sunstroke necessitating frequent invaliding, I read one day a letter from an executive engineer in the *Pioneer* on the prevention of sunstroke. This officer had had three attacks of sunstroke. He had then come to the conclusion that the dangerous rays of the sun were not the heat rays, but the chemical. His argument was based on the fact that no one ever gets heat stroke from exposure to a dark source of heat, or one where the luminous rays possess no degree of chemical energy, *e. g.*, the furnaces in an arsenal. In scientific language, the actinic rays are the dangerous ones; they will pierce through anything except a ray of color, interposed to act as a filter. He therefore argued that the only way to ward off sunstroke was to treat his body as a photographer treats his plates, and envelop it in red or yellow. He therefore lined his helmet and coat with yellow, and, after five years of extreme exposure, had no further sun attacks. Acting on this theory, I lined my helmet with orange-red flannel, had a similarly colored pad sewn into the inside of my khaki coat at the back, and wore an orange-red shirt always when on the line of march. I never again felt the effects of the sun. I would therefore strongly recommend similar measures to be undertaken by any officer who cannot stand the direct heat of the sun.

Curative Treatment.—On the occurrence of heat stroke, the patient should be moved into the shade where possible, his clothes opened, and cold water from a mussack be poured on to his head and neck. Ammonia should also be applied to his nostrils. The douche must be repeated until a favorable effect be produced. A turpentine enema should also be administered, and a large mustard poultice applied to the chest. Ice to the head should not be applied in cases where the skin is cold and the pulse feeble. If convulsions occur, a few whiffs of chloroform are indicated. In the form characterized by the long persistent subsequent head pain, blisters to the shaved vertex and nape of the neck, with quinine, give some relief, but time is here the chief remedy.

In Italy, in cases of direct heat stroke, the administration of a solution of trinitrin (1-1,000), twenty drops to water, 4,500 minims, every quarter of an hour, until the complete disappearance of the symptoms has been found successful.

As regards venesection: This has been advocated by some practitioners. But, impressed by the eloquent words of the late Professor Maclean as to the invariable fatality induced by this proceeding, I can offer no opinion as to its usefulness, as I have never dared to abstract blood. Lastly, any one who has once suffered severely from heat stroke should not return to the tropics.

Raynaud's Antimalarial Mixture.—The formula is given by the *Journal of Tropical Medicine* for April 1st, as follows:

- ℞ Tincture of iodine.....90 minims;
Potassium iodide.....90 grains;
Distilled water.....5 ounces;
M. Dose, one teaspoonful in water at commencement of paroxysm, repeated in fifteen or twenty minutes if no improvement.

For Hæmoptysis in Children.—The *Revue médicale du Canada* quotes the following from the *Journal médical de Paris*:

- ℞ Powdered alum.....0.50 gramme (7½ grains);
Rabel water.....20 drops;
Extract of rhatany.....2 grammes (30 grains);
Syrup of roses... } of each 30 grammes (1 ounce);
Syrup of cachou. }
Infusion of roses.....160 grammes (5½ ounces).
M. The dose is a dessertspoonful taken every half hour.

Or this:

- ℞ Perchloride of iron..from 0.40 to 1 gramme (12 to 15 grains);
Syrup of canella.....30 grammes (1 ounce);
Distilled water.....100 grammes (3½ ounces).
M. A tablespoonful every half hour.

Or this:

- ℞ Ergotine.....1 gramme (15 grains);
Syrup of rhatany.....10 grammes (150 grains);
Distilled water.....100 grammes (3½ ounces);
M. A dessertspoonful every hour.

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THE LATE DR. WALTER REED.

No higher appreciation could be shown of the services of an American physician than the insertion of his portrait as the frontispiece of an issue of a British periodical, together with a memorial notice signed with the initials of the editor in chief. The portrait to which we have reference is that of the later Major Walter Reed, M. A., M. D., LL. D., of the United States army; the periodical is the *Journal of Hygiene*, the April number; and the editor whose initials are signed to the memorial is George H. F. Nuttall, M. D., Ph. D., late associate in hygiene in the Johns Hopkins University, Baltimore, and now lecturer in bacteriology and preventive medicine in the University of Cambridge.

Dr. Nuttall remarks that it was during his service in the Johns Hopkins University, 1890-'92, that Dr. Reed was on duty in Baltimore in research work in pathology and bacteriology under Professor Welch, and that daily association with Reed in the laboratory gave him an exceptional opportunity of judging of his qualities. "Suffice it to say," he adds, "that Reed's personality left an indelible impression on all of us with whom he associated. He was remarkably accurate and full of resolution in his work, and when he left us we were convinced that some day he would make his mark. In this he more than fulfilled our expectations."

Dr. Nuttall maintains that to Reed and to Reed only belongs the credit of demonstrating the part played by the mosquito in the ætiology of yellow fever, in spite of the prior suggestions of Nott and Finlay. He quotes General Leonard Wood as saying: "I know of no other man on this side of the

world who has done so much for humanity as Dr. Reed. His discovery results in the saving of more lives annually than were lost in the Cuban war, and saves the commercial interests of the world a greater financial loss each year than the cost of the Cuban war." Reed, says Dr. Nuttall, was the soul of the yellow fever commission in Havana: in the words of General Wood, "His was the originating, directing, and controlling mind in this work, and the others were assistants only." He quotes Dr. Welch as saying: "I am in a position to know that the credit for the original ideas embodied in this work belongs wholly to Major Reed."

Such an appreciative and enthusiastic memorial sketch as Dr. Nuttall's of Dr. Reed is wholly deserved, and it will serve to encourage men of the real scientific spirit the world over. Dr. Nuttall expresses the hope that the United States government will provide suitably for Dr. Reed's widow. This, as we have before announced, it has already done.

THE DISPENSING PHARMACIST AS A COADJUTOR.

In these days when so much is said about the evil of substitution on the part of the pharmacist we recall with satisfaction the fact that, while from time to time we have deplored the practice and spoken in unsparing terms of those who are guilty of it, we have always held that resort to it—meaning reprehensible substitution—was had by but few. We have always esteemed the great body of dispensing pharmacists as upright and worthy members of a very honorable but also a very arduous profession, one that was almost being driven out of business by the increasing tendency of physicians to neglect the magistral prescription. While we wish to emphasize all that we have ever said in deprecation of reprehensible substitution—meaning thereby any interference with the prescriber's plain intention, whether for purposes of dishonest gain or to shirk the necessity of admitting that a drug called for is not in stock—we desire to call the attention of the medical profession anew to the fact that substitution of a far different sort is often not only justifiable, but also commendable.

Of course we cannot admit that under any cir-

cumstances the pharmacist is warranted in such substitution or change in dispensing a prescription as could in any way alter the therapeutical properties of the product from what the prescriber intended it should have. Further, it must be said that the dispenser cannot always be sure that some slight change deemed by him conducive to the elegance of the product, and therefore made in devotion to his art, will not to some extent modify the capability of the medicine to produce a particular effect. Unless there is some overpowering reason for making a slight change in putting up a prescription, it is always the safest course for the dispensing pharmacist, as it is his manifest duty, to follow the prescription to the letter. When such a reason exists, the pharmacist should if possible communicate with the physician. This, honorable and conscientious man that he almost invariably is, he does. But such communication is not always possible; in that case something must be left to the dispenser's discretion, and if it is, the physician will oftener have occasion to thank him than to complain.

But there is a sort of substitution which is purely and simply pharmaceutical. Possibly a prescriber, knowing next to nothing of pharmacy, has ordered a preposterous excipient or vehicle. We hold that under such circumstances the dispenser is plainly within his sphere in correcting the error. A correction of that sort would involve substitution in the literal sense of the word, but it would not in the slightest degree be the kind of substitution against which the medical profession protests. There is danger, however, since the protest in some quarters has been so indiscriminate and has resulted in so much newspaper talk, that legislation may be effected that would make it an offense on the part of an apothecary to pursue this wise and beneficent course. Such legislation would be universally regretted by the medical profession.

THE RESTRICTION AND PREVENTION OF RABIES.

A most interesting and instructive résumé of the salient points of our knowledge of rabies—hydrophobia, as it is commonly called—was recently prepared by Dr. F. G. Novy, professor of bacteriology

in the University of Michigan, and issued in the form of a *Teachers' Sanitary Bulletin* by the Michigan State Board of Health, an organization which, as we have often pointed out, is doing a great work in educating the people in matters of hygiene. Dr. Novy's brochure is written in simple language, so that it can easily be understood by any person having a common school education. Its teachings are of immense importance to the community.

Dr. Novy insists that when rabies is discovered in a district all dogs should be muzzled for a period of at least three months. A dog that has bitten a person or an animal, and is suspected of being rabid, should not be killed if it is possible to confine and watch it, for the first object is to ascertain if it really is rabid. On this point we have often dwelt. If, however, the dog has been killed, its brain and spinal cord should as soon as practicable be tested by inoculation on other animals. If there are not adequate laboratory facilities in the neighborhood, the head and spinal column, with their contents intact, should be sent at once to the nearest place where there are such facilities, or, preferably, carried there by the local health officer, since, owing to delays in transportation, it is a common occurrence for laboratories to receive such material in a state of putridity, when of course satisfactory experiments are out of the question. If it is impracticable to carry the specimen instead of sending it, portions of it—that is, of the brain and of the spinal cord—may be sent in 20 per cent. glycerin sterilized by boiling. The experiments take time, and a report may sometimes be necessarily delayed for as long as three weeks.

Meantime, much is to be hoped for from cauterization of the wound. "Experimentally it has been shown that of the infected animals fully 90 per cent. can be saved if within twenty-four hours after the accident the wound is disinfected by a radical procedure." Dr. Novy thinks that perhaps the use of some strong chemical, such as fuming nitric acid, under anaesthesia, is preferable to the use of the actual cautery. Then the preventive inoculation is to be resorted to. The author is convinced that there is absolutely no question of its value, and in this, we believe, he is sustained by the great majority of persons whose opportunities for judging have been adequate.

NEXT YEAR'S TUBERCULOSIS CONGRESS IN ST. LOUIS.

Since it was announced that this congress would be held in July, 1904, we have received a note from Mrs. White, the president of the Brooklyn Home for Consumptives, in which she expresses the opinion that a congress held in St. Louis in July would be a failure on account of the hot weather. She suggests that June or October would be a better time. Her impression is founded on several years' residence in St. Louis. The suggestion seems to us well worthy of attention.

EMERGENCY WARDS IN FACTORIES.

A suggestion has been made that an emergency ward should be attached to all factories, to which an employee, when taken suddenly ill or injured in the discharge of his work, might be removed until a physician could be summoned. We understand that nearly all the large department stores, in which, of course, the liability to accident at any rate is much less than in factories using machinery, have some room or ward reserved for such cases. The establishment of such accommodation in factories, especially in those employing extensive machinery, is certainly much to be desired.

THE INDEX MEDICUS.

The first number of this resuscitated publication—issued by the Carnegie Institution of Washington and printed in Boston—inaugurating the second series, has reached us this week, somewhat later than was expected. The editors, Dr. Robert Fletcher and Dr. Fielding H. Garrison, explain that the delay has been owing to the necessity of having to employ new type made by hand. It is announced that No. 2 and No. 3, for February, and March, will be issued as a double number. The familiar appearance of the *Index* will bring joy to the heart of many a follower of periodical medical literature.

THE SUMMER RESORT DOCTOR.

The legislature of the State of New Hampshire has so amended the law regarding the practice of medicine that hereafter physicians who are not licensed or registered in the State will be required to pass an examination before they can do business at the summer resort hotels. The amendment expunges from the exemption section the words "or the hotel physician regularly employed by the landlord of the summer hotel in the care of his guests or employees." We believe that the amendment will work no injustice, but, on the contrary, that it will restore to the licensed physicians of New Hampshire a certain degree of protection of which they have hitherto been deprived.

SCARLET FEVER IN THE PROVINCE OF ONTARIO.

The *Monthly Bulletin* of the Provincial Board of Health of Ontario for the month of March records that for the quarter ending with that month there had been a prevalence of scarlet fever of a type of unusual virulence. In January there were 90 deaths, in February 104, and in March 95. "This rate," says Dr. Peter H. Bryce, the secretary of the board and a well known sanitarian, "exceeds that of any year in thirty years, and shows more than three times the mortality for the same months in 1902. . . . If continued at this rate during the year, it would mean 1,200 deaths, or a mortality equal to that of smallpox, scarlatina, diphtheria, and typhoid combined in 1902." Dr. Bryce sturdily contends that scarlet fever is not a disease of childhood that everyone must have. This statement he does not base wholly on the well known fact that there is a very considerable congenital immunity to scarlet fever, but he properly insists on prompt segregation of the sick. In this he is undoubtedly to be supported. The disease seems to have been particularly prevalent in Toronto, Ottawa, Brockville, Port Hope, Minden, and Peterborough.

THE BACILLUS LETHALIS.

Under the heading of The Immortal Guinea Pig, a well known New York physician, signing himself "Melancthon Fairchild," published in the *New York Times's* Sunday supplement for May 3d a very spirited fanciful picture of the terrible effects of the *Bacillus lethalis*, a microorganism fabled to have been discovered by a friend of his. This organism seemed to be capable of conveying any and every infectious disease; indeed, it was so potent for evil that an injection of it was invariably followed by instant death. However, an antitoxine was obtained from it which appeared capable of conferring immortality, and an animal rendered universally immune by it was "the immortal guinea pig." Having convinced himself that immortality was undesirable, recoiling at the thought that he might confer so detestable a gift upon his fellow men, and, above all, fearing that he might himself be tempted to render himself immortal, the discoverer destroyed all his antitoxine, blotted out all indications of how it was to be made, and then quietly took his own life by infection with the *Bacillus lethalis*. This fabrication, which we have no hesitation in calling worthy of Poe, is elaborated in a manner altogether uncommon among prosaic medical men, and we look to its author for further contributions to imaginative literature.

News Items.

Society Meetings for the Coming Week:

MONDAY, June 8th.—New York Academy of Medicine (Section in General Surgery); New York Academy of Sciences (Section in Chemistry and Technology); New York Medico-historical Society (private); New York Ophthalmological Society (private); Gynecological Society of Boston; Burlington, Vt., Medical and Surgical Club; Norwalk, Conn., Medical Society (private); Medical Association of the Greater City of New York; Society of Medical Jurisprudence.

TUESDAY, June 9th.—New York Academy of Medicine (Section in Genitourinary Surgery); New York Medical Union (private); Buffalo Academy of Medicine (Section in Medicine); Kings County, N. Y., Medical Association; Rome, N. Y., Medical Society; Medical Society of the County of Rensselaer, N. Y.; Newark, N. J., Medical Association (private); Trenton, N. J., Medical Association; Clinical Society of the Elizabeth, N. J., General Hospital and Dispensary; Northwestern Medical Society of Philadelphia; Practitioners' Club, Richmond, Ky.; Richmond, Va., Academy of Medicine and Surgery.

WEDNESDAY, June 10th.—New York Pathological Society; New York Surgical Society; American Microscopical Society of the City of New York; Society of the Alumni of the City (Charity) Hospital; Society for Medical Progress, New York; Philadelphia County Medical Society; Lenox Medical and Surgical Society (private).

THURSDAY, June 11th.—New York Academy of Medicine (Section in Pædiatrics); New York Academy of Medicine (Section in Otology); Society of Medical Jurisprudence and State Medicine, New York; Brooklyn Pathological Society; Medical Society of the County of Cayuga, N. Y.; South Boston, Mass., Medical Club (private); Pathological Society of Philadelphia; Church Hill Medical Society, of Richmond, Va.

FRIDAY, June 12th.—Brooklyn Dermatological and Genitourinary Society (private); German Medical Society of Brooklyn; Medical Society of the Town of Saugerties, N. Y.

SATURDAY, June 13th.—Obstetrical Society of Boston (private).

Change of Address.—Dr. E. Gruening, to No. 36 East Fifty-seventh Street, New York.

Association of Medical Officers of the Army and Navy of the Confederacy.—This association met in New Orleans, on May 21st.

New York State Medical Association.—The first district branch of the New York State Medical Association held its annual meeting at Watertown on May 26th.

Wisconsin College of Physicians and Surgeons.—The graduating exercises of the Wisconsin College of Physicians and Surgeons were held on May 28th, in Milwaukee.

Garfield Memorial Hospital School for Nurses.—The graduating exercises of the class of 1903 were held at the hospital building in Washington, on May 27th.

Vaccination not Compulsory in St. Paul, Minn.—By a resolution adopted by the board of health and the board of school inspectors of St. Paul, vaccination, although declared to be a wise and prudent measure and urged as a precaution in times of small-pox, is not compulsory.

A Medical Centenarian.—Dr. James Webber, an English centenarian surgeon, died at Barnstaple on April 21st, in his 101st year.

First Woman Physician Appointed to Public Office in Greece.—Madame A. Vassiliades, M. D., has been appointed physician to the prison for women at Athens.

West Virginia State Medical Association.—The association held a three days' session in Charleston, W. Va., closing on May 28th. An election of officers took place.

Georgetown University.—The Medical and Dental Departments of Georgetown University will hold their eighty-sixth annual commencement on Wednesday, June 10th.

Harvard Medical School.—An addition to Harvard Medical School, in the shape of five new buildings situated on the Fenway, will soon be under process of construction.

Michigan State Medical Society.—The Michigan State Medical Society will hold its annual meeting in Detroit, on June 11th and 12th, Dr. A. E. Bulson, of Jackson, Mich., presiding.

Sibley Memorial Hospital.—The Sibley Memorial Hospital, connected with the National Training School for Nurses and Deaconesses, held its commencement on May 25th, in West Hall, Washington, D. C.

State Board of Medical Examiners of New York.—Appointments were made by the Board of Regents at Albany, on May 22nd, of medical examiners to represent the several medical societies of New York State.

Mortality in Washington, D. C.—There was a large increase in the percentage of deaths in Washington during the week ending May 30th, consumption heading the list, while diseases of the brain and nervous system followed closely.

Seney Hospital, Brooklyn.—A gift of \$125,000 has been promised to the Seney Hospital by Mr. and Mrs. William Halls, Jr., provided the hospital authorities secure pledges to the amount of \$500,000 within a time to be appointed by the donors.

Onondaga County Medical Society.—The Onondaga County, N. Y., Medical Society held its ninety-seventh annual meeting in Syracuse on Tuesday, June 2nd, at the rooms of the Academy of Medicine in the Dillaye Memorial Building.

Beth-Israel Hospital Appointments.—At the recent meeting of the board of directors of Beth-Israel Hospital, Professor Fred Walker Gwyer, of Cornell, was appointed visiting surgeon to the Beth-Israel Hospital; Dr. Max Einhorn, visiting physician; Dr. Henry Koplik, visiting physician to the Children's Department, and Dr. A. Hymanson and Dr. J. Barsky, adjunct visiting physicians to the Children's Department.

A New Hospital for Boston.—A very large hospital will be erected this summer by the House of the Good Samaritan, in Boston, Mass., adjacent to the Back Bay Fens, on an estate consisting of a lot of 48,013 feet of land.

The State Board of Medical Examiners of South Dakota will hold its regular semi-annual meeting at Sioux Falls, on July 8th and 9th. Licenses to practise in South Dakota will be granted only after examination.

Chicago Medical Missionary Association.—This body was definitely organized recently and a constitution and by-laws were adopted. Bishop Hartzell, of Africa, presided and dwelt on the importance of the physician's work in Africa.

Chinatown under Surveillance.—Chinatown, San Francisco, is being closely watched by the officers of the Marine Hospital Service ever since the outbreak of the bubonic plague in that section, and a certain degree of cleanliness has been secured.

New York State Hospital for Crippled and Deformed Children.—The sum of \$50,000 has been appropriated by the State to secure a new site for the New York State Hospital for Crippled and Deformed Children, now situated at Tarrytown.

Scarlet Fever and Diphtheria Hospital.—According to the fifth annual reports of the Scarlet Fever and Diphtheria Hospital, situated at the foot of East Sixteenth Street, 422 patients have been treated since its organization. There are no free wards.

Union Medical Association of Northeastern Ohio.—The Union Medical Association of Northeastern Ohio held its 127th quarterly session in Canton, on May 20th. The association numbers several hundred physicians in that portion of the State.

Monroe County Medical Society.—The eighty-third annual meeting of the Monroe County Medical Society was held in Rochester, N. Y., on May 27th. Papers were read by Dr. Abraham Jacobi and Dr. Max Einhorn, of New York, and by Dr. J. W. Murphy, of Chicago.

The Medico-Chirurgical Hospital of Philadelphia.—The legislature of Pennsylvania has appropriated \$200,000 for the remodeling and renovating of the Medico-chirurgical Hospital. This does not include the separate appropriation of \$30,000 a year for two years' maintenance.

Adventist Sanitarium.—An enormous sanitarium built by the Adventists, a religious sect, was dedicated on May 31st, at Battle Creek, Mich. The main building is 550 feet in length and six stories high. In its rear are three large four-story wings radiating from the central building, which, if placed side by side with the main building, would make its length 970 feet. The dining rooms and kitchens are on the top or sixth floor of the main building and a hundred feet are given over to a roof garden higher than any church steeple in Battle Creek.

An Episcopal Hospital in Washington, D. C.—On Saturday, June 6th, the cornerstone of the Episcopal Eye, Ear and Throat Hospital will be laid by Bishop Satterlee, of Washington, the incorporators of the institution being the commissioners of the district.

Chicago Alumni Meet.—The Alumni Association of the Chicago College of Physicians and Surgeons met at the Sherman House, in Chicago, on the evening of May 25th, and entertained 200 members of the graduating class of 1903. New officers were elected. A banquet was given at the Auditorium in the evening.

Indecent Advertising.—A strong movement is on foot in Michigan to suppress the immoral medical advertisements that are current in the public press. The legislative committee of the Wayne County Medical Society has asked the citizens of Detroit to join in a movement to suppress such advertising.

Typhoid in Philadelphia.—The number of cases of typhoid increased with alarming rapidity in Philadelphia during the week ending May 30th, making a total of 120 cases since noon of May 23d. The health officials blame the city water and reiterate the injunction that all water should be boiled for domestic use.

A Conditional Bequest for a Hospital for Contagious Diseases in Albany.—By the will of Matthew W. Bender, of Albany, who died on May 21st, \$10,000 is left for the erection of a hospital for contagious diseases, provided that a further fund of at least \$10,000 is accumulated within five years after his decease.

Health Boards Convene.—In accordance with the act of July 1, 1902, the first conference of State and national boards of health was held on June 3rd in Washington, D. C., Surgeon-General Wyman, of the Marine Hospital Corps, presiding. Twenty-one States were represented. A closer cooperation between State and national authorities was planned.

Philadelphia College of Physicians will Build.—The corporation of the College of Physicians and Surgeons, of Philadelphia, now at Thirteenth and Locust Streets, will erect a fine building on the east side of Twenty-second Street, below Market. The lot will cost \$80,000. This institution possesses the second best medical library in the United States.

Cause of Typhoid in Palo Alto.—A San Francisco correspondent gives information about the water supply at Palo Alto, which goes to show that the recent outbreak of typhoid was not owing to the city water, which is provided from a depth of 700 feet, and which, on being tested, was shown to be exceptionally pure, but to the water from a polluted mountain stream and a surface well. This water was used by two dairies, and it was along the route of these two dairies that the fever was confined. The vigorous action taken by the people of Palo Alto has succeeded in quelling the disease.

Trinity Medical College, Toronto, Canada.—At a convocation held on May 28th, in Trinity University, Toronto, Canada, the complete union of Trinity Medical College with the University was announced. The occasion was the matriculation and conferring of degrees on medical students. Great satisfaction was expressed by Provost Macklem and others of the faculty.

Local Organization in Nebraska.—Fifty-nine counties, out of a possible sixty-six eligible in the State of Nebraska, are now organized under the national reorganization plan. At the State society meeting held on April 28th, 29th, and 30th, in Lincoln, the roster showed the membership in the State society to be almost double the roll of any of its thirty-four preceding years of existence.

Roof Garden for Consumptives.—The director of the Philadelphia Hospital, Dr. Martin, has planned a roof garden for consumptives, which will be fitted up with beds where patients may in summer spend the nine hours usually spent in rooms, in inhaling the pure air. Dr. Martin proposes to make this roof garden attractive with flowers and shrubs, so that it may gratify the patients' æsthetic sense.

Jefferson Medical College.—The annual commencement of Jefferson Medical College, in Philadelphia, was held on May 28th, when 166 students received their diplomas. Unusual interest was added to the ceremonies by the presence of Professor Johann von Mickulicz-Radeski, of Breslau, Germany, on whom was conferred the honorary degree of LL. D., by Dr. W. W. Keen, acting for the faculty of the college.

An Ambulance Wrecked.—While responding to an emergency call, a Bellevue hospital ambulance was knocked into splinters by a Third Avenue surface car at Thirty-second Street on the evening of May 28th. Dr. Warren, who was on the back seat, was hurled into the air striking an L road pillar and falling senseless to the ground. He was removed to the hospital. No bones were broken, but he was found to be suffering from concussion.

No Yellow Fever in Havana.—President Souchon, president of the State Board of Health, of Louisiana, who has recently returned to New Orleans from Cuba, whither he and Dr. Arthur Nolte, chairman of the quarantine committee of that board, went to investigate sanitary conditions, reports that Havana is free from yellow fever and that the quarantine regulations of the board of health would be somewhat modified in consequence.

French Hospital in New York a Beneficiary.—In response to the request of Chancellor Jules Bœufve, of Washington, D. C., that the portion of the fund subscribed for the Mont Pelée sufferers, which was returned to Washington, should be given to the French Hospital on West Thirty-fourth Street, New York, a majority of the subscribers have expressed themselves in favor of the donation. The amount thus accruing to the French Hospital is about \$800.

The Aberdeen, S. D., District Medical Society, covering twelve counties in the northeastern portion of South Dakota, held its regular bi-monthly meeting in Aberdeen on May 19th. Five papers were presented on venereal diseases, this being the special topic selected for discussion.

Fatty Degeneration of the Heart.—A case of fatty degeneration of the heart, a disease almost unknown among children, proved fatal recently to a six year old boy in the Bronx. The child was found unconscious in the morning and died before a physician arrived. An autopsy showed the cause of death.

The University of Cincinnati.—At a comitia held on April 30th at the Royal College of Physicians of London, England, Sir William Selby Church, presiding, the following report was received by the committee of management: "That the University of Cincinnati, U. S., be added to the list of universities at which the curriculum of professional study required for the diplomas of the Royal College may be pursued and whose graduates may be admitted to the final examination of the examining board in England, on production of the required certificate of study."

A Directory of Babies.—Health Commissioner Lederle has directed the eighty physicians who are specially engaged to care for the health of the infants and children of the tenement house districts to make an index directory of all babies under one year old. The list will contain, as far as possible, the names and addresses of all the babies in the five boroughs. It shows already 20,000 born since January 1, 1903. The city will be laid out in districts, to each of which one or more physicians will be assigned. They will be required to visit their district frequently and to report any cases of sickness to the department.

Faculty Changes in Columbia University.—The following appointments in the faculty of the College of Physicians and Surgeons of Columbia University were announced at the last meeting of the board of trustees of the university for the academic year: Dr. Christian A. Herter to be professor of pharmacy and therapeutics. Dr. Smith E. Jelliffe, Dr. W. A. Baseedo and Dr. Frank S. Meara to be instructors in materia medica and therapeutics. Dr. John B. Luther to be assistant in analytical chemistry. Dr. E. Hoenpfl, Dr. John H. Larkin and Dr. Norman E. Ditman to be instructors in pathology. Dr. Philip H. Hiss promoted to be an assistant professor in bacteriology and assigned a seat in the faculty of pure science. Dr. Francis E. Wood to be instructor in clinical pathology. Dr. Frederick R. Bailey and Dr. A. N. Miller to be instructors in normal histology. Dr. W. B. Coley, Dr. Forbes Hawkes and Dr. Clarence A. MacWilliams to be instructors in surgery.

The South Dakota State Medical Society held its twenty-second annual meeting on May 27th and 28th, at Mitchell, S. D. About eighty physicians were present. An excellent literary programme, supplemented by an elegant entertainment by the

citizens of Mitchell and the Mitchell District Medical Society, made the meeting one of both profit and pleasure to all in attendance. A paper of special interest was read by Dr. W. R. Smith, of Sturgis, on Glioma of the Pons Varolii. A paper on Perforation in Typhoid Fever, by Dr. E. T. Ramsey, of Clark, brought out an extended and interesting discussion, with reports of several cases operated upon, some of which had terminated favorably. The advanced idea was urged by several present that it was the duty of the attending physician to prepare for early operation in all cases where perforation seemed likely. Nothing new was presented in the technics of the operation. The new medical law, which has been in operation scarcely three months, was generally approved. Reports from all sections indicate that both the State and the profession have already been much benefited by the change in the methods employed by itinerants, irregulars, and quacks generally, since the new law became operative. Reorganization on the plan proposed by the American Medical Association was effected, and the State divided into nine districts. These districts make scarcely any change in the local societies already existing. It is believed the new plan will prove a benefit to the society. The officers elected were: President, Dr. B. A. Bobb, of Mitchell; vice-president, Dr. C. B. Mallery, of Aberdeen; secretary, Dr. William Edwards, of Bowdle.

Medical Legislation in South Dakota.—During the last session of the legislature a Medical Practice act was passed creating a board of medical examiners for South Dakota. Of the members of this board, who are appointed by the governor, not more than four shall be regular, not more than two homœopathic, and not more than one eclectic. Five members of the board constitute a quorum. Under the law the board must hold two regular meetings each year, on the second Wednesday of July and the second Wednesday of January, respectively, besides additional meetings as the board may deem necessary. All applicants for registration are required to be graduates of colleges having a four years' course of not less than twenty-six weeks each. The board is also empowered to issue licenses to licensees of other States whose requirements are on a par with the State of South Dakota. Dentists, osteopaths "in the legitimate practice of their profession," and "Christian Scientists as such, who do not practise medicine, surgery or obstetrics by the use of any material remedies or agencies," and resident physicians, regularly licensed and practising at the time of the act are exempted from its operation. Following are the names of the board of medical examiners, recently appointed under this act: President, Dr. Stephen Olney (R), of Sioux Falls; vice-president, Dr. H. S. Graves (E), of Hurley; secretary and treasurer, Dr. H. E. McNutt (R), of Aberdeen; Dr. J. L. Faxton (R), of Huron; Dr. J. W. Freeman (R), of Lead; Dr. H. M. Finnernd (H), of Watertown; Dr. A. H. Colton (H), of Vermillion. The board will hold its meeting for examinations at Sioux Falls, on July 8th. Those desiring further information should correspond with the secretary, Dr. H. E. McNutt, Aberdeen, S. D.

Official News.

Infectious Diseases in New York:

We are indebted to the Sanitary Bureau of the Health Department for the following statement of cases and deaths reported for the two weeks ending May 30, 1903:

DISEASES.	Week end'g May 23.		Week end'g May 30.	
	Cases.	Deaths.	Cases.	Deaths.
Measles	448	15	356	13
Diphtheria and Croup.....	455	55	378	42
Scarlet fever.....	288	27	246	14
Small-pox	1	0	3	0
Chicken-pox.....	97	0	71	0
Tuberculosis	305	148	205	144
Typhoid fever	46	12	42	10
Cerebro-spinal meningitis.....	0	0	0	9

Public Health and Marine-Hospital Service
Health Reports:

The following cases of smallpox, yellow fever, cholera and plague, have been reported to the surgeon-general, Public Health and Marine-Hospital Service, during the week ending May 29, 1903:

Smallpox—United States.			
Places.	Date.	Cases.	Deaths.
Alabama—Mobile	May 16-23	4	
California—Los Angeles	May 8-16	1	
California—San Francisco	May 10-17	2	
Colorado—Denver	Apr. 25-May 2	19	
Illinois—Belleville	May 16-23	1	
Illinois—Chicago	May 16-23	9	
Indiana—Elwood	May 17-24	6	
Indiana—Indianapolis	May 16-23	3	
Iowa—Des Moines	May 16-23	1	
Kentucky—Newport	May 8-23	2	
Louisiana—New Orleans	May 16-23	4	
Maine—Biddeford	May 16-23	1	
Maryland—Baltimore	May 16-23	1	
Massachusetts—Holyoke	May 16-23	1	
Michigan—Detroit	May 16-23	2	1
Michigan—Grand Rapids	May 16-23	1	
Michigan—Port Huron	May 16-23	1	
Minnesota—Winona	May 16-23	3	
Missouri—St. Louis	May 17-24	20	
Nebraska—Omaha	May 16-23	1	
New Hampshire—Manchester	May 16-23	4	
New Hampshire—Nashua	May 16-23	6	
New Jersey—Camden	May 16-23	1	
New York—Elmira	May 16-23	1	
New York—New York	May 16-23	1	
New York—Rochester	May 14-21	6	
Ohio—Ashtabula	May 16-23	2	1
Ohio—Cincinnati	May 15-22	15	
Ohio—Dayton	May 16-23	5	
Pennsylvania—Altoona	May 16-23	1	
Pennsylvania—Carbondale	May 14-21	1	
Pennsylvania—Johnstown	May 16-23		1
Pennsylvania—McKeesport	May 16-23	1	
Pennsylvania—Philadelphia	May 16-23	18	4
Pennsylvania—Pittsburgh.....	May 16-23	24	3
one case imported from W. Va.			
Pennsylvania—Reading	May 18-25	1	
South Carolina—Charleston	May 16-23	10	1
Utah—Salt Lake City	May 16-23	3	1
Wisconsin—Milwaukee	May 16-23	1	
Smallpox—Foreign.			
Brazil—Rio de Janeiro	Apr. 26-May 3 ..		1
Canada—Winnipeg	May 9-16	1	1
Canary Islands—Las Palmas	Apr. 25-May 2 ..	18	
China—Hong Kong	Mar. 28-Apr. 11 ..	2	1
Colombia—Barranquilla	May 3-10		3
Colombia—Bocas de Toro	May 25	25	2
Great Britain—Birmingham	May 2-16	24	
Great Britain—Dublin	May 2-9	27	4
Great Britain—Dundee	May 2-9	1	
Great Britain—Glasgow	May 8-15	1	
Great Britain—Leeds	May 2-16	34	3
Great Britain—Liverpool	To May 16	6	
Great Britain—London	May 2-9	17	
Great Britain—Manchester	May 2-9	10	1
Great Britain—Newcastle-on-Tyne.....	May 2-9	1	
Great Britain—Nottingham	May 2-9	2	
Great Britain—Sunderland	May 2-9	1	
India—Bombay	Apr. 21-28		94
India—Calcutta	Apr. 18-25		3
India—Madras	Apr. 18-25		1
Mexico—City of Mexico	May 10-17	11	7
Russia—Moscow	Apr. 28-May 2 ..	2	1
Spain—Valencia	Apr. 15-30		2

Yellow Fever.

Brazil—Rio de Janeiro	Apr. 26-May 3 ..	13	
Colombia—Panama	May 11-18	3	1
Costa Rica—Limon	Apr. 30-May 7 ..	2	
Costa Rica—Limon	May 7-14	3	2
Mexico—Coatzacoalcos	May 8-16	1	
Mexico—Tampico	May 8-16		1
Mexico—Vera Cruz	May 16-23	12	7

Cholera.

India—Calcutta	Apr. 18-25	140	
Straits Settlements—Singapore	Apr. 4-11		3

Plague.

Brazil—Rio de Janeiro	Apr. 26-May 3 ..	2	
Chile—Iquique	May 27	Present.	
China—Hongkong	Jan. 1-Apr. 11 ..	216	208
India—Bombay	Apr. 21-28	1031	
India—Calcutta	Apr. 18-25	434	
India—Karachi	Apr. 19-26	228	197
Japan—Yokohama	May 26	Present.	

Army Intelligence:

Official List of Changes in the Stations and Duties of Officers serving in the Medical Department of the United States Army, for the Week ending May 30, 1903:

GODFREY, GUY C. M., Captain and Assistant Surgeon. Relieved from duty in the Division of the Philippines and ordered to San Francisco, Cal., to report by telegram to the adjutant-general for further orders.

GORGAS, W. C., Colonel and Assistant Surgeon-General. Ordered to report to the Commanding General of the Department of the East for temporary duty as Chief Surgeon of that Department.

McCULLOCH, C. C., Captain and Assistant Surgeon. Relieved from duty in the Division of the Philippines and ordered to San Francisco, Cal., to report by telegram to the adjutant-general for further orders.

Public Health and Marine Hospital Service:

Official List of the Changes of Station and Duties of Commissioned and Non-commissioned Officers of the Public Health and Marine Hospital Service for the Seven Days ending May 28, 1903:

BLUE, R., Passed Assistant Surgeon. To assume command of the Plague Laboratory, San Francisco, Cal., relieving Surgeon A. H. Glennan.

BROOKS, S. D., Surgeon. Upon being relieved at Portland, Me., by Surgeon W. P. McIntosh, to proceed to Savannah, Ga., and assume command of the service, relieving Acting Assistant Surgeon E. S. Osborne.

DECKER, C. E., Assistant Surgeon. Granted extension of leave of absence, on account of sickness, for thirty days, from May 8th.

DUFFY, F., Acting Assistant Surgeon. Granted leave of absence for four days, from June 1st.

FOSTER, M. H., Passed Assistant Surgeon. Upon being relieved by Passed Assistant Surgeon J. H. Oakley, at Port Townsend Quarantine, Wash., to proceed to Port Townsend, Wash., and assume command of the service, relieving Passed Assistant Surgeon C. H. Gardner.

GARDNER, C. H., Passed Assistant Surgeon. Upon being relieved at Port Townsend, Wash., by Passed Assistant Surgeon M. H. Foster, to proceed to New York, N. Y., and report to Surgeon G. W. Stoner, Immigration Depot, for duty.

GEDDINGS, H. D., Assistant Surgeon-General. Detailed to represent the service at South Carolina Sanitary Association, at Columbia, S. C., May 28th and 29th.

GLENNAN, A. H., Surgeon. Relieved from command of the Plague Laboratory, San Francisco, Cal., and directed to proceed to Washington, D. C., for duty.

GUITERAS, G. M., Surgeon. Relieved from duty at Philadelphia, Pa., to take effect June 5, 1903, and directed to proceed to Cairo, Ill., and assume command of the service, relieving Passed Assistant Surgeon J. H. Oakley.

HICKS, W. R., Acting Assistant Surgeon. Granted leave of absence for five days, from June 2nd.

KERR, J. W., Assistant Surgeon. Upon being relieved at Cincinnati, Ohio, by Passed Assistant Surgeon J. A. Nydegger, to proceed to New York, N. Y., and report to Surgeon G. W. Stoner, Immigration Depot, for duty.

LUMSDEN, L. L., Passed Assistant Surgeon. To proceed to San Juan, Porto Rico, and assume temporary command of the service.

McINTOSH, W. P., Surgeon. Upon being relieved from duty at Mobile, Ala., by Surgeon J. H. White, to proceed to Portland, Maine, and assume command of the service, relieving Surgeon S. D. Brooks.

NYDEGGER, J. A., Passed Assistant Surgeon. Relieved from duty at Baltimore, Md., and directed to proceed to Cincinnati, Ohio, and assume command of the service, relieving Assistant Surgeon J. W. Kerr.

OAKLEY, J. H. Passed Assistant Surgeon. Upon being relieved at Cairo, Ill., by Surgeon G. M. Guiteras, to proceed to Port Townsend Quarantine, Wash., and assume command of the service, relieving Passed Assistant Surgeon M. H. Foster.

PERRY, J. C., Passed Assistant Surgeon. Detailed for temporary duty at Washington, D. C.

RICHARDSON, T. F., Assistant Surgeon. Granted leave of absence for three days, from June 17th.

RODMAN, J. C., Acting Assistant Surgeon. Granted leave of absence for four days, from June 1st.

TOWNSEND, F., Acting Assistant Surgeon. Granted leave of absence for one week.

TROTTER, F. E., Assistant Surgeon. Granted leave of absence for ten days, from June 15th.

WHITE, J. H., Assistant Surgeon-General. Relieved from duty in Washington, D. C., to take effect June 6, 1903, and directed to proceed to Mobile, Alabama, and assume command of the service, relieving Surgeon W. P. McIntosh.

Board Convened.

Board convened to meet at the marine hospital office, Baltimore, Md., May 28, 1903, for the physical examination of cadets in the Revenue Cutter Service. Detail for the board. Surgeon H. R. CARTER, chairman. Passed Assistant Surgeon J. A. NYDEGGER, recorder.

Births, Marriages, and Deaths.**Born.**

OVERLOCK.—In Pomfret, Connecticut, on Thursday, May 7, to Dr. and Mrs. S. B. Overlock, a son.

Married.

ANDRIES—FRIEDE.—In Rochester, N. Y., on Wednesday, May 20, Dr. Joseph H. Andries, of Detroit, and Miss Charlotte Friede.

BERMANN—HUNT.—In Washington, D. C., on Thursday, May 21, Dr. Isidor Samuel Bermann and Miss Mary Lillian Hunt.

TERRY—STUART.—In Annapolis, Maryland, on Friday, May 29, Dr. Charles Edward Terry and Miss Marion Stuart.

WHITWELL—ZELLER.—In Buffalo, N. Y., on Wednesday, May 30, Dr. J. F. Whitwell and Miss Elsa B. Zeller.

Died.

HUNT.—In Milwaukee, Wisconsin, on Wednesday, May 27, Dr. Florence Hunt, of Chicago, in the forty-fifth year of her age.

KEYSER.—In Boulder, Colorado, on Sunday, May 24, Dr. P. H. Keyser, Jr., in the thirty-first year of his age.

KLEMM.—In St. Louis, Missouri, on Sunday, May 24, Dr. Henry Klemm, in the sixty-first year of his age.

MORELAND.—In Atlanta, Georgia, on Friday, May 22, Dr. J. T. Moreland, in the fifty-sixth year of his age.

NUNEZ DE VILLAVICENCIO.—In New Orleans, Louisiana, on Thursday, May 21, Dr. C. B. Nunez de Villavicencio, in the sixty-fourth year of his age.

SHERMAN.—In Eagle Cliff, Ohio, on Tuesday, May 19, Dr. W. B. Sherman, in the seventy-second year of his age.

SHRADER.—In Washington, D. C., on Thursday, May 21, Dr. Houston D. Shrader, in the fifty-second year of his age.

SYNON.—In Chicago, Illinois, on Thursday, May 21, Dr. George C. Synon.

Pith of Current Literature.

PRACTICE OF MEDICINE.

Uræmia and its Treatment. By W. T. Thomson, M. D., LL. D. (*Medical Record*, May 16th).—The physiology and pathology of kidney diseases is so very unsatisfactory that treatment must be based, to a large extent, on clinical observation. The author divides the condition that may lead to uræmia and allied states into two general classes, the functional and the organic. The poisons, whatever their nature may be, that give rise to certain symptoms consequent on partial or total suppression of the urine differ greatly in different cases. In the condition of true uræmia, Dr. Thomson believes, we have to deal with one special poison, among others, which is quite common and very important in its effects in renal diseases. To illustrate the difference between the true uræmic condition and other conditions also dependent on the insufficient elimination of certain poisons, the author reports a number of cases. The first case is that of a man, who owing to acute obstruction of one ureter (its fellow had been obstructed thirteen years previously) lived for ten days without passing any urine at all. He at no time showed any symptoms of uræmia or other symptoms of apparent great import. There were loss of appetite, some constipation, contracted pupils and some slight twitching of the hands and face. The patient was weak but otherwise felt well. He died at the end of ten days of pure asthenia and with no other symptoms except the ones recorded. The deduction to be drawn from this and from similar cases is, that the fatal poisoning was due to a very different poison from the one that produces uræmia. The true uræmic poison, although unknown, is easily recognized clinically. The symptoms it produces resemble closely those produced by continued poisonous doses of suprarenal extract; that is, high tension and later a weak heart. The indications for treatment are, therefore, to lower the arterial tension. The author illustrates his views by relating the history of a woman who had an extremely high tension pulse, a dilated left ventricle, and later some uræmic symptoms. There were albumin and casts in the urine, a greatly reduced output of urea, and a marked reduction in the total quantity of urine excreted. The ordinary heart stimulants and vasodilators were tried without avail. The patient was then put on full doses of aconite, five drops of the tincture every three hours. Her improvement was striking. This was due, in Dr. Thomson's opinion, to the fact that aconite is the best vasodilator we have, and the relief to the heart through vasomotor dilatation far more than counterbalances the depression of the heart itself. The author believes that in kidney lesions there is a poison generated that resembles adrenalin, and that this is at the bottom of the trouble. "I would ascribe the arteriocapillary sclerosis of long-standing kidney disease to high tension first, rather than high tension to the sclerosis." Late in the disease the sclerosis will increase the mischief. Therefore, in kidney diseases, vasodilators should be used early, and aconite is the best drug we have. Eclampsia is a condition due to a double form of poisoning. One

of these poisons resembles adrenalin, while the other is akin to atropine. The result is high tension and a strong heart. Venesection is the best treatment, but if this seems undesirable, then veratrum viride should be employed. Aconite is too slow in its action to be of service. The author considers at some length the three classic forms of Bright's disease: The acute, the chronic interstitial, and the chronic parenchymatous. He deplores the confusion that has arisen through regarding such different diseases as expression of approximately the same kind of lesions. On the whole, Dr. Thomson's beliefs with regard to these conditions and their treatment, do not vary materially from those generally accepted and we do not therefore abstract them.

Differential Diagnosis in Diseases of the Gall Bladder and Ducts. By George Emerson Brewer, M. D. (*Boston Medical and Surgical Journal*, May 14th).—The author divides the ordinary disease of the gall bladder and ducts into three main classes: Calculous diseases, inflammatory diseases, and new growths. An elaborate chart gives the chief diagnostic symptom of the various affections. Dr. Brewer reviews the development of our knowledge of these diseases and discusses the numerous symptoms with special reference to their significance. With regard to the three most important symptoms the author has this to say: (1) *Pain*. While the pain due to lesions of the biliary passages is usually fairly characteristic, yet there are many conditions in which the pain may closely simulate that due to these diseases, and it is therefore necessary to keep them always in mind. Such conditions are: Gastric ulcer; appendicitis; renal colic; Dietel's crisis (in movable kidney); gastric crises of tabes; inflammatory adhesions in the region of the pylorus or duodenum; aneurysm of the renal artery and several other rare conditions. (2) *Tumor*. Those due to the gall bladder are found in the right hypochondriac region. The author gives the symptoms and signs by which the causes of such tumors can be determined. The chief causative factors of such tumor formation are: (a) Accumulations of mucus (hydrops). (b) Accumulations of bile, from a non-calculous common duct obstruction. (c) Distention with pus (empyema). (d) Cholecystitis with local peritonitis. (e) Malignant disease. (3) *Jaundice*. This may be of two kinds, temporary and constant. (a) Temporary jaundice without other symptoms is suggestive of catarrhal obstruction of the common duct. Accompanied by colic it is suggestive of the passage of stone through the common duct. If there is intermittent jaundice, fever, and colic it suggests floating stone in the common duct. (b) Continued jaundice with chills, fever, enlargement of the liver with tenderness, enlargement of the spleen, and general sepsis suggests infective cholangitis. Progressively increasing jaundice, with enlargement of the liver but without distention of the gall bladder, and with a history of preceding colic, is suggestive of stone impacted near the papilla. Increasing progressive jaundice, without fever or pain, and with tumor of the gall bladder suggests common duct obstruction by a new growth. Jaundice is absent in

from 80 to 90 per cent. of all operative cases of gall bladder or duct diseases. If it is preceded by colic, jaundice is practically always due to stone; if it is not accompanied by pain, then it is practically always due to inflammation or new growths of the ducts, or to pressure from outside.

Cardiac and Apex Beats in Aortic Insufficiency.—Dr. Giovanni Galli (*Münchener medizinische Wochenschrift*, April 21st) says that in cases of aortic insufficiency, whether complicated by mitral insufficiency or not, no diagnostic value can be attributed to the apex beat, as this may be entirely absent. Galli thinks the explanation of Martin for the phenomenon, that in the event of the incompetence of the left ventricle to continue its work, the right ventricle undertakes some of it and becomes hypertrophied, is not justified, as in the cases which have come to autopsy no hypertrophy of the right ventricle was found; but the left ventricle was much hypertrophied and its walls alone, on account of their thickness, must have formed the entire beat of the heart against the thoracic wall with no appreciable apex beat.

Gastric Carcinoma Associated with Hyperchlorhydria and with Attacks of Stupor. By Norman B. Gwyn, M. D. (*Philadelphia Medical Journal*, May 16th).—Autopsy showed the tumor to be a typical adenocarcinoma. The peculiar features of the case, as set forth in the title of the paper, were: (a) The hyperchlorhydria and (b) the attacks of stupor. (a) Three analyses of the stomach contents showed the total acidity to range between 40 and 70 and the free HCl to range between 25 and 55. Blood and hæmatin could at no time be demonstrated in the stomach contents. While free HCl is not very uncommon in cases of gastric carcinoma, yet it is very uncommon to find such a large quantity of free HCl, as in the present case, almost twenty-one months after the onset of the disease. (b) The patient showed a condition of intense stupor on four occasions in a period of six months. The ordinary causes of stupor could in this case be accurately excluded. The origin of the stupor in the case under consideration remained undetermined. The author reviews the various theories for the coma that has been observed in several cases of carcinoma and other severe gastric conditions, and finds that none of the explanations so far advanced seems to fit the case he reports.

A Case of Latent Traumatic Endocarditis.—Dr. A. Prandi (*Gazzetta degli ospedali e delle cliniche*, April 19, 1903) was called to see a boy with digestive disturbances and symptoms of a general character, such as headache, slight fever, anorexia, slight meteorism, constipation, etc. This continued for five days when there came on a sense of suffocation, a precordial pain, and other signs of endocarditis, with enlarged heart area, tumultuous and irregular heart action, and a systolic murmur at the apex, accompanied by an accentuation of the second sound. The patient died within a few days, the symptoms having grown progressively worse.

Nothing in the previous history of the patient indicated the source of the endocarditis, except a trau-

matism of the chest sustained a few months previously. Since that day the child had not been as active and lively as before, and had at times shown difficulty in respiration. The author thinks that this case was one of traumatic endocarditis.

Case of Acute Alcoholic Poisoning in a Child Aged Four Years: Treatment by Saline Injection: Recovery. By F. C. Forster, M. R. C. S. (*British Medical Journal*, May 16th).—The author reports the case of a four year old boy who had swallowed two ounces of undiluted whiskey. Three quarters of an hour later he was unconscious, respirations shallow, and pulse weak and rapid, the general condition being one of profound collapse. There had been no vomiting. The stomach was well washed out, and general stimulation employed, but to no purpose. Hot saline rectal irrigations were then tried, with satisfactory results, the child recovering consciousness within an hour, and being apparently well by the next day. About a pint of the injection was retained. This case seems to disprove the view that rectal irrigations are useless in cases of collapse because of the loss of absorbent power of the walls of the rectum.

A Case of Purpura Hæmorrhagica (Werlhoff's Disease).—M. Ladevèze (*Lyon médical*, April 19th) records the case of a man, thirty years of age, who, while in apparently perfect health, was insidiously seized with progressively more severe ocular, nasal, gingival, salivary, pulmonary, genito-urinary, rectal and subcutaneous hæmorrhages. There were no physical signs, and no evidence of serous transudations. There was no fever and no digestive disturbance. The case progressed with increasing weakness and anæmia. No internal hæmostatic was of any value, perchloride of iron, ergotive by mouth and hypodermically and adrenalin all being tried. The author concludes by remarking on the obscurity of the pathology of Werlhoff's disease. No autopsy was obtainable.

Polymyositis.—Dr. H. Oppenheim (*Berliner klinische Wochenschrift*, April 27th and May 4th) presents the clinical picture given by twelve cases which he has observed. There are irregular fever and painful swelling of one or several groups of muscles with œdema of the overlying skin. The diseased muscles have a tendency to contracture and later to atrophy. The skin and mucous membranes share in the disease by becoming the seat of exanthemata and swellings. Among other complications are nephritis, disturbances of the ocular muscles, of swallowing and respiration, and sometimes the spleen is enlarged. Scleroderma seems to be related to polymyositis and one disease can go over into the other. Some of the patients die, others recover. Diaphoresis is the main element in the treatment, and is brought about by aspirin and hot air baths. Thermomassage, gymnastics and electrotherapy are also employed.

Hereditary Icterus.—Dr. Alois Pick (*Wiener klinische Wochenschrift*, April 23rd) records the cases of three brothers and sisters between the ages of seventeen and twenty-six years, who had suffered

from jaundice since birth and whose mother had also been icteric since her birth. Other brothers and sisters were not affected. There was, in all the patients, a distinct yellowish tinge to the skin and connective tissues, but there were no biliary salts or pigment in the urine and the feces were of normal color. The author attributes the jaundice to hepatic insufficiency, as urobilin was found in the urine of all the patients. He suggests as a possible further explanation, a congenital communication between the lymph channels and the biliary passages.

Adipose is Dolorosa (Dercum's Disease).—Dr. A. Weiss (*Wiener klinische Wochenschrift*, April 23rd) says that the essential features of this disease are pathological deposits of fat on the surface of the body and its sensitiveness to pressure. The deposits may be localized or diffused, and, as a rule, the hands, feet, and face remain free. Spontaneous pain is not constant. Probably, some disease of the nervous system is also present. The course of the disease is always chronic and the prognosis as to life is good. The author reports a case.

Traumatic Tuberculous Peritonitis with Ileus.—Dr. R. Luecke (*Berliner klinische Wochenschrift*, May 4th) says that tuberculosis of the large cavities is rarely caused by traumatism. The case reported is that of a boy who fell while skating and upon whose abdomen another boy stepped. The child gave evidence of a serious abdominal disease and died in two weeks. The autopsy showed a diffuse tuberculous peritonitis, a scrofulosis with cheesy degeneration of the mesenteric and mediastinal lymph glands, and slight traces of a previous peritonitis, in the form of fibrous adhesions. The author calls attention to the extremely rapid development of the tuberculosis after the accident.

DISEASES OF CHILDREN.

The Causes of Sudden Death in Children.—Dr. Giuseppe Segadelli (*Gazzetta degli ospedali e delle cliniche*, April 19, 1903) discusses the various possible causes of sudden death in children, and reports the case of a child, aged three years, in which the autopsy showed no other lesions than an intestinal invagination and a slight catarrhal gastroenteritis, so that there was apparently no way of accounting for the sudden death of the child. Richter, in 1,525 autopsies, found that capillary bronchitis was the most frequent cause of sudden death in children, and says that this is not astonishing in view of the frequency of capillary bronchitis, and the narrowness of the capillary bronchi in infancy and childhood. The second prominent cause of sudden death in children is hypertrophy of the thymus gland, the mechanism of which is not yet fully understood. Poltauf opposes the idea that these deaths occur in virtue of tracheal compression, because the thymus can never increase in size enough to compress the respiratory passages. According to Poltauf, thymus gland hypertrophy is an evidence of a disease of metabolism which is characterized by a hypertrophy of the lymphatic tissues, in which condition substances that produce tetanic contractions are secreted by the thymus gland. These sub-

stances become fatal by cardiac paralysis. Richter, however, denies the validity of this hypothesis and shows that the lymphatic state referred to by Poltauf was only present in one case out of the 1,525 autopsies. On the other hand, acute capillary bronchitis was found in children with hypertrophied thymus glands, and was probably the true cause of death. In a third group of cases sudden death occurs in consequence of gastrointestinal lesions in children, but the noteworthy fact in these cases is that these patients do not show post mortem lesions extensive or severe enough to account for their death. The case reported here comes within this group, and the gastroenteritis found in this child was not marked enough to have caused sudden death. As regards the intussusception, it was produced evidently in the agony of the last hour, and was not a lesion during life. The author believes that in this case the death could not be accounted for otherwise than by the gastroenteric catarrh. Filippi found that during sleep children were more susceptible to organic disturbances, and the child in this case died in his sleep. During childhood, too, there is an increased susceptibility of the nervous system. Lancereaux proved that death from heart failure might occur in persons without heart disease through a violent irritation of the splanchnic nerves by disturbances in the stomach. In the present case, the author thinks that death was due to a stimulus arising from the gastrointestinal tract, acting upon a highly excitable nervous system.

OBSTETRICS AND DISEASES OF WOMEN.

The Modern Treatment of Fibromyomas of the Uterus.—Dr. D. A. Abuladze (*Roussky Vrach*, April 5th), in a brief survey of the modern status of the surgical treatment of myomas of the uterus, draws the following conclusions as to the value of the different methods employed: (1) An early surgical intervention is necessary in fibromyomas of the uterus. (2) Conservative myomectomy is the ideal method of treatment. It does not produce any deformity, it can be performed thoroughly so as to cure the patient, and it enables the surgeon to extend considerably the field of application of operations for fibromyomas. (3) The indications for colpomymectomies are limited. (4) Hystermymectomy should be used only in exceptional cases, as it deforms the patient. (5) The vaginal route is to be preferred for hystermymectomy whenever the diagnosis is made early enough, on account of the lessened danger of infection and the lessened necessity for perfect asepsis.

MATERIA MEDICA, PHARMACY, AND THERAPEUTICS.

Therapeutic Inoculations of Bacterial Vaccines, and their Practical Exploitation in the Treatment of Disease. By Dr. A. E. Wright. (*British Medical Journal*, May 9th).—Summary. 1. There is in connection with every immunization process a sequence of negative and positive phase, followed in cases where the inoculation is successful by the maintenance of a *higher base line* of immun-

ity. 2. The inoculation of an excessive dose may involve a risk, in particular, the risk of an undue prolongation of the negative phase. 3. The inoculation of a series of doses of a vaccine will, in cases where the inoculations were uncontrolled by intermediate blood examinations, involve the possibility of the production of a cumulative negative phase. 4. The cumulative negative phase, which is a desideratum either in itself or as leading to the maintenance of a high base line of resistance, is achieved only when the successive doses are properly adjusted and when the inoculations are appropriately interspaced. 5. The success of a prophylactic inoculation process may be imperilled where the sequence of negative and positive phase and the cumulative effects of successive inoculations are not taken into consideration. 6. The success of serumtherapy in diphtheria and its comparative failure in the case of other diseases, are explained by the fact that in the first case we are able to secure the elimination of all negative phase blood, and we are able to induce in the vicariously inoculated animals a cumulative positive phase of absolutely phenomenal dimensions. In the case of other diseases we have been unable to secure these prerequisites of a successful serumtherapy. 7. In the case of patients who, though suffering from localized bacterial invasions, are possessed of a considerable balance of resisting power, it is possible without risk to undertake therapeutic inoculations of bacterial vaccines, provided always that the results of these inoculations are controlled by subsequent blood examinations.

Report on the First Application in Man of the Antipneumococcus Serum of Tizzoni-Panichi.—Dr. Luigi Panichi (*Gazzetta degli ospedali e delle cliniche*, April 19th) reports the results of his clinical investigations with the new antipneumonic serum prepared in Tizzoni's laboratory, in Bologna. He found that the serum had no untoward effects whatever, and did not produce any rise of temperature or any other disturbances in injection. The serum was employed in seven cases of pneumonia, most of which were of a severe type with pronounced cerebral symptoms. The ages of the patients were from fourteen to forty-two years, and the remedy was used for the first time on the second, third, or fourth day of the disease.

The serum reduced the temperature of the patient within a few hours, to the extent of from one to four degrees, but a similar effect has been obtained in the use of the other antipneumococcus serums, such as those of Pane, Klemperer, etc., and the temperature can be reduced also by the use of antipyretics. The author thinks, therefore, that the reduction of the temperature is not the only requirement for an ideal serum. The pulse and respiration were also rendered less frequent after the use of the new serum, but this, in the author's opinion is not a final test of the efficacy of the serum. In his view, the real criterion of the value of an antipneumonic serum is the effect of the remedy upon the character of the expectoration and upon the lesions in the lungs. He found that in his cases injections of comparatively small doses of serum (from 15 to 30 cubic centimetres) were sufficient within from eight to twelve hours to produce a return of the

râles of resolution. These doses corresponded in size to those required to immunize rabbits experimentally against pneumonic infection. The effects obtained with these injections were, in fact, identical in rabbits and in man. The author is convinced that Tizzoni's serum was of great value in the cases of lobar pneumonia in which he employed it; not only because it reduces the temperature and regulates the pulse and respiration, but also because it produces a direct effect upon the morbid process, softening and fluidifying the exudate in the lung. In other words, the effects of Tizzoni's antipneumonic serum are equivalent to those of the antidiphtheritic serum in diphtheria. In one case out of seven reported the treatment was instituted too late in the disease to produce any beneficial effects.

The Treatment of Bubonic Plague by Yersin's Serum, with Observations on its Mode of Action. By Dr. D. L. Cairns. (*Lancet*, May 9th).—The author's experience, gained during the two recent outbreaks of plague in Glasgow, seems to warrant the following conclusions: (1) That Yersin's serum is a remedy of the greatest value in the treatment of bubonic plague; (2) that its action is bactericidal, as shown by the degeneration induced in the bacilli, as well as antitoxic; (3) that this double action of the serum is best secured by its early administration in large doses, both subcutaneously into the lymphatic area which drains toward the bubo, and also intravenously; and (4) that in very mild cases subcutaneous injection alone will probably suffice, but in severe cases the combined method should be employed. For these latter the initial combined dose should be perhaps from 150 to 300 cubic centimetres, the proportion given intravenously varying with the relative severity of the general symptoms.

The Treatment of Pyæmia with Scavo's Iodized Milk.—Dr. Giuseppe Santoro (*Gazzetta degli ospedali e delle cliniche*, April 19, 1903) reports two cases of pyæmia in which he used Scavo's iodized milk with good results. After the bistoury had done what was needed, this remedy produced rapid and beneficial results. Scavo's iodized milk is a solution of iodine in sterilized skimmed milk, which is used instead of the iodized serum, which was formerly employed for the same purpose. The remedy is injected hypodermically and the object is to inject the iodine in an easily assimilable form. Iodine increases the resistance of the body cells against bacteria and their products. Scavo's milk is used principally in tuberculosis of the bones, joints, and glands, and in Basedow's disease and allied conditions. In inflammatory conditions of the larynx and in suppuration of the ear it has also given good results. [The milk is at present made by Professor Scavo, and its exact composition is not given by the author.]

Note on the Use of Pilocarpine in the Treatment of Pneumonia. By Dr. E. Curtin. (*Lancet*, May 16th).—The writer's article is based upon the results of the use of pilocarpine in seven cases of pneumonia. He found that it relieved pleuritic pain and breathing within a few hours of its administration and also seemed to hasten resolution, probably

by exciting glandular secretion. Its administration was in the majority of cases followed by a rise of temperature, of from half a degree to one degree and a half. One tenth of a grain hypodermically did not cause profuse perspiration, but rarely failed to reduce the temperature within an hour or two. It also cleaned the tongue and stimulated the flow of saliva. No undesirable or unpleasant results were noted. One precaution was necessary—namely, to keep the patient warm, especially his feet.

Phototherapy in the Treatment of Rosaceous Acne.—M. Leredde (*Journal des praticiens*, April 18th) says that the light treatment of this form of acne should be included among the recognized therapeutical measures. It brings about a cure more rapidly than chemical means (salves, etc.), and is more quickly efficacious than it is in tuberculous or erythematous lupus. In most of the cases, the cure remained perfect; in others, it became so when combined with external treatment and with the necessary attention to the visceral disturbances, especially of the gastrointestinal tract. Phototherapy is specially applicable to rosaceous acne of the nose, where the lesions are often much deeper than on the cheeks; but if the action of the light is not promptly efficacious, the author does not hesitate to use scarification at the same time.

Anæsthetic Action of Yohimbin.—Dr. Loewy and Dr. Müller (*Münchener medizinische Wochenschrift*, April 14th) have experimented with the extract of the bark of yohimbin and find that qualitatively it acts like cocaine; quantitatively, however, it differs from it. Yohimbin applied locally to mucous membranes can inhibit sensation as well as interfere with the irritability of the nerves of sensation; when applied to the nerve ends of the nerves of sensation, it induces anæsthesia. It acts like cocaine in being transitory in its effect, the return to the normal following its disappearance. It is not certain that its action can be applied practically.

NERVOUS AND MENTAL DISEASES.

Graves's Disease in Association with Rheumatoid Arthritis. By R. L. Jones, M. B. (*British Medical Journal*, May 2nd).—The author's experience seems to suggest not so much an affinity between Graves's disease and rheumatoid arthritis, as that they frequently coexist. He reports fourteen cases of rheumatoid arthritis showing in addition the four cardinal symptoms of Graves's disease—*viz.*, tachycardia, goitre, exophthalmos, and tremor. Tachycardia is a feature of some early cases of rheumatoid arthritis—it is suggested that it may be an indication of larval Graves's disease. The goitre and ocular symptoms were present in varying degrees, and were observed to change from time to time. The tremor was as a rule, general, and was more marked in the limbs affected with joint swellings. Increased pigmentation, leucoderma, scleroderma, urticaria, and various œdemas—all secondary features of Graves's disease—are occasionally met with in rheumatoid arthritis. In the majority of cases the two diseases began at the same time. Quinsy and rheumatism were frequent antecedents

of both. There is probably some obscure relationship between rheumatism and rheumatoid arthritis; the following factors may determine the sequence: 1. A fundamental element in the form of a neuropathic diathesis. 2. An accidental element in the presence of a possible source of toxæmia—oral sepsis, gastric ulcer, etc. It is possible that rheumatoid arthritis is caused by an underlying cerebrospinal toxæmia—a toxæmia which may be derived from many different disorders. Opinion as to the part played by the thyroid gland in Graves's disease is still divided; and since this disease may precede, arise coincidentally with, or possibly be engrafted upon, rheumatoid arthritis, the author suggests that these two diseases, when fused together, are extensions of one and the same morbid process—a toxæmia. The ideal line of treatment in both should be directed to the toxæmia.

Compulsory Ideas and Impulsive Actions.—Dr. S. A. Soukhanoff (*Roussky Vrach*, April 12th) calls attention to the difference between compulsory conceptions and impulsive actions. There is a variety of psychical actions which are compulsory; for example, compulsory conceptions, compulsory ideas, fears, movements, and desires. These psychical processes may be the expressions of an inherited nervous predisposition, taking the form of what the author calls the ideo-obsessive constitution. A characteristic of this particular constitution of the nervous system is that it is not accompanied by any loss of moral sensibility. If there is no additional pathological process present, persons with the ideo-obsessive constitution do not commit impulsive actions. The performance of impulsive acts is a symptom of other varieties of psychical disease, such as hysteria, epilepsy, progressive paralysis, idiocy, dementia, mania, melancholia, etc. In persons who perform impulsive acts the moral sensibility is, as a general rule, impaired. In the ideo-obsessive constitution, there are rarely instances of sexual perversions referable to impulsive acts. [The difference between the ideo-obsessive constitution and the state in which impulsive acts are committed is chiefly that in the former the compulsory idea of committing a certain act is present, but is controlled by fear and by the moral sensibility, while in the other the act itself is committed without any compunction.]

LARYNGOLOGY, RHINOLOGY, AND OTOTOLOGY.

Treatment of Tuberculous Laryngitis.—Dr. E. Kronenberg (*Münchener medizinische Wochenschrift*, April 14th and 21st) declares that surgical intervention is demanded in these cases when the general condition is good and when it is possible or probable that the diseased focus can be extirpated. Laryngotomy is only the exceptional measure of choice; the operation through the mouth is to be preferred. If entire extirpation of the diseased area is impossible, operation should be limited to the relief of dangerous symptoms or complications. None of the the usually recommended caustics has a specific action; the best of

all is the galvanocautery. The most important task in the face of this disease should be directed toward bringing about a spontaneous cure; a vigorous and careful general treatment should be practised so long as there is no specific against tuberculosis, diet and hygiene playing an important rôle.

CUTANEOUS MEDICINE AND SURGERY.

Drug Eruptions. By G. Pernet, M. R. C. S. (*British Medical Journal*, May 16th).—The author classifies and discusses the various drug eruptions as follows: (1) Erythematous, urticarial, papular, and desquamating rashes. These are the commonest drug eruptions met with. Belladonna produces symmetrical cutaneous rashes, sometimes associated with erythema multiforme and wheel-like patches. Scarlatiniform rash from the internal administration of this drug is rarely seen. Chrysarobin at times leads to a marked diffuse erythema, accompanied by conjunctivitis, if it has been applied near the eyes. Mercury may cause anything, from a slight erythema to a severe eczematous-like irritant dermatitis. Such a rash may become generalized, and instances of fatal universal dermatitis have been recorded. In syphilis mercurial rashes were formerly often attributed to the lues venerea itself, and the drug pushed with unfortunate results. A localized dermatitis following the use of blue ointment for pediculi is not uncommon.—Arsenic produces erythematous eruptions on the trunk which are either diffuse (scarlatiniform, morbilliform, erythrodermal) or circumscribed (papular, circuate, etc.). The lesions also simulate seborrhœic dermatitis, psoriasis, lichen planus, and syphilides. Iodoform acts as a cutaneous irritant in some cases, producing urticarial and erythematous conditions. The same may be said of its substitutes. Copaiba produces a papular, scarlatiniform, or morbilliform eruption. Turpentine also gives rise to similar rashes. Quinine and salicin both produce erythema, especially in patients with generalized skin diseases. Borax is stated to have produced psoriasis, but this the author has never seen. It does cause erythema. Opium, morphine, potassium chlorate, digitalis, antipyrine, sulphonal and chloral all produce erythematous rashes, as likewise do chloroform and ether anæsthesia and diphtheria antitoxine.

Diagnosis. In scarlatiniform rashes the first thing is to exclude scarlet fever. Non-scarlatinal rashes do not usually come out in the order observed in scarlatina. The urine should always be examined. Desquamation is not characteristic of scarlet fever. Where an epidemic of smallpox exists, the preliminary scarlatiniform rash of that disease must be borne in mind. Multiformity of eruption is in favor of non-scarlatinal origin—this is also true of morbilliform eruptions. The history must be taken with great care—often patients will deny the use of any drug whatsoever, especially where they have been using patent medicines, copaiba for gonorrhœa, etc. (2) Vesicular and bullous eruptions. These indicate a more severe action of the drug or a greater susceptibility of the skin. Most of the drugs already mentioned produce them. Iodoform, when applied to varicose ulcers, occasionally leads to an eruption of closely aggregated vesi-

cles on an erythematous base. Salipyrin produces at times a herpes-like eruption about the glans penis and the mucous membrane of the mouth. Potassium iodide greatly aggravates bullous eruptions. Arsenic and antipyrine both cause vesicular eruptions, that due to the latter being characterized by after-pigmentation, sometimes leading to the erroneous diagnosis of syphilis. (3) Pustular eruptions. Arsenic, chloral, and salicylic acid occasionally produce pustular eruptions, but they are rare. Bromides, and especially potassium bromide, give rise to postular lesions, either discrete or confluent, a not uncommon error being to mistake them for syphilides. Such eruptions are likely to occur in epileptics and they may continue to appear although the drug be stopped. The iodide pustular rashes are the most common. The individual lesions are usually smaller than in the case of bromides; they are usually discrete, rarely confluent. (4) Furunculosis sometimes results from the use of arsenic, bromides, or quinine. (5) Purpuric eruptions indicate great toxicity, due either to large doses of the drug or to great susceptibility of the patient. Arsenic, antipyrine, iodoform internally, quinine, sulphonal, and chloral all produce them. (6) Gangrene due to destruction of the vitality of the skin, may follow the use of arsenic, quinine, iodide, and orthoform. (7) Pigmentation. Arsenical pigmentation has long been recognized; in most cases it follows an erythematous blush, which gradually turns from red to copper color and to bronze—in severe cases, to almost black. The minute white dots on a dark background are characteristic. Silver nitrate and antipyrine also produce discoloration of the skin. (8) Keratosis or hyperkeratosis. This complication is observed in arsenical poisoning. (9) Tumor-like lesions may occur in the bromide eruptions. (10) Changes in the nails and hair are sometimes caused by arsenic.

A Case of Staphylococcus Infection of the Skin in Diabetes.—Dr. I. B. Studzinsky (*Roussky Vrach*, April 5th) reports a case of diabetes in a man twenty-nine years old, in which the disease was accompanied by the appearance of a peculiar staphylococcus infection of the skin. It has been known for a long time that diabetics are particularly prone to skin lesions and to pyogenic infections, but this belief became a certainty when Bujwid demonstrated experimentally that the addition of sugar to a culture medium promoted the growth of staphylococci. Rosenbach found that ordinary furuncles by absorption gave glucose to the blood or at any rate some very strongly reducing substance which was not uric acid. As yet, however, the question as to the connection between furuncles and glycosuria is an open one. In the present case there was no doubt as to the diabetes. The skin infection showed itself first on the anteroexternal surface of the thigh, in the form of a multitude of small furuncles of the size of a millet seed. These increased in size until they reached that of a half dime, burst, and became skin lesions of a dark pink color, which were soft, projected above the surface of the skin, and in their structure resembled granulating surfaces. They were painful on pressure and discharged pus from openings in their centres. They grew larger in size

and some of them coalesced, and new lesions appeared and passed through the cycle described. Finally, some of the lesions assumed the appearance of rupia. The lesions spread over the lower extremities and some of them appeared on the trunk, producing the sensation of itching. On bacteriological examination the pus from these lesions, being taken from those which had not yet opened, showed the presence of the *Staphylococcus pyogenes aureus*. Inoculations of the pure culture of this germ obtained from one of the lesions, and inoculations of the pus taken from one of the lesions into denuded areas of skin in the same patient, produced similar lesions. The patient died in diabetic coma, and portions of skin were obtained on autopsy for examination. The microscope showed that the lesions were instances of localized and diffused suppurative inflammation combined with a reaction of granulation. The peculiar form which the lesions assumed in this case, which was so different from the usual types of staphylococcus infection of the skin observed, was due to the peculiarities of the soil, the diabetic tissues.

PHYSIOLOGY AND PATHOLOGY.

Bacteriological Examination of Malignant Growths.—Dr. Robert Alessandri (*Centralblatt für Bakteriologie, Parasitenkunde und Infektionskrankheiten*, April 22d) examined twenty-three epitheliomata, eight sarcomata, one papillary recurrent glandular cystoma of the breast and one hypernephroma of the kidney and suprarenal body. No blastomycetes were found on culture, although suspicious looking bodies could be detected on microscopical examination. A portion of the growth in bouillon cultures bore some resemblance to sarcinæ, which had nothing to do with the neoplasms, however.

Contribution to the Study of Gastric Digestion.—González Campo (*Revista de Especialidades Médicas*, May 5th) gives the results of his observation, through the gastric fistula of a dog, of the influence upon the motor and secretory functions of the stomach of various substances as follows: (1) In the dog, a meal composed of 100 grammes of chopped, raw meat and 200 cubic centimetres of water at the temperature of the surrounding air, leaves the stomach in three hours. (2) The evacuation of the stomach is accelerated by half an hour if, with the meal, a small quantity of sodium bicarbonate, alcohol, a bitter, strychnine, hydrochloric acid, or very cold or hot water is taken. (3) Evacuation is accelerated by fifteen minutes through ingestion of a small dose of sodium bicarbonate half an hour before a meal, or by an increased dose during the meal. (4) Evacuation is retarded forty-five minutes by ingestion of a large amount of alcohol during the meal. (5) The secretion of hydrochloric acid is not appreciably influenced by ingestion of liquids of extreme temperatures, bitters, strychnine or hydrochloric acid. (6) The total acidity is increased by small doses of sodium bicarbonate and large quantities of alcohol. (7) Total acidity is decreased by large doses of sodium bicarbonate given with the food, and also to a

lesser degree by small doses given half an hour before eating. (8) Free hydrochloric acid, which is not present in the dog's stomach after the test meal, becomes manifest, as it does in man, after introduction of large amount of alcohol with the food and also, contrary to that which occurs in man, after ingestion of sodium bicarbonate in any dose.

Hermaphrodites.—Dr. Landau (*Berliner klinische Wochenschrift*, April 13th) describes a genuine hermaphrodite. The person is twenty-eight years of age, a widow, and is possessed of a very large clitoris, but the other genitals are masculine in character. She has feminine traits and desires and sexually feels attracted to men only. The author speaks of the difficulties of assigning such persons to the proper sex, and points out that the German law does not employ the word "hermaphrodite." He cites Virchow as authority for the statement that human beings can be neuter in gender. [For the complete description of the person, the reader is referred to the original article.]

Unusual Vascular Murmur in the Lungs.—Dr. P. K. Pel (*Berliner klinische Wochenschrift*, April 13th) narrates the case of a man, thirty-two years of age, who suffered frequently from hæmoptysis. The apex of the right lung was retracted. Over the entire upper right lung could be heard a loud, continuous blowing murmur with systolic increase. It was accompanied by a high-pitched, whistling, almost musical "overtone," and was heard with greatest distinctness over the supraclavicular fossa. Pel believes that it was caused by a direct connection between the arteries and veins of the region or possibly to a dilatation of the veins in the immediate neighborhood of the artery.

Topographical Anatomy of the Tracheal and Bronchial Lymph Glands.—Dr. W. Sukinnenikow (*Berliner klinische Wochenschrift*, April 13th and 20th) goes exhaustively into a study of the anatomy of these glands, and illustrates his paper freely. His main conclusions are, that these glands follow a regular distribution and lie in three separated spaces formed by the synoptic relations of the trachea and the bronchi. The bronchial glands lie in the angle formed by the separation of the bronchi or their branches. The right vagus nerve bears topographical relations to the right tracheobronchial group, but the left vagus nerve has no such relation to the glands on the left side. The left inferior laryngeal nerve is in direct relation with the group occupying the arch of the aorta and the thyroid gland. The author doubts the possibility of eliciting by percussion an enlargement of these glands.

On the Inclusions in Cancerous Tissues.—Dr. V. N. Klimenke (*Journal Akousherstva i Gieniskikh Boliesney*, February) repeated the experimental work of Feinberg, who affirmed that he had discovered the parasites of cancer (*Deutsche medicinische Wochenschrift*, 1902, No. 11, p. 86) and also investigated the question of cellular inclusions in cancerous tissues. He did not find the organism described by Feinberg in any of his sections made from the cancerous tissues immediately upon their removal

from the body by operation. The present author's attempts by modern microchemical reactions to determine the nature of the cellular inclusions of cancerous tissues did not give any positive results. He believes, however, that the work which has been done of late in this direction is too one-sidedly directed toward a study of degenerative processes in cancerous tissues, instead of considering also processes of secretion and storage, *e. g.*, the formation of glycogen. The supposition that the inclusions found in the cells of cancer are in reality parasites which cause the malignant growth, are refuted by the following facts: In one case of cancer we find a large number of inclusions and a very small number of mitoses, while in another case we find a large number of mitoses and a very limited number of inclusions. Not one cancer cell examined by the author and found to be proliferating, contained an inclusion.

The work was done in the Zürich clinics, the material being obtained directly from the hands of the surgeons, immediately immersed in Flemming's solution or some other fixative. The material comprised four cases of mammary cancer, one of cancer of the lower lip, and one of fibroadenoma of the breast. Feinberg stated that he had found the real parasites of cancer in certain vacuoles which existed between the cells and could not be stained by any known method. They were usually oval in form and occasionally sharpened at the ends or rounded. Their size was usually smaller than that of the nucleus of the cancer cells, and they had a dense cell wall with double contour which stained well with plasma dyes. There were a small nucleus which stained with nuclear dyes, consisting of a nucleolus and a less well staining nuclear substance. The plasma of the cell itself was only demonstrable by the plasma dyed (Orange G). The author followed Feinberg's technics, but his experimental work was entirely negative as regards the presence of Feinberg's bodies, although he did find cellular inclusions in the shape of Plimmer's bodies in all the slides, except in the case of cancer of the lip.

Arrow Poisons in German East Africa.—Dr. L. Brieger and Dr. G. Disselhorst (*Berliner klinische Wochenschrift*, April 20th) refer to the glucoside isolated from arrow poison in 1899 by the former author and assert that it is identical with Fraser's and Lillie's poisonous glucoside isolated from the plant *Acocanthera venenata*. The natives of German East Africa employ an antitoxine extracted from other plants when poisoned with acocanthera, but the authors have obtained negative results with them experimentally in animals.

Some Observations on the Blood Gases in Diabetes. By Dr. A. B. Beddard, Dr. M. S. Pembrey, and Dr. E. I. Spriggs. (*Lancet*, May 16th).—During the last twenty years the view that diabetic coma is due to an acid intoxication, has steadily gained ground. The alkalinity of the blood is diminished and its carbonic acid content is low. The authors have estimated the carbonic acid content and the alkalinity of the blood in fifteen cases, eight being cases of diabetic coma, and three of diabetes without coma. The gases were estimated with

Hill's blood pump, and the alkalinity by Wright's method. They found that in all the cases of diabetic coma which had not been treated with alkali, the carbonic acid was half or less than half the normal. In the blood of the non-comatose patients there was less CO₂ than in normal blood, but more than in coma. The depression in alkalinity and CO₂ content ran approximately parallel, except where sodium carbonate had been given. The authors do not favor the view that in diabetic coma the tissues are loaded with CO₂, but rather favor the conception that in diabetes, owing to the acids produced by the morbid metabolism, the cells of the body are (from alkali deprivation) unable to carry on the usual oxidative processes, and that in coma this inability to utilize oxygen becomes acute and the cells, including those of the respiratory centre, are in a state of oxygen starvation, although there is plenty of oxygen in the blood.

Comparative Examination of Maternal and Fœtal Blood and Liquor Amnii.—Dr. W. Zaugemeister and Dr. T. Meissl (*Münchener medizinische Wochenschrift*, April 21st) have examined many specimens of blood of mother and child and reach these conclusions: (1) In the majority of instances, the child has more red blood cells than the mother, but fewer leucocytes, although this relationship may occasionally be reversed. Usually, the hæmoglobin content is greater in the child than the mother. (2) The blood of the child coagulates less perfectly than maternal blood, and the clot is softer. Centrifugated serum of the mother is wine-yellow in color, that of the child darker, orange yellow. (3) Maternal serum contains a constant higher amount of proteids than that of the child, and has consequently a higher specific gravity and a richer amount of nitrogen. The volume of plasma is greater in the mother, and this fact, combined with the greater hæmoglobin content of the fœtal blood, is important for the respiration of the fœtus. (4) The chlorides are the same in both mother and child. (5) The nitrogen appears to be somewhat greater in the former than in the latter. (6) The freezing point of both sera is, on the average, the same.

From chemical examinations of the liquor amnii, the authors conclude also that during the last months of pregnancy, the fœtus urinates quite constantly.

Blood Changes After Splenectomy.—Dr. E. Rautenberg (*Münchener medizinische Wochenschrift*, April 21st) finds that the postoperative increase of erythrocytes may last for several months, that there is no change in the percentage of hæmoglobin, and that the increase of eosinophiles begins within a few weeks of operation and attains a rather high percentage (8 per cent.). In a case examined five months after operation, he found, in addition, that the leucocytes doubled in number (from 5,000 to 10,000) within four weeks of the operation, and gradually decreased in the next four months to 7,000. The multinuclear neutrophile cells were at first enormously increased and gradually diminished in number. Within four weeks of the operation, a decided lymphocytosis appeared, but no swelling of the lymphatic glands was observable.

Proceedings of Societies.

AMERICAN GYNÆCOLOGICAL SOCIETY.

Twenty-eighth Annual Meeting, Held in Washington, D. C., May 12, 13, and 14, 1903.

The President, DR. JOSEPH E. JANVRIN, of New York, in the chair.

What Shall be the Treatment in Cases of Pregnancy Complicated by Fibroid Tumor?—

There was a general discussion on this subject, and the first paper with this title was read by Dr. HENRY C. COE, of New York. He stated that fibroid tumors complicated pregnancy because they interfered with the normal development of the gravid uterus. They caused distressing symptoms or they jeopardized the life of the foetus or of the mother. Each case must be studied separately, and the decision as to the treatment would vary with the patient, the tumor, and the experience and bias of the surgeon. He spoke of the influence of the tumor on pregnancy and of that of pregnancy on the tumor—increased growth, degenerative changes, environment, etc. He distinguished three periods of pregnancy.

1. Up to the fourth month.—(a) Empty the uterus in the case of large interstitial or broad ligament tumors, or where they were situated in the lower uterine segment, also in cases of impacted intrapelvic growths. Cases were cited in point. (b) Small tumors should be enucleated per vaginam, if possible, though pregnancy would usually be interrupted. Intrauterine polypi should be removed, if accessible. (c) Enucleation should be done by the abdominal route. Subperitoneal pedunculated growths should be removed. (d) Impacted growths should be liberated under anæsthesia when no adhesions were present, and they should be kept out of the pelvic cavity until they were held out of the way by the growing uterus. The wishes of the patient should be followed so far as this could be done with safety.

2. Fourth to seventh month.—The location of the tumor was important, as well as its size and variety. Pain and pressure symptoms furnished indications for treatment. (a) Large interstitial growths. The uterus might be emptied, although the danger of hæmorrhage from such a course was greater. (b) He advised enucleation by the abdominal route, and spoke of the propriety of removing multiple small tumors which did not encroach on the uterine cavity. (c) The patient should be kept under observation. She might go to full term and be delivered normally. (d) Impacted tumors, pressing on the bladder, bowel, or ureter, might call for radical operation. (e) Twisted pedicle, degeneration of the tumor, disease of the annexa, peritonitis, etc., might require interference without reference to pregnancy.

3. After the sixth month.—Viability of the foetus should be obtained, if the life of the mother was not actually jeopardized. Could the woman be delivered at term? Yes (a), with subperitoneal growths, if they are not too large and favorably

situated. (b) With small interstitial fibroids, if they were not in the lower uterine segment. (c) Polypi presenting at the os could easily be removed at any time. After the eighth month the Porro-Cæsarean operation, suprapubic amputation, or hysterectomy should be performed. Conservatism should be practised here, as in other gynæcological operations, but not carried to extremes.

The author discussed the question of marriage and subsequent risks of pregnancy in women with fibroids. He said the time for conservative surgery was often before there was a chance of conception. In general, if a fibroid was to be regarded as a menace to life before pregnancy, the condition must be still more grave after conception occurred. Was it not the duty of the gynæcologist, he asked, to ward off this danger?

Myomectomy or Hysterectomy.—Dr. JOSEPH TABER JOHNSON, of Washington, read a paper with this title. He said the treatment depended upon the size, variety, and location of the tumor, and the size of the pregnancy. Myomectomy in favorable cases should be the operation of election. However, cases would occasionally present themselves with such urgent symptoms as to require supravaginal hysterectomy as a life-saving operation. He described briefly successful operations of both varieties. He discussed the question of abdominal and pelvic operations during pregnancy, also the propriety of inducing premature labor as well as the policy of trusting to the *vis medicatrix naturæ*.

Pregnancy and Labor Complicated by Myomata.—Dr. GEORGE TUCKER HARRISON, of New York, in a paper with this title, stated that no general rules could be laid down with reference to the treatment, as each case must be carefully studied in all its circumstances before recourse was had to operative intervention. The dangers of this complication of pregnancy as a cause of dystocia were formerly overestimated. The plan of treatment, during pregnancy, as a rule, was an expectant one.

Dr. EDWARD REYNOLDS, of Boston, spoke of the treatment of large incarcerated fibroids, at or near term, in advance of the foetal head. He had seen ten such cases. No one of these tumors was smaller than the seventh month foetal head. In each instance the woman was delivered either normally or by forceps.

Dr. J. DUNCAN EMMET, of New York, said there was no question but that certain myomata must be removed either by myomectomy or by the radical removal of the uterus, while there were other cases in which the tumors did not interfere with the course of pregnancy. He was glad one of the essayists had emphasized a preference for myomectomy rather than the removal of the uterus, as the latter was such a serious procedure in its after effects, etc.

Dr. WILLIAM R. PRYOR, of New York, expressed himself in favor of conservatism in the treatment of fibroids associated with or complicating pregnancy. If the tumors were situated in the anterior wall of the uterus, and were very small, they would slide up over the pubes without much trouble. Even before the seventh month, while some of these tumors seemed to be an actual bar to delivery, they would accommodate themselves to the situation by

their softness. Subperitoneal fibroid tumors complicating pregnancy demanded operation as a rule.

Dr. HENRY D. FRY, of Washington, referring to Dr. Coe's paper, spoke of emptying the uterus, saying he thought the cases were rare where this procedure was called for. The treatment was either expectant or radical. Those tumors which indicated emptying the uterus were necessarily located in the lower uterine segment, and yet some of these occasionally rose in the pelvis and gave very little or no trouble.

Dr. WALTER P. MANTON, of Detroit, looked upon cases of fibroid tumors complicating pregnancy as very rare. Personally he had seen but six such cases out of five or six thousand cases of labor in private and hospital practice. In the majority of cases of interstitial submucous fibroids abortion almost inevitably occurred between the third and fifth months.

Dr. REUBEN PETERSON, of Ann Arbor, Mich., spoke of a case on which he had operated, the fibroid tumor being located in the lower uterine segment and of the interstitial variety. He did myomectomy and enucleated the tumor; the woman went on to full term and was delivered of a child.

Dr. GEORGE J. ENGELMANN, of Boston, had twice seen the disappearance of a fibroid following confinement.

Combined Bisection of Tumors and Uterus with Enucleation of the Former in Abdominal Hysterectomy for Large Fibroid Tumors.—Dr. GEORGE H. NOBLE, of Atlanta, Ga., read a paper on this subject. In case of large fibroid tumors in the body of the uterus, the author recommended bisecting the tumor, bisecting the uterus, and then enucleating the bisected tumor. In intraligamentous tumors the uterus should be bisected, the capsule of the tumor penetrated from the cavity of the uterus, and the tumor enucleated from its capsule.

The advantages of this method were: Saving of time, prevention of hæmorrhage, increased working space, easy manipulation, accessibility to the blood supply in the deep pelvis, and freedom from liability of injury to the ureters and uterine arteries.

Enucleation of Intraligamentous and Postperitoneal Fibroid Tumors in the Deep Pelvis.—The author (Dr. GEORGE H. NOBLE) had received a reprint from Dr. Pryor, of New York, in which he (Pryor) had anticipated him in the treatment of intraligamentous tumors, or postperitoneal fibroids, in the deep pelvis. As the principle was the same, and both of them only differed in technique, the speaker endorsed it. Intraligamentous tumors were partially enucleated by penetrating their capsules from the cavity of the uterus after bisecting the organ. They should be turned out with the fingers and morcellation forceps, then drawn up and rotated outward as described. The portion of the tumor attached to the capsule everted the latter as it was drawn out of the abdominal incision, and often to such a surprising extent that it might be included in the ligature placed around the upper border of the broad ligament. In this way the capsule in some cases might be entirely removed, and in others only cut away, and if within the ligature of the pedicle, avoided

the necessity of suturing the edges of the capsule. He said that Dr. Pryor did complete enucleation of the tumor and sutured the capsule, while he partially enucleated the tumor, utilizing its attached portion to pull up the capsule, transfix, and tie off, in part or entire, with the ligature of the broad ligament.

The Relation and Correlation of Gynæcological and Nervous Affections.—Dr. CHAUNCEY D. PALMER, of Cincinnati, in a paper on this subject, discussed this relationship from two standpoints: (1) What influence do female pelvic diseases have in the induction of nervous disorders? (2) What affections of the female pelvic organs arise from nervous derangements? At the start, he ruled out all thought of the occurrence of any organic, so called structural, lesions of the nervous system as resulting, unless indirectly and quite remotely, from pelvic diseases. The morbid changes, then, to which reference was made were hysteria, neurasthenia, neuralgia, chorea, epilepsy, hysterioepilepsy, certain paralyses, migraine, convulsions of certain kinds, including tetanus, also mental aberrations, and vasomotor changes.

While many hysterical women had no anomaly of the sexual organs, it must be said that a certain proportion of them did have some imperfection in the development of their sexual apparatus, especially the uterus. Hence the justifiability of an oophorectomy in some such cases. Should the sexual organs be diseased in hysterical women, one could not say that the hysteria was secondary. Even then psychological causes were at work, more potent than the local disease.

Errors in diet, in general hygiene, in lack of rest, and in various indulgences of the mind and body in girlhood led to physical anomalies and gave rise to abnormal mobilities of her nervous system. The functions of ovulation and menstruation played more than the ordinary rôle in the inauguration of nervous phenomena.

He spoke of cases of insanity having been promptly relieved by gynæcological operations; likewise it had immediately followed them. Such sequelæ, then noticed, were probably more common than after other operations. In the treatment of women for the special diseases of their sex, there was too much of a tendency to place undue stress on real or supposed lesions of the reproductive organs. This was particularly true in reference to some so called, ovarian affections. The gynæcology of to-day would not amount to much without an appropriate surgery, but indiscreet surgery, like overmedication, might be an abuse. Every theory in medicine must be the outgrowth of an extended experience. "Knowledge comes, but wisdom lingers."

The Ætiology, Pathology, and Treatment of Puerperal Sepsis.—Dr. HIRAM N. VINEBERG of New York, contributed a paper with this title. 1. He said that severe sepsis might be caused by a variety of pathogenic germs. The variety of germ found in the uterine discharge in a given case was no criterion of the severity of the case and formed no safe guide as to prognosis or as to the treatment to be adopted. 2. Bacteriological examination of the blood was of little value, either from a prognos-

tic or from a therapeutic standpoint. 3. The treatment of puerperal sepsis must be based chiefly upon the clinical history and physical signs of each individual case. 4. Wounds or infection in the perineum, vagina, or cervix were to be treated on the general surgical principles of irrigation and drainage. 5. Curetting was indicated where there were evidences of placental decidual residua in the uterus independent of the variety of bacteria that might be found in the uterine cavity. 6. In those rare cases in which adherent and sloughing placental tissue could not be removed, either with the sharp curette or with the fingers, hysterectomy was indicated, provided the patient was not already moribund. 7. Hysterectomy was also indicated in cases of septic endometritis, or infection of the placental site, so long as the infection was still limited to the uterus, and when the symptoms steadily grew worse in spite of uterine irrigation, with or without curetting, and appropriate hygienic stimulating treatment. 8. In abscess of the uterus the abdomen should be opened, and, when feasible, the purulent foci should be drained and the uterus preserved. If the uterus was studded with small abscesses, hysterectomy was indicated. 9. The abdominal was to be preferred to the vaginal route for hysterectomy. 10. If the infection had passed from the uterus into one or other tube and had set up a violent grade of inflammation, the abdomen should be opened and the infected tube removed before a general peritonitis developed. 11. When the infection had passed through the uterus and had set up a general peritonitis, a patient might occasionally be saved by a timely abdominal section and drainage. 12. In cases of parametric exudates, the treatment should be conservative, and surgical intervention was indicated only when there were evidences of pus formation. 13. In obscure cases in which the pathological lesion could not be determined, and the symptoms were steadily growing worse, it might be advisable to open the abdomen to search for a hidden purulent focus or for a circumscribed slough of the uterus. 14. The procedure proposed by Trendelenburg and executed by him and others, of ligating the pelvic veins when they had become infected and thrombosed, was worthy of further trial.

Dr. WILLIAM R. PRYOR took issue with the essayist in regard to the significance of certain pathogenic germs. In the mild cases of puerperal sepsis, very rarely was the streptococcus present, while in the severe ones streptococci were found. In the mild forms of the disease many other kinds of germs were found, chiefly staphylococci and saprophytic bacteria. The form of puerperal sepsis which demanded careful attention was due to the streptococcus.

Dr. EDWIN B. CRAIGIN, of New York, related his experience at the Sloane Maternity. He was free to confess that in this institution infection occasionally occurred, because patients were taken undelivered, no matter whether they had been handled by midwives or by tyros. Patients were admitted whether they were just in labor or whether they had been in labor for several days. Occasionally patients had been lost from puerperal infection, although pathologist and bacteriologist were unable to find the streptococcus. A number of severe cases had been observed in this maternity in which a variety of bac-

teria were found in the uterus. In the management of puerperal sepsis, he emphasized two points: First, to make sure the uterus was emptied. Second, in making sure that it was emptied, do just as little damage to the inside of the organ as possible.

Dr. J. WHITRIDGE WILLIAMS laid stress on the value of bacteriological examinations of the uterine lochia and of the blood. In many cases there was no definite indication for treatment from such examinations; yet there was no doubt in his mind that important and valuable information as to the condition of the patient could be elicited in this way, more particularly by an examination of the blood. He had seen but two cases of puerperal sepsis in which he felt that an operation was distinctly called for.

Dr. MATTHEW D. MANN, of Buffalo, spoke of gonorrhœal infection in connection with the puerperium.

Dr. W. GILL WYLIE, of New York, said there could be no question but that surgical intervention was indicated in some of the severe cases of puerperal sepsis. Of his first nine cases, treated at the Bellevue Hospital many years ago, seven were treated locally and two surgically. He believed the uterus should be emptied in every case of severe streptococcus infection connected with the puerperium.

Dr. EDWARD P. DAVIS, of Philadelphia, speaking of hysterectomy in cases of puerperal sepsis, stated that this operation had nothing definite to support it except in rare cases of adherent placenta. A method which yielded good results where irrigation had failed consisted in opening the abdomen and inspecting the uterus, tubes, and ovaries, freeing adhesions, etc., and, if there was a collection of pus found in the tubes, draining by means of iodoform gauze carried through into the vagina, separating the organs from abnormal adhesions.

Dr. MALCOM McLEAN referred to the curette as a dangerous instrument in cases of puerperal sepsis in the hands of the average general practitioner. Emptying of the uterus was an absolute necessity in some cases, especially where there was evidence of putrid absorption, with chill, and sudden high temperature.

Dr. HENRY D. FRY said the practice at the Columbian Hospital, where a large number of maternity cases were observed, if the patients were seen in the beginning of sepsis and the infection seemed to be confined to the uterine cavity, was, first, to thoroughly clean out the uterus. After having taken a culture, active treatment of the uterus was suspended until the result of the culture was made known. If there were retained pieces of placenta, blood clots, attended with a foul odor, producing infection, the indication for cleaning out the uterus was clear. On the contrary, if the culture showed streptococcus, staphylococcus, colon bacillus, or gonococcus, or any of these infective agents, the uterus was left alone. In cases of streptococcus infection he believed the use of the curette would do a great deal of harm, in that it would break down the protective zone of inflammatory tissue which was thrown out by nature and would cause ultimately a general systemic infection.

Dr. HERMAN J. BOLDT, of New York, said experience had taught him, so far as the treatment of

puerperal sepsis was concerned, that a bacteriological examination of the secretions from the vagina or from the uterus, or a bacteriological examination of the blood, furnished no indication whatever, because there was usually a mixed infection, both streptococci and staphylococci being found in the secretions of the uterus or vagina. Such patients frequently manifested mild clinical symptoms, although operative intervention was not indicated. In all cases that came under his care, examinations of the secretions and of the blood were invariably made, and in patients who showed bacteria in the blood, even a pure staphylococcus infection, the general condition of the patient did not seem to indicate the necessity of surgical intervention, consequently they were left alone and recovered. On the other hand, many patients showed absolutely nothing in the blood, yet they died, so that as the result of the accumulated experience, bacteriological examinations of the secretions and of the blood of such patients did not give a definite clue as to the indication for treatment. Hysterectomy was of no avail in the intense cases of puerperal sepsis, particularly the fulminant forms, as the patients died within a few days.

Dr. SETH C. GORDON, of Portland, Me., thought surgical treatment was undertaken too early in some cases of puerperal sepsis. If there were abscesses of the Falloppian tube, they should not be opened until one was quite sure that he could make a straight incision from the vaginal vault into the abscess cavity without having any doubt as to whether pus was limited to the top of the vaginal wall. Every time an abrasion was made in the uterus or vagina with the curette or knife, a new avenue of infection was opened up and caused in many cases great deal of harm.

Dr. H. G. WETHERILL referred to the Carosso method of treatment of puerperal sepsis, as advocated by Dr. Edward J. Ill, of Newark, N. J., several years ago. Its value was unquestionable.

(To be concluded.)

Letters to the Editor.

THE CONTRACT SURGEON IN THE PHILIPPINES.

NEW YORK, April 30, 1903.

To the Editor of the NEW YORK MEDICAL JOURNAL:

Sir: On January 30, 1903, the President of the United States approved an act of Congress entitled "*An act to promote the efficiency of the Philippine Constabulary, to establish the rank and pay of its commanding officers, and for other purposes.*" On February 20, 1903, General Order No. 13, Headquarters, Division of the Philippines, Manila, P. I., was promulgated. This order relates wholly to the Philippine Constabulary, and commences by quoting the act of Congress referred to above. Section 2 of this order contains the following words: "While assisting the constabulary, the companies [companies of Philippine scouts are here meant] continue to be dependent on the army for their

pay, rations, clothing, medicine and medical attendance, arms and ammunition, and amenable to the rules and articles of war."

A little farther on in the same section comes the following provision for proper medical attendance and care for the Philippine scouts and constabulary during expeditions against ladrones, as the insurgent Philippine forces remaining at this date are now called: "Department commanders will send *contract surgeons or acting hospital stewards*, with necessary medicines, etc., *to accompany scouting expeditions as may be required, for the purpose of properly caring for the sick and wounded.*"

It is to this paragraph in this order that I wish to invite your attention for a moment. In view of the fact that the only field work now on hand in the Philippines, except perhaps in the island of Mindanao—and there is but little there now, and in this little contract surgeons have at least their full share—is being conducted by the scouts and constabulary forces; in view of the fact that, as may be seen from the daily journals, this work is hazardous and wearisome to a very considerable degree; in view of the fact that there is no retirement on the pension list for the contract surgeons disabled in line of duty, no foreign service pay for them, no future in store—except annulment of contract; in view of these facts why is this discrimination made in favor of the commissioned officers of the medical corps of the army serving in the Philippines?

Why are contract surgeons and acting hospital stewards (the use of the conjunction "or" would seem to imply that both are equally capable from a medical and surgical point of view!) to do all the field work, to take all the risk of danger to life and health incident to "hiking" after and fighting Ladrones throughout the provinces? Is it because the Philippine scouts and constabulary are not regarded as of such vital importance—in case of loss of life or disability—as are the rank and file of the regular army, and therefore contract surgeons or acting hospital stewards are considered good enough to treat them? Or is it because at posts in the Philippines where scouts and constabulary forces are stationed, contract surgeons are being detailed to look out for their medical and surgical welfare, and so, being on hand, they would be the most easily obtainable for such scouting and fighting as may from time to time arise? If this latter should be given as the reason, is it, after all, any reason at all?

Are first lieutenants in the regular medical corps too precious or of too much rank and importance to be spared for duty at such posts?

The bravery and readiness for duty, cheerful fulfillment of the same, and the medical and surgical ability of the contract surgeon, as compared with similar attributes of members of the regular medical corps of the army, have never to my knowledge been questioned, and could not be by any one acquainted with the facts. All members of the medical corps of the United States Army should always be ready *to do their share and bear their portion* of hardship and danger, but why should the poor contract surgeon have it "rubbed in" as this order proposes to do, more especially as he has no healing balm in the shape of foreign service pay, foggies, or

retirement for disability for such extra-hazardous and wearing duty?

It cannot be said that contract surgeons are out-ranked by first lieutenants of the regular medical establishment, and so have to perform more strenuous medical labors, for the contract surgeon, being neither an enlisted man nor a commissioned officer, has no rank at all. But, if he had, and was out-ranked by every commissioned member of the regular medical corps, that still would be no reason for ordering him and his ilk to perform campaigning duty so that his immediate superiors might be excused from it. Can it be that the authorities have at last recognized the merit of the contract surgeon and have assigned to his class the duties for which regular members of the corps have so long and often expressed their desire—active service? I am afraid not. Truly I am at a loss to see the *raison d'être* of such an order, and should be glad of enlightenment on this subject.

Does not this seem to the medical profession generally a little difficult of comprehension? To say the least, a trifle unjust? True, the order does *not* say that commissioned medical officers *may* not serve on such expeditions, but it *does* say that the contract surgeon or the acting hospital steward *shall*!

It would surprise me to hear that contract surgeons now making contracts—they are for two years at this date—in the United States, for duty in the Philippines, were furnished with copies of this general order from Division Headquarters in the Philippine Archipelago! I am quite sure that they are not. Many physicians, were they aware of the existence of such an order, discriminating against their class in the division of the Philippines, would think at least twice before putting their names to the contract.

Therefore I ask you to publish this letter in the *Journal*, so that "he who runs"—to make a contract for medical duty in the Philippines—"may read" what may be *his* future duty and detail and wherein it will differ from that of the commissioned medical officer, United States Army, on duty in our insular possessions in the far East.

A FORMER CONTRACT SURGEON AND CAPTAIN
AND ASSISTANT SURGEON, U. S. VOLS.

Book Notices.

Uterine and Tubal Gestation. By SAMUEL WYLLIS BANDLER, M. D., Instructor in Gynæcology, New York Post-graduate Medical School. Illustrated by Ninety-three Drawings. New York: William Wood & Company, 1903. Pp. xi-159.

Most of these pages have been printed before in one of the current obstetrical journals and present, therefore, no novelty. They represent a great amount of original work on the part of the author, and whether his conclusions are generally accepted or not, the book is one deserving of careful study.

Dr. Bandler divides his book into three parts: The Essentials of Uterine Gestation, The Essentials of Tubal Gestation, and Ovarian and Placental Secretion. In the first division the newer theories, as elaborated by von Spee and Peters, are discussed and

somewhat added to by the author, who has supplied a large number of illustrations to emphasize his arguments.

In his discussion of the origin of tubal pregnancy, Bandler looks at the injury to the cilia of the tube by trauma or inflammation as the main ætiological factor. He disregards entirely the work of Martin and Werth, and recently of Micholitsch, in which the presence of accessory lumina of the Falloppian tube is made to appear as the principal factor in holding the ovule in the tube to be there developed. The truth probably is that, while in a series of cases the cilia of the tubal lining epithelium may be absent, while in another accessory lumina may be present, while in another occlusions and knots of the tube may be found, any or all of these may be the causes of a given tubal pregnancy, and no two cases may have the same ætiological factors as a basis. We do not say Dr. Bandler is wrong; but he has probably not included the whole truth in his theory that an absence of cilia is the ætiological factor in tubal gestation. We would merely suggest that probably in some cases the ovum or the ovule itself is at fault; and it requires more than absence of ciliated epithelium to explain interstitial and ovarian pregnancies.

Turning now to the last division of the book, we confess our inability to review it justly. It is based entirely on theory and is filled with broad generalizations which name no place in a purely scientific work, such as the statement that "papillomata of the ovary, in all probability, also develop from cells of these supposedly regressive structures" (the epooophoron and the paroophoron). The entire argument as to the relation of the chorionic epithelium to the development of chorioepithelioma is similarly studded with generalizations and theories. The author may be correct in many of his assumptions; but in the present rather confused state of the entire subject, no man can say what will eventually be found to be right. We find here a mixture of physiological chemistry improved and of pathology and histological anatomy which is not easily digestible.

Nevertheless, the author's work is highly interesting and has been carried out with energy and assiduity. Many of the illustrations are original, and the book as a whole is full of suggestiveness and indicates the tendency of American writers toward original lines of research.

Physical Chemistry for Physicians and Biologists.

By Dr. ERNST COHEN, Professor of General and Inorganic Chemistry in the University of Utrecht. Authorized Translation from the German by MARTIN H. FISCHER, M. D., Instructor in Physiology in the University of California. New York: Henry Holt & Company, 1903. Pp. viii-343.

Since in recent years physiological and physical chemistry are so often consulted in solving medical problems, especially in the field of clinical diagnosis, the volume before us constitutes a most valuable addition to works on this subject. The author carefully considers the wide range of education in these sciences which his readers may have received, and the book is accordingly written in an elementary and comprehensive manner.

Dr. Cohen has divided his subject into sixteen lectures, and under each heading develops his subject from the simple physical or chemical phenomenon into the more intricate physiological reaction. The examples selected by him in each lecture are typical and explain to the novice in this field the applications to which each technical process may be referred. The subjects of electrolytic dissociation and the catalytic action of ferments, which Emil Fischer so fitly compares to the action of a key in opening a lock, are comprehensively treated. Under the latter heading is brought the presence of minute amounts of arsenic in the thyroid gland and its consequent physiological properties as shown by Gautier.

Equilibrium and reversible reactions, as shown in the blood hæmoglobin, and osmotic pressure, as exhibited in certain plant and animal cells, are fully discussed. The author calls attention to the important fact that so called "physiological" salt solution, approximately a 0.6 per cent. solution of sodium chloride, is only indifferent toward the blood corpuscles of the frog, whereas a 0.9 per cent. solution causes no change in volume in the blood of man, horse, or cattle. It would be well to observe this suggestion in practice. The author accordingly refers hypotonicity and hyperisotonicity to this standard.

The tenth lecture deals with the determination of the molecular weight, under which subject cryoscopy is treated. This is of particular interest to the physician, as well as to the surgeon, as an indication of renal insufficiency, and, although there has been no end of discussion upon this subject, it must be admitted that cryoscopy is of importance from a diagnostic standpoint in those cases in which the functions of the kidney are questioned.

To the author as well as to the translator should be accorded praise for presenting in such concise form, this simple and comprehensive presentation of an important subject.

BOOKS, ETC., RECEIVED.

Ambulance Work and Nursing. A Handbook on First Aid to the Injured, with a Section on Nursing, etc. Profusely illustrated. Chicago: W. T. Keener & Co., Pp. 3-304. (Price, \$3.50.)

The Practical Medicine Series of Year Books. Comprising Ten Volumes on the Year's Progress in Medicine and Surgery. Issued monthly. Under the General Editorial Charge of Gustavus P. Head, M. D., Professor of Laryngology and Rhinology, Chicago Post-Graduate Medical School. Volume v. Obstetrics. Edited by Reuben Peterson, A. B., M. D. Professor of Obstetrics and Gynecology, University of Michigan. April, 1903. Chicago: The Year Book Publishers, 40 Dearborn Street, Pp. 5-204. (Price, \$1.50. Price of the Series, \$7.50.)

The Refraction of the Eye and the Anomalies of the Ocular Muscles. By Kenneth Campbell, M. D., Edin. F. R. C. S. Eng., Surgeon to the Western Ophthalmic Hospital; Surgeon-oculist to His Highness the Maharajah and Gackwar of Baroda. New York: William Wood & Company, MDCCCIII. Pp. 1-214. (Price, \$1.75.)

The Practical Details of Cataract Extraction. By H. Herbert, F. R. C. S. Eng., Major I. M. S., Professor of Ophthalmic Medicine and Surgery, Grant Medical College. In charge of The Sir Cowasjee Jehangir Ophthalmic Hospital, Bombay; Fellow of Bombay University. New York: William Wood & Company. MDCCCIII. Pp. v-109. (Price, \$1.25.)

Miscellany.

A "Doctor's Sign."—The following sign of a quack "doctor" appears in Chattanooga, Tenn.:

DR. C. H.

FAITH HEALER.

Drink 3 glasses of water, wash my hands.
Blow my breath on him & heal him.
Cures Spells & drives out Bad Spirits.
Diseases of all kind male and female
Cured & will tell you the cause of sickness.

Coal and Wood | Lunches of all kinds
Sold. | and Confectionary.

There are, we are sorry to say, ill-natured persons who speak of the surgeon as "the butcher." Surely this gentleman keeps a veritable "delicatessen" of medicine.

But even this simple little idyll has its pathetic side. We learn with regret that several prominent members of the county medical society, engaged in the suppression of illegal practice, were found recently in a state of hysterical melancholia, gazing on the sign and dejectedly wailing in antiphon:

When the enterprising healer's not a healing,
not a healing,
When the doctor isn't "cussing spirits good,"
spirits good,
He loves to do a bit of honest dealing,
honest dealing,
And drive a thriving trade in coal and wood,
coal and wood.
When the curist aint a curing of a brother,
of a brother,
He loves to deal in candy, cake, and bun,
cake and bun.
Taking one consideration with another,
with another,
A physician's lot is not a happy one,
happy one.
(Ensemble) Oh,
When quackery suppression's to be done,
to be done,
A physician's lot is not a happy one,
(basso profundo) happy one.

Abduction of a Lady Doctor in India.—"Not exactly guilty" is a queer verdict for a jury to bring in, but, according to the *Indian Medical Record* for April 8th, it will stand on record in British India, though it "didn't go" with the court. Here is the story. "A well-to-do zamindar of Malda induced a young lady doctor, a native Christian, into a river boat on the pretence of taking her to attend to his wife. There, like Comus, he offered her wine; but the lady was steadfast, even when the Babu fired off a gun in make believe suicide. Fortunately, the young lady had a faithful young friend, who was the means of her rescue, and at a critical moment the zamindar's boat was boarded, and the lady brought off in triumph unharmed, while the zamindar, in spite of his tears, was arrested. He was tried by a native magistrate. The evidence was unimpeachable and overwhelming, and the accused

was convicted. The magistrate's sentence, however, was so ridiculously inadequate that government appealed and the High Court sent the case to the sessions judge of Malda for retrial. The assessors brought in a verdict of not exactly guilty, which, we think, must constitute a record even among assessors' verdicts. The court, however, disagreed, and the zamindar has been sentenced to two years' imprisonment, which those who know the case will agree is not a day too long."

The Treatment in Cellulitis After Incision.—Mr. Stephen Paget, F. R. C. S. (*Clinical Journal*, April 8th), in a Postgraduate Lecture at the West London Hospital, says: "With regard to the treatment after incision, I think it is best to lay gauze lightly in the wounds, and to wrap the limb in gauze for a few hours only, and then to foment it with hot boric lint. It is a mistake to attribute any great value either to drainage tubes or to plugs of gauze. I have seen drainage tubes kept in day after day, even after they had made regular tunnels that you could look through and see daylight at the other end; and thick, sodden plugs of gauze pushed in at one incision and out at another, and moved and pulled about, giving pain at every dressing, and serving only to keep the pus and the sloughs from finding their way out. I am sure that this excessive use of tubes and plugs is bad surgery. And the same applies to the excessive use of the arm bath. It is very tiring and uncomfortable to keep one's arm in a bath, and I doubt whether a bath for an hour is any better than a bath for a quarter of an hour. Nor is there any evidence that it makes any difference what sort of antiseptic you put in the bath. Probably a dash of iodine or of Condy's fluid is just as good as anything else; and a hot soaking for ten or fifteen minutes is quite long enough. Then take the arm out, wrap it in hot fomentations, and leave it alone for a time. Like every wounded limb, it wants rest; and it cannot get properly rested if it is perpetually being bathed and plugged and moved about."

A Polyglot Physician.—According to the *British Medical Journal* for May 2nd, at the Second International Congress of the Medical Press, at Madrid, Dr. Cortezo, the President of the congress, displayed his versatility in the matter of linguistics in a manner that must make most of us envious. "He began in French, and welcomed the delegates in the name of the Spanish medical press. The medical press had no connection with political machinations. The names of the distinguished visitors were well known in Spain. He continued in French, enumerating the French journalists who were present, and then commenced to speak in German, referring to the German press in flattering terms. In Italian he drew a parallel between the two countries of Spain and Italy, referring to their similar origin, their close connection for ages, their similarity of race; he enumerated the great Spaniards, Seneca and others, who had also been great Romans. 'Italy,' he said, 'was our mother, she is still our guide.' Resuming in Spanish, he paid a graceful tribute to the English medical press and the state of medical knowledge in England, referring in warm

terms to the work of Lister; and a few remarks to the Spanish Americans and the Spanish press concluded a striking address." While most of us, those of us at any rate, who are engaged in medical journalism, in the nature of things have to dabble for reading purposes, in several languages, few of us, we imagine, could speak to a mixed international assembly of physicians addressing each section in their own tongue. Perhaps one of the great weaknesses of the English speaking profession is the lack of linguistic attainments, and the importance of cultivating the faculty of languages should be impressed more and more on the coming members of our cosmopolitan profession.

To Prevent Draw Sheets from Wrinkling.—A correspondent writes to the *London Hospital* for April 25th as follows: To nurses in charge of bedridden and helpless patients, I beg to offer a suggestion for preventing draw-sheets from wrinkling. Have your draw-sheet slightly wider than the mattress, with a wide hem on either side through which run a firm wooden lath, such as is commonly used for window blinds. These laths have holes bored in them at each end, with corresponding button holes in the hem of the sheet. Pass through the holes strings of stout tape, and tie firmly to the bedstead. Of course the sheet must be placed under the patient in the usual way before inserting the laths. Draw-sheets treated in this way will remain smooth much longer than they can do by merely tucking in.

The Shortsighted Policy of British Insurance Companies.—The *Journal of Tropical Medicine* for April 1st says editorially: "Intercourse with our colonies is the essence of Imperialism, and everything possible should be done to foster it. How, then, do these great public bodies, to whom so much of the nation's money is entrusted, play their part? One company, with the word 'Colonial' prominent in the name of the firm, states that it 'does not encourage insurance business with men proceeding to our colonies.' Another of the largest of our companies makes a similar assertion; and all, except a very few, look askance at business with persons proceeding abroad. This is a serious reflection on any British insurance company. If the insurance companies are to take their place in the imperial work before us, they must cease to be parochial in their notions and to remember that the State, having allowed them to accumulate a large part of the national wealth, requires of them national work. What is the consequence of their desire to 'cannny'? The American companies step in. Soon after an uninsured Britisher sets foot in a colony, the omnipresent American insurance agent makes overtures, and more often than not secures a policy. The money goes to swell American coffers, and the British office—that is, Britain—is left all the poorer. And all this for what reason? Because British insurance offices have based their opinions as to the danger of modern life in the tropics on 'gossip' of fifty years ago, and they affect to believe in dangerous and unhealthy areas of the globe on insufficient evidence."

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Lectures and Addresses.

THE OPENING ADDRESS.

AT THE FIRST ANNUAL CONFERENCE OF STATE AND NATIONAL HEALTH AUTHORITIES UNDER THE ACT OF JULY 1, 1902, HELD IN WASHINGTON, D. C., JUNE 3, 1903.

By WALTER WYMAN, M. D.,

SURGEON-GENERAL U. S. PUBLIC HEALTH AND MARINE-HOSPITAL SERVICE.

Gentlemen: I beg leave to express my pleasure in meeting you at this assemblage, called by myself in accordance with Section 7, of the act of Congress approved July 1, 1902.

What may be the result of these annual conferences time must determine, but certainly we may consider the present, the first annual conference under the law, as a most noteworthy event. For the first time in the history of the United States there has been placed within its statutes, by the act of Congress referred to, a provision looking to harmonious and cooperative efforts in public health matters between the national government and the State governments.

This status has been long desired, but difficult of achievement by reason of our republican form of government. It has been difficult for the national government to extend its influence into State health matters without appearing to infringe upon the States' authority, and it has been difficult for the States, individually or collectively, to seek aid from the government without appearing to surrender authority reserved to them by the national constitution. In the mean time, however, the Marine Hospital Service, now bearing the title of the Public Health and Marine Hospital Service of the United States, has become so developed and strengthened, and the State health organizations have been so perfected, that a sentiment of respect, one for the other, has been established, finding its expression in this law of 1902, and, in particular, section 7 above referred to.

To my mind the outlook is bright. The great problems to be solved in sanitary affairs; the great work to be done in the suppression, and even elimination, of disease, and the cultivation of health and strength, so that physically, as well as in other respects, the United States may take a leading posi-

tion among the nations, are propositions which should not be considered impossible of solution, and a proper development under the terms of this law will be an important step in this solution.

One of the most important features of this assemblage is its official character. All of us are familiar with conventions of similar purpose, productive of much useful information but entirely lacking in official significance. Here, however, are assembled the legalized health authorities of the States, representing the practical administrative experience as well as the theoretical and scientific knowledge required in the consideration of public health affairs.

Many of you have devoted the best years of a long professional life to the consideration of the subjects which will come before us, having acquired, in individual instances and on special subjects, unusual knowledge and wisdom.

Combined effort appears to be a distinguishing feature of this new twentieth century. This is seen in nearly all forms of civic and commercial life and even scientific and professional effort. It would seem that when the history of the twentieth century is written there will be lacking those great and single characters looming way above the average, leading, directing, or dictating; instead, there will be an elevation of the average, the best individual effort will, in neither purpose nor effect, aggrandize the individual, but will be exerted in connection with other effort of like nature for the establishment of a parity of well being among all. This, I take it, will be the keynote of our action, bearing constantly in mind the actual results to be attained and being determined to attain them.

To refresh your memory I will now read Section 7, referred to, and also Section 8, which is somewhat analogous.

It will be seen that Section 7 provides for three kinds of conferences. First, the surgeon general may invite as many of the health and quarantine authorities as he deems necessary, not more than one from each State, Territory, or the District of Columbia, to a conference whenever in his opinion the interests of the public health would be promoted thereby. Second, a conference must be called at least once a year of all the States, Territories, and the District of Columbia. Third, upon the application of not less than five State or Territorial boards

of health, quarantine authorities or State health officers, he must call a conference, but in this event only those States joining in the request are to be called.

While the present is the first annual conference, it is not the first conference called under the law. Last January, upon the request of twenty-two States, a so called plague conference was called to consider the situation in San Francisco. The proceedings of that conference in detail have been transmitted to each of you. The effect of it was undoubtedly very great in bringing about the present satisfactory status in San Francisco. The object of that conference was specific, but, as you will note, the law providing for the annual conference gives no details. We must assume, therefore, that the intent of the law is that we shall get together, and we are to decide ourselves as to the matters to be considered. It is evident that the conference is advisory in character, without changing in the least the present executive force of this bureau of the Treasury Department.

It seems advisable at the outset, and for a satisfactory understanding of one another, to give a review of the laws and of the organization relating to the Public Health and Marine Hospital service, and to receive in return an account of the same nature from each State delegate.

The laws especially relating to the United States Public Health and Marine Hospital Service can be found printed with the United States Quarantine Regulations, with the exception of the Sundry Civil Act, approved March 2, 1901, which provided for a laboratory "for the investigation of infectious and contagious diseases and other matters relating to the public health."

Having thus referred to the law, I propose now to describe the organization of the Bureau of the Public Health and Marine Hospital Service. For executive administration, the bureau is divided into six divisions, each presided over by an assistant surgeon general. There is also a Miscellaneous Division, presided over by an assistant surgeon, and the office of the chief clerk. The clerical force numbers about twenty. These divisions are named as follows:

Division of Marine Hospitals and Relief.

Division of Domestic Quarantine.

Division of Foreign and Insular Quarantine and Immigration.

Division of Sanitary Reports and Statistics.

Division of Personnel and Accounts.

Division of Scientific Research.

Miscellaneous Division.

Division of Marine Hospitals and Relief.—To this division are sent all matters relating to the marine hospitals, twenty-two in number, owned by

the Service, and to the patients, numbering 58,000, treated annually in these hospitals, and in some 110 relief or contract stations. The purveying depot, a large building located in New York, is under the direction of this division, to which are also referred all matters relating to hospital supplies, including subsistence, drugs, hospital furniture, surgical instruments and appliances, plans and specifications for hospital construction, and the conduct of the sanatorium for consumptive patients at Fort Stanton, New Mexico, where the service has a sanitary ranch, fifty-six square miles in area, the buildings of the fort having been placed in perfect condition, the patients in the sanatorium numbering about 150. The scheme for this ranch embraces the removal of consumptives from our hospitals with a view to their improvement or recovery. Quite a large percentage have recovered, a number have greatly improved, and all who desire can find employment, after leaving, in the same high, dry, and healthy locality. The hospitals are thus relieved from this contagious disease, and the vessels from which the patients come are subject to inspection and disinfection as to their forecastles or other quarters that have been occupied by known consumptives.

Division of Domestic Quarantine.—To this division are referred all matters relating to the national maritime quarantine stations, embracing nineteen complete disinfecting stations and eighteen inspection stations. At the former are hospitals, barracks, disinfecting machinery, steamers, and small boats, all requiring constant care and attention. This division, also, must see to the expenditure of appropriations for new stations, involving purchase of lands, construction of piers and buildings, said construction being generally under the supervising architect of the treasury on plans approved by the bureau and the department, but occasionally the bureau attends to this construction itself. To this division are also referred all matters relating to the quarantine regulations and their interpretation. Matters relating to interstate quarantine and suppression of epidemic diseases are also handled in this division. Quarantine upon the Mexican and Canadian borders is also conducted through this division.

Division of Foreign and Insular Quarantine and Immigration.—To this division is assigned the management of the national quarantine stations in Hawaii, Puerto Rico, and the Philippine Islands, the supervision of officers detailed for duty in the offices of the United States consuls in foreign ports, who sign the bills of health with the consuls. At present there are three officers in Japan, Yokohama, Kobe, and Nagasaki; two in China, Shanghai and Hong Kong; one in Naples, Italy; ten in Cuba,

three in Havana, one each at Cienfuegos, Santiago, Nuevitás, and Matanzas, and several at subports; four in Mexico, two at Vera Cruz, one at Progreso, and one at Tampico; six in the fruit ports of Central America, namely, Bocas del Toro, Columbia, Port Limón, Costa Rica, Bluefields, Nicaragua, Ceiba and Puerta Cortez, Honduras, Livingston, Guatemala, and Belize, British Honduras.

To this division are also referred all matters relating to the medical inspection of immigrants, a most important function of the service, requiring the detail of a large number of officers.

Division of Sanitary Reports and Statistics.—This division is charged with the preparation of the *Public Health Reports* published weekly by the bureau. All matters of a statistical nature are referred to it.

It may be of interest to state that some question has arisen as to whether the work of this division, which is authorized both by the law of 1893 and the law of 1902, may not duplicate the work of the Census Bureau, but I am pleased to state that after conference with the chief statistician of the Census Bureau and others connected therewith, it has been found that there need be no duplication or interference by one bureau with the other; on the contrary, each will be helpful to the other. The Census Bureau, in addition to the decennial census, will publish an annual census of mortality and births, but the weekly and monthly reports will be published as heretofore by this bureau, and morbidity reports, which are so much desired and which will require special organization to procure, will be undertaken by the Public Health and Marine Hospital Service.

Division of Personnel and Accounts.—To this division are referred all matters relating to the personnel of the service, examinations for admission to the corps of commissioned officers, examinations for promotion, appointments and resignations, appointment of boards for the physical examination of officers of the Revenue Cutter Service. This division has, also, charge of the bookkeeping of the service.

Division of Scientific Research.—This division might be better called the Division of Scientific Research and Sanitation. To it are referred all matters relating to the Hygienic Laboratory. It should be understood that this laboratory, or the staff thereof, is not a part of the bureau proper, though at present located in the same building. A new building, however, is just completed, located on the grounds of the old Naval Observatory, about half a mile west of the White House, on the river bank. Five acres of this tract were turned over from the Navy Department for the establishment of this laboratory. It will give the director of the laboratory great pleasure to arrange with the delegates

to this conference to show them this building. The laboratory has an advisory board, consisting of a delegate from the army, not yet named; Dr. Urie, of the navy; Dr. Salmon, chief of the Bureau of Animal Industry; Professor Welch, of Johns-Hopkins; Professor Flexner, of the Rockefeller Institute; Professor Sedgwick, of the Massachusetts Institute of Technology; Professor Vaughan, of the University of Michigan; and Professor Westbrook, of the University of Minnesota. Under the law of 1902, three new divisions were added to the laboratory, the Division of Bacteriology already existing. These three new divisions are those of Zoology, Chemistry, and Pharmacology. But one of these new divisions has been organized, namely that of zoology, and the good results of this new organization are manifested in the recent discoveries and published report of the chief of this division, Dr. Stiles, upon The Prevalence and Geographical Distribution of the Hook Worm. Bulletins, embodying important results of investigations, are published from time to time under the supervision of the director of the laboratory, Dr. Rosenau. It is believed that Congress can be influenced to provide for the extension of this laboratory by the erection of new buildings from time to time as the necessity therefor becomes demonstrated.

To this Division of Scientific Research and Sanitation are referred special requests for scientific investigation of special diseases, as, for example, the recent investigation of the so called spotted fever of Bitter Root Valley, Montana. The initiatory steps for special investigations of this character are taken in this division, but any prolonged or technical work connected therewith is turned over to the laboratory.

Requests for special investigations of water pollution or local causes for the spread of typhoid fever are referred to this division. The officer in charge of this division examines all current literature relating to scientific medicine or sanitation and keeps a card index of the same.

Miscellaneous Division.—The Miscellaneous Division has charge of the mailing of all bureau publications, and has certain miscellaneous duties relating to the reports of necropsies from the marine hospitals, the medical examination of claims for benefits on account of injuries received by the crews of life-saving stations, certain matters relating to the annual report, etc.

Under certain bureau orders the operations of these several divisions are coordinated so that the work of one division, where it affects the personnel or duties connected with another division, is accomplished with the full knowledge and acquiescence of the other. There are also two regular bureau

boards for the careful consideration of matters referred to them—namely, the Service Board and the Sanitary Board.

Yellow Fever Institute.—There is one other feature of the bureau, assigned to no particular division, but embracing all, namely, the institute for the study of yellow fever, called the Yellow Fever Institute, with which most of you are familiar. This institute was founded about two years ago for the purpose of learning all that could be learned about yellow fever, including its ætiology, and to bring to this work the aid of all reputable physicians who might desire to take part therein, its membership including, besides the officers of the Marine Hospital Service, special investigators both in this and foreign countries. It is divided into four sections, the chairman of each section being one of the division officers of the bureau to which, under bureau organization, matters of a kindred nature would naturally come. These, together with the chairman and secretary of the institute, form an executive board to consider, especially with regard to publications, the contributions received from the members. Twelve bulletins have been issued. A thirteenth, and the most important of all, relating to the cause of the disease, is now being printed and will be ready for distribution within a few weeks. This bulletin contains the report of a working party sent to Vera Cruz last summer to investigate and attempt to find the causative agent of the disease. Their work was continued during the winter with the material obtained in Vera Cruz, and gives evidence that progress has been made toward a final result. A second working party of three, two of whom were in the first party, are now in Vera Cruz and vicinity pursuing a continued investigation, and it is the purpose of the institute to continue in the prosecution of this work until successful. This institute embraces new features in the investigation of the cause of a specific disease, and if it proves successful with regard to yellow fever it may be that the new features of organized effort which it embraces will be applied to the investigation of other diseases.

Other important matters engaging the attention of the service are the proposed legislation for the establishment of a national leprosarium in which may be received the occasional cases of leprosy found in the States and which give the local and State authorities so much trouble; also the enforcement of the new regulations relating to the examination and licensing of establishments for the production of vaccine, serums, and antitoxines, under the law passed by the last Congress. These regulations go into effect next August.

Mention should also be made of the connection of the service with the International Sanitary Bureau of

American Republics, established in accordance with resolutions of the Conference of American States held in the city of Mexico winter before last.

The Medical Corps.—Finally, with reference to the service work, I wish to say a few words with regard to the medical corps, numbering 108 commissioned medical officers received into the corps only after a thorough examination as prescribed by law, appointed first to the lowest grade, and promoted to the higher grades only after further successful examination. The discipline of the corps is military in character; the regulations for its uniforms and government are prescribed by the president; its officers, by reason of unusual responsibilities, continuous medical and surgical care of the large clientèles, and by special scientific instruction in its Hygienic Laboratory, are kept in the van of professional excellence. There are, however, nearly two hundred acting assistant surgeons, some of whose appointments are temporary in character, but a number of whom have been long in service by reason of special adaptability or because the arrangement made with them is necessary in the interest of economy. These officers of the medical corps are stationed in all parts of the United States and its dependencies, and constitute our reliance not only in the ordinary work of the service but in times of special need.

Conference Organization.—I have deemed it necessary to give this somewhat extended account of the organization of the service, both that our aims and methods may be understood and that I may the more readily explain a proposed method of making these annual conferences of practical utility. It might be advisable to appoint on special committees members of the conference especially interested in the several subjects to be considered by these committees, said committees to remain in organization during the year and to receive for further conference with the surgeon general such matters as might be pertinently referred to them by him. The titles of these committees would find their analogues in the several divisions of the bureau. The reports of these committees could be read to the full conference at its annual meeting, and, if adopted by the bureau and the conference, would have a force and influence which would naturally result from the conjoint action of the national and State authorities. I would suggest tentatively a committee on scientific research and sanitation, a second on the prevention and spread of epidemic diseases, a third on morbidity and mortality statistics, a fourth on State legislation, and a fifth on education. In addition to these, there might be special committees on certain specified diseases, namely, cholera, yellow fever, plague, smallpox, tuberculosis, leprosy and typhoid fever. To these

committees might be committed such resolutions as may be offered here, but the adoption of any resolutions by this conference, it seems to me, should not be until after a report thereon had been made by the special committee to which it is referred.

It is believed that this plan is at least worthy of trial. It would give real aid and would stimulate the members of the committees in an investigation of the subjects confided to them, and might produce a uniformity of effort, a coordination of work in different parts of the country, which now does not obtain.

THE SURGERY OF THE PROSTATE FROM THE STANDPOINT OF PERSONAL EXPERIENCE.

BEING THE ORATION IN SURGERY.*

By GRANVILLE MacGOWAN, M. D.,
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Gentlemen: When I was asked by our president to write for you an Oration upon Surgery, I was rather puzzled to know the character of the address I should make. In response to an inquiry he told me I was at liberty to write upon anything I cared to. I decided to bring before you the advancements along a line of surgery which is to most physicians strange, almost unheard of, and certainly not believed in; by many surgeons looked upon with curious doubt and disbelief, by a few, regarded with favor—but not actively pursued—by some, enthusiastically recommended without judgment and without conscience, and by a few, practised with care, with an endeavor to obtain experience valuable in developing rules of precision for the work of those who may follow them, or for those who have not the means of procuring considerable experience for themselves. I refer to the radical surgery which reopens the vesical outlet closed by encroachment, in whole or in part, of the chronically inflamed prostate gland upon the urethra, which naturally passes through it as a tunnel through a hill. This subject has been close to my heart since 1892, and much of my time has been occupied in its practical development. I could not believe the old-fashioned assertion, "Once a prostatic always a prostatic." I had no faith in the dictum of the master, Guyon, that all cases of senile prostatic obstruction were sclerotic. I believed that successful methods could be developed for the relief and cure of such sufferers, and there were many other practical surgeons in this wide world, but principally in America, who thought as I did. We have gone on quietly developing this belief and showing our faith by our

works, until now, to-day, to you I feel that I may state positively and absolutely, speaking only from the experience of my own operations, which have now numbered close to one hundred, that no man who is prostatic, unless his prostatism is due to cancer, need feel that he has a disease of which he may not be rid with much less risk to his life than he takes if he refuses the assistance offered to him by the surgeon. Many of these cases can be entirely cured. The tonicity of bladders which have been atonic for years, scarcely possessing enough motor power to force the urine slowly but reluctantly through a catheter to fall without curve at the feet of the individual, have the contractile power of the detrusor so restored in a few weeks, after the removal of the obstruction, that a good-sized stream of urine will be projected in a forceful arc, a considerable distance from the body. The crippled kidneys, with dilated ureters, pelves, and calices, and obstructed and choked urinary tubules, oftentimes the seat of abscesses, secreting too little or too much urine, which always contains albumin in varying amounts and casts, usually pus, and sometimes blood, and always, whether the urine is increased or diminished, secreting a quantity of urea greatly below normal, which perhaps for years have been unable to take care of the poisonous excreta, the separation of which from the blood is their duty, will, when the prostatic obstruction is removed, in a short time begin to functionate properly. The blood, pus, and casts disappear, the albumin lessens and often is lost entirely, and the quantity of urea increases. The slow moving and doubtful mind becomes alert, the lagging step quickens, the nauseated and rebellious stomach changes to an eager receptacle for food, the ashy cheek turns pink again, and frequently sexual power held in abeyance for years, almost forgotten, reasserts itself and is restored.

This is not a fancy picture which I have drawn, but one which may be shown to you any day, if you are of an enquiring mind, in any city of considerable size and importance in America.

With the achievements of the past ten years in the surgery of the urinary organs before us, it is very interesting to read the works of those distinguished Englishmen, John Hunter and his student and successor, Everard Home, whose labors and conclusions dominated surgical methods in the treatment of these diseases for nearly a century.

Hunter, speaking of the treatment of the swelled prostate gland (Edition, March 30, 1796, page 174), says:

"The methods practised in the above cases afforded only temporary relief but must be had recourse to, to avoid the consequences of retaining the urine

* Delivered before the Medical Association of the State of California at Santa Barbara, April 21, 1903.

too long. As a temporary relief from pain, as also to remove spasm, opiate clysters should be thrown up once or twice a day. A certain cure, I am afraid is not yet known. In one case in which I was consulted, a surgeon had found burnt sponge reduce the swelling of the gland very considerably. This disease, like stricture, produces complaints in the bladder. I have recommended sea bathing, and in some cases, received considerable advantage from it, and in two cases, a cure of some standing."

Home, in his position as successor to John Hunter and as curator of the Hunter Museum, had unusual opportunities for study of disease of the prostate. This subject happened to possess great attraction for him, and its study gave him great satisfaction. To his imperfect investigations and immense influence we owe the false idea that this gland is lobular, consisting of two lateral and one middle lobe. This great surgeon very narrowly escaped finding the true solution of prostatism. On page 23, vol. ii, *On the Diseases of the Prostate Gland*, he says:

"The lateral lobes when cut into were found to be made up of a number of nodules like that in the middle lobe. *They were so loosely connected with one another that they might have been separated by dissection.* Their internal structure was in all the same, and like that already described. The projections seen externally were small portions of the outer surface of these nodules pressing against the general covering in which they were all contained."

Had he followed up the train of thought expressed in this paragraph, prostatectomy would have been introduced nearly one hundred years ago. He had thoroughly studied the symptoms of prostatism and he was well aware of the dangers. On pages 31 and 32, vol. ii, he says:

"Upon the present occasion, when treating upon a disease in which the symptoms, if not early attended to, increase rapidly and prove fatal, it is peculiarly necessary to state all the fatal consequences of delay, by showing the mischief that is produced by it."

Instead of seeking a solution of the problem by operative interference, always with the idea that it was the enlarged middle lobe that caused the distressing symptoms, his attention was given entirely to the perfection of the drainage of the bladder in such manner, that the congestion of the part would be allayed and the cure, relative or total, of the affected obstructions be obtained. He very properly considered that the diseased condition had nothing whatever to do with any constitutional vice or general depression. Of this he says, page 86, vol. ii:

"I am induced to consider the disease of which I am treating as one that is entirely local, produced

by local violence, kept up by local circumstances and having all its symptoms aggravated by a succession of causes of irritation belonging to the natural action of the organs to which the prostate gland is attached, and I am sorry to say that the disease has not only its progress increased, but unnecessarily produced, by the unskilful use of the instruments employed for its relief, and been too often the means of putting an end to the patient's life, which, had the case been differently treated, there is every reason to believe, by reference to the other cases, might have been preserved for many years."

He was the originator of prolonged drainage for the relief of retention and cystitis due to an enlarged prostate. He was fortunate in discovering the original Weiss, who manufactured for him elastic catheters of high grade, which could be retained in the bladder for weeks, and he sometimes retained the catheter for so long as from one to three months, until the bladder would for a time regain the power of emptying itself. He was firm in his belief, that these cases, seen at the right time and treated by drainage in this way, became entirely well, for, he says:

"As cases of the disease do not always come under our care in the earlier stage, it frequently happens that too much has been done and the parts too much injured to admit of the recovery of the patient. Were it otherwise, I am very sanguine in my opinion that most of them might get well."

The precepts of Home were dominant for more than fifty years, and surgeons and physicians looked upon enlargement of the prostate gland as a trouble which could not be removed by operative measures. This was further strengthened by the dictum of Guyon, who, with his powerful Necker school, for many decades has moulded surgical opinion upon this subject in France, and, through those educated in the French universities, much of the opinion of the world. It was not comprehended that the problem presented was peculiarly a mechanical one, that prostatism consists solely of the obstruction caused by the encroachment of growths arising from the abnormal development of the glandular, fibrous, or muscular structures contained within the capsule of this organ pressing upon the urethral tunnel, upon the internal urinary meatus, or upon the muscular tissue of the bladder wall, interfering by pressure with its innervation or with its contractile rhythm.

In addition to this, a variety of other reasons held the knife in check: The fear of hæmorrhage which could not be controlled by reason of the depth at which the vessels were situated, the terrors of vesical tenesmus, the fear of contamination of the wound by the urine discharged upon it, and, before the

age of aseptic surgery, the fear of urinary infiltration and gangrene, bound the surgeon to the doctrines of Home and Guyon.

Tentative and careful were the first bold spirits who planned the intentional removal of prostatic obstruction. From time to time, in operating for stone or for tumor of the bladder, a projecting and obstructing prostatic prominence had been removed with its covering of bladder mucous membrane by snare or ligature and scissors, but I think the first deliberately planned and executed prostatectomy was done by William Bellfield, of Chicago, in 1886. Since then, numerous workers in various parts of the world have developed various methods for attacking and removing prostatic obstructions, only two of which are worthy of attention.

Either the obstructing portions of the gland are shelled out or excochleated through an incision made into the membranous or prostatic urethra from the peritonæum, or they are removed through a cut made through the belly wall and anterior wall of the bladder.

The instruments necessary for the perineal route are very few. A sharp bistoury, to sever the skin and perineal muscles; a sharp lithotomy knife, to enter the urethra; a staff (full curved by preference); a probe-pointed narrow gorget, to enter the incision made in the membranous urethra and pass on to the bladder; a Blizzard knife and a pair of uterine dilators, to enlarge the incision; a long handled blunt capsule knife or a forceps, to open the capsule of the prostate; two or three long pointed curved tenacula, to pull the loosened tumors down and prevent them from slipping into the bladder while being enucleated; a narrow packer, to introduce a gauze trailer along the finger into the capsule of the prostate for stilling the hæmorrhage; and a short metallic tube No. 36 for evacuating, with a very large eye on the upper surface almost at its end, so that it cannot become obstructed by clots, or if it does, so that a Chismore evacuating bulb can be attached to pump them out; and a strong long-handled rongeur, are the instruments I make use of. In many cases one may get along with a knife and a staff if he is inclined to operate for show, or in the same spirit which prompts the ship carpenter to build a boat with an adze. All the various devices which had been introduced for the pulling down of the neck of the bladder or the prostate, such as the rubber retractor of Simms or the metallic ones of Ferguson and others, may be easily dispensed with, as they do not facilitate the operative work, but rather impede it.

The position of the patient advocated by George W. Goodfellow, of San Francisco and Tucson, of extreme flexion of the thighs upon the abdomen, and

of the legs upon the thighs, is of much greater importance and assistance than any of these devices. There are very few cases which may not be successfully operated on through a simple median perineal incision carried through the skin and the perineal muscles from the scrotal junction to a point about half an inch in front of the anus, care being taken not to sever the anal sphincter. Exceptionally, pre-rectal or inverted Y incision may be necessary. My experience with it, however, has not been satisfactory. In three cases in which I used it, and in three others operated on in Chicago which afterwards came under my care, the scars left were painful for many months. One of my own cases required a secondary operation for relief of the pain and the obstruction to the urethra caused by the contraction of the scars.

For the removal of the prostate by a suprapubic cut precautions are necessary to keep out of the abdominal cavity and to avoid disturbing the cellular tissues in the spaces of Retzius. The first is best secured by placing the patient in the full Trendelenberg position after cutting through the skin and abdominal muscles. The second is accomplished by sewing the anterior bladder wall tightly up to the transversalis fascia by a few catgut stitches just before, or immediately after, opening the bladder—this effectually cuts off the space underneath the symphysis from injury and infection. The sides of the cut in the bladder should be secured to the recti muscles by two or three silk or silkworm gut ligatures on each side. The time thus occupied is well spent, for it avoids much trouble after operation. The bladder being thus secured, the prostatic outgrowths are sought for with the finger, the capsule is opened, and they are enucleated, if possible, through an incision made through the bladder neck centrally or laterally, as the case may demand.

For this purpose, it is better to use some sort of blunt instrument which will tear rather than cut, as the hæmorrhage is less. These tumors are sometimes so dense and adherent that they cannot be removed by enucleation; they must then be removed piecemeal with rongeurs or serrated scissors and long tissue forceps, the index finger of the left hand being used as a guide for the amount of tissue to be removed and the force necessary to remove it. This is a very tedious and sometimes a very bloody, procedure, but, withal, one that gives very satisfactory results.

When I use *sectio alta* for prostatectomy I nearly always make a median perineal incision to utilize for counterpressure, and if this is not done I obtain the necessary support from the hand of an assistant within the rectum. I drain these cases always with the De Pezzer tubes. The instruments required for

the operation are, a knife, half a dozen artery forceps, which should be smooth-grooved so as not to tear the bladder, some well curved needles both round pointed and sharp pointed, a pair of blunt pointed or serrated scissors, and two or three pairs of long-handled and strong-jawed rongeurs, a staff for the perineal incision, if it is made, and one or two De Pezzer suprapubic drainage tubes.

In considering the advisability of the doing of a radical operation in cases of difficult or impossible natural micturition caused by enlarged prostate, it is well to be conservative without being unduly so. I have heard it stated by some operators, and read in the writings of others, that the proper time to enucleate an enlarging prostate or to do a Bottini operation upon it is when the irritation phenomena which usher in prostatism—increased urinary frequency, pelvic burning and straining, associated with the evidences demonstrable to the finger in the rectum, with perhaps the presence of a little pus or from time to time a few red corpuscles in the urine—are first noticed. With this I cannot agree, for by proper medical aid, which includes careful hygienic measures, the evil hour of operation may be put off quite a number of years without great detriment to the prostatic. But when once the trouble becomes so great that the treacherous existence of a catheter life is forced upon the person operation should be urged, because then a new and continuous element of danger is ever present: I mean the constant threat of septic poisoning from unclean materials carried in by the catheter. However particular the individual may be, it is not possible for him at all times to be either gentle with the introduction of the instrument or clean with the lubricant or his immediate person. He is day by day, even hour by hour, risking his existence upon a gamble that he will not infect himself, and he had far better take the small chance of death necessary to obtain a radical cure by operation.

The remark is often made to me by medical men, that it is useless to think of relieving certain people by operation for enlarged prostate because they are too old. No one is too old for these operations. I have done a successful Bottini upon a man ninety years of age, bent nearly double, and I have known successful prostatectomies to be done upon several men who were more than eighty years old.

The statement often comes from the same source, "He cannot be helped, for his urine is full of albumin and contains casts"; or "He has stone in the bladder, and you can't do both operations at once"; "It will take too long," or "He can't stand the two operations; he is too weak."

While carefully noting these factors I do not let

them influence me. You have to operate on these people as you find them, and not in the condition you would like to have them. If they were in good shape they might not need an operation, and unless they were inoculated with what might be termed operative fever, they would most probably not consent to one.

The presence of pus, of blood, of albumin in limited quantities, of casts of any kind, excepting amyloid, are not contraindications for the doing of either prostatectomy or prostatotomy. Nor does extreme age, long sickness, feebleness within reasonable limits, or septic symptoms, such as nausea or hic-cough, prohibit surgical interference. There are just three contraindications to which I pay attention: First, a tendency to bleed freely from very slight injuries; second, the existence of serious heart lesions accompanied by a great general muscular feebleness; third, and most important, is the inability of the kidneys to secrete a reasonable quantity of urea, and what I consider a reasonable quantity in these cases is from 15 to 25 grammes *per diem*. In a number of the cases in which the patients got well for me after operation, the daily quantity of urea for weeks had not exceeded 15 to 20 grammes *per diem*. This outcome seems really wonderful when the severity of the operation and the loss of a quantity of blood, which is always very considerable when proportioned to the age and strength of the individual, is taken account of.

I do not know what considerations control other operators in the selection of their cases. I take mine as they come, doing a perineal or suprapubic excochleation, or both, or the Bottini operation, as my judgment dictates for the particular case. I never refuse to make the attempt to relieve the sufferings of one of these miserable wretches, no matter how bad his condition may be, if his kidneys work in such a manner that I believe with care they may be kept from striking on him during his recovery from the surgical injuries necessarily inflicted in the attempt to remove the cause of his condition. Some have come to operation with me that a surgeon desirous of having entirely favorable statistics might have refused to operate on.

One need not be so discouraged as not to attempt to relieve the patient unless the individual is in one of the three classes which I have designated as unfavorable. If the percentage of urea runs so low that any decided hæmorrhage is very dangerous, or if the person is so feeble that it is risky to confine him to bed for a few days, or if he has a bad pyelitis, it is better to do a Bottini operation and chance his being in a better condition later for a prostatectomy if the Bottini operation does not give him permanent relief. I have had occasion to enucleate the pros-

tates of three persons upon whom I had done Bottini operations which gave very excellent relief for a time varying from one to two years, and speak positively when I say that the scars left by the Bottini do not in any way seriously interfere with the subsequent enucleation of the tumors. The scars are soft and pliable, quite contrary to the teachings of certain urologists who have had no personal experience with them.

When it is known that the obstruction is cancerous enucleation should not be attempted, for such cases usually succumb to primary or secondary hæmorrhage. An exception was one of my cases. An enormous spindle-celled sarcoma weighing about two pounds, which included all the prostatic substance but not its capsule, and which had not invaded the urethra but had attacked the anterior wall of the rectum, was successfully removed by enucleation through an aperture made in the anterior wall of the rectum, with primary recovery, and no recurrence up to the time of death from other causes four years afterwards.

If, when the urethra is opened, cancerous structure is recognized by the fingers or eye, a prostatotomy made with the apparatus of Young, Freudenberg, or Chetwood by the Bottini method offers the only relief to the sufferer; for if the burns are made slowly, with the ampèremeter registering not less than 45, or more than 50 ampères, it will make a wound which will not bleed and will heal perfectly. If the enlargement is very dense and cement-like, and if when the capsule is slit the tumors enucleate with great difficulty or not at all, I believe it is better to attempt the relief of the case by a Bottini operation done with the parts in sight, than it is to channel a ragged and uncertain groove through the obstruction with rongeur or scissors.

Some operators teach that all prostatectomies should be done by *sectio alta*, and some assert that the suprapubic cut is never necessary, that all obstructions may be removed through an incision in the perinæum. Neither is right in his contention. It is true, that however peculiar and irregular the shape of the encroachment of these tumors on the urethra and bladder may be, provided they are not fibroid or myomatous, when skill has been acquired in enucleation, by the aid of hooked retractors or stout tenacula, nearly all may be brought down through a median perineal incision and delivered without entering the bladder. If the bladder must be entered, it is better to do so by cutting directly through the neck posteriorly by the backward cut, originally proposed by Harrison, as a cure for prostatism. By this means the finger can, in most instances, be easily passed into the bladder and swept over its posterior and lateral surfaces feeling for

isolated protuberances, large or small, beneath the mucous membrane, sometimes unconnected and sometimes connected with the body of the prostate. Such tumors can often be opened with a long-handled capsule knife with the finger as a guide, enucleated and delivered.

I have seen a few cases where the enlargement sprang out from one side of the prostate high up, projecting into the bladder without coming in contact with its base, hanging down into the urethral mouth from the top wall, so to speak, and acting when the bladder was full like a ball valve, exactly as the so called middle lobe is supposed to act. I have met with small adenoid nodules set in an inflammatory cement directly around the bladder mouth pouting into the mucous membrane just enough to stop it up, and if one removes a mass as large as a fist, and leaves such little fellows, which are the real obstructing portions, undisturbed, the operation will either be wholly or partially unsuccessful.

Again, the tumors projecting into the bladder may be fibroid, and after the adenoid nodules from about the prostatic urethra have been removed it is found that no impression upon the obstructions beyond the bladder neck by an attempt to excochleate, can be made. Sometimes on entering the prostatic urethra and commencing to enucleate, a dense fibroid or myomatous growth through which a channel can only be cut with the rongeur is found. In all such cases it is necessary to open the bladder suprapubically for the removal of the obstructions.

I confess that, the greater my experience, the more it troubles me to add this extra cut. In such prostastics, the bladder is usually very foul and the belly wound becomes easily infected. As great speed in the doing of these operations should be used as is consistent with thoroughness, and this will vary with the operator, the one operating must know how much or how little it is necessary to do. Speed in operating may prove to be very delusive. I known one operator whose speed is said to be remarkable, but he has never had an approximately perfect result.

If the cystoscope can be introduced into the bladder before operation, and projecting nodules of considerable size can be seen upon the superior portion of the lateral quadrants or the superior quadrant, or springing from the prostate on one side far away from the bladder neck, I prefer always to make the suprapubic cut for removal of the obstructions, making the perineal cut afterward, if upon examination it appears to be necessary. The after treatment of these cases is generally easy enough if you have a skilled nurse; otherwise, it becomes a subject which is often disagreeable and

unusually burdensome, onerous, and time-absorbing for the surgeon.

If the work for the removal of the obstruction can be done without disturbing or breaking through the outer capsule of the prostate or tearing the neck of the bladder, the immediate hæmorrhage is not alarming, but when compared with other surgical operations, with the exception of those about the face, the hæmorrhage is always quite considerable, and sometimes, where the arteries are sclerotic or some of the large veins of the capsule are opened, it is severe and not always easy to control. The best method of doing this is to use hot water at 120° F., the tissues of the perinæum, buttocks, and scrotum being protected by sterilized vaseline. If this does not suffice, the wound can be slightly packed with gauze, moistened in a solution of 1-1000 of adrenalin chloride passed in along the finger and carried up inside the capsule on each side.

Some operators do not drain, declaring it to be unnecessary. If the urine is clear and sweet its contact can never do any harm to the perineal wound unless the raw surface extends beyond the tissue of the capsule of the prostate. When the urine is alkaline or rather ammoniacal, and the bladder has contained calculi or incrustations upon ulcerated bosses of the prostate, or where there is fear of hæmorrhage, it is much better, I believe, to drain. For this purpose, I at first used Watson's perineal drainage tubes, but they are too short to fit all perinæums, are not very comfortable, and are expensive. I then used the Tiemann soft rubber perineal tube, which has a double eye, one at the end, the other on the supper surface near the end, having them made in calibres from 30 to 40 F. These do not readily become plugged, but should there be a late copious hæmorrhage into the bladder at the end of twenty-four or forty-eight hours filling this viscus with clots, the tube is useless to assist in their evacuation. Two experiences of this kind led me to adopt the tube I use at present, which is a metallic one 18½ centimetres long, the calibre 36 F., with a large smooth eye 2 centimetres long by 1 centimetre wide, situated near its rounded end. It is really a short evacuating tube and is made to fit the Chismore evacuator, with which attached the bladder may be easily emptied of clots no matter how copious the hæmorrhage has been. It is worn with great comfort, does not cause tenesmus, and is usually removed at the end of the fourth day with the packing. I think it is a very valuable device for perineal drainage after bloody operations upon the bladder or prostate, and can recommend its use to others. It is securely held in place by tapes tied back of the winged flange and fastened with safety pins to a broad band about the waist, two

in front and two at the back. Continuous drainage is provided for by a piece of large-sized drainage tube attached to the metal tube and connected by a glass reduction tube to six feet of ¼-inch calibre rubber tubing, which emerges from the foot of the bed and ends in a graduated bottle on the floor. This tube is so arranged with safety pins that the patient can move freely in bed without disturbing the tube in the bladder. If further drainage is required, use is made of the Tiemann perineal tubes, their calibre being reduced gradually to 20 F.

The patient's bowels are moved freely at the end of the first twenty-four hours, and afterward once daily, using such laxatives as are not disagreeable to the individual. After removal of the packing, the deeper parts of the wound are not repacked, but the superficial parts are slightly stuffed with gauze, to prevent contamination with fæcal matter.

During the first twenty-four hours, 10 minims of the solution of adrenalin chloride, 1-1000, are given every two hours hypodermically as a hæmostatic agent and cardiac stimulant, and usually 1/30 grain of strychnine at the same time. After the first day, the medicines are continued at longer intervals when necessary. Where the hæmorrhage came directly from the bladder, I have several times succeeded in stopping it by the injection of an ounce of the solution of adrenalin chloride, 1-5000. In all my important operations upon the urinary tract for the last eight years, I have had two quarts of normal salt solution given by hypodermoclysis while the patient is on the table under the anæsthetic, and this is repeated every three hours after he leaves the table until the drainage tubes show a free secretion of urine. In all this time I have never lost an operative case from suppression of urine or from uræmia.

(To be concluded.)

Tuberculosis Camps.—Commissioner Lederle, of the bureau of health, has recently returned from the Adirondacks, where he went to investigate the various tuberculosis camps and to study their systems, as well as to look up a site for the camp proposed to be instituted for the people of New York city. He has not yet selected a site.

Atlanta, Ga., wants a State Board of Health.—The physicians of Atlanta are making a strong effort to secure the creation of a board of health for Georgia. At the last meeting of the medical association at Columbus, Ga., a committee was appointed consisting of one physician from each of the forty-four senatorial districts of the State to take the necessary steps toward securing a department of health. Dr. Charles Hicks, formerly president of the Georgia Medical Association, was chairman.

A HISTORICAL SKETCH OF THE EAR DEPARTMENT AT THE NEW YORK EYE AND EAR INFIRMARY.*

By GORHAM BACON, M. D.,
NEW YORK.

It is my privilege on this occasion, to give you a brief historical account of the Ear Department of this Infirmary.

This institution, founded in 1820, was known as the New York Eye Infirmary until April 30, 1864, when a committee of the directors, appointed to apply to the legislature for permission to change the title of the institution from the New York Eye Infirmary to the New York Eye and Ear Infirmary, reported that their application had been granted and that the said New York Eye and Ear Infirmary, in addition to the powers conferred by the said act, "are hereby authorized to treat and care for indigent persons affected with deafness and other diseases of the ear."

Although this institution had, previously to this time, cared for patients afflicted with ear diseases, we must consider that the organization of the ear department practically dates from April, 1864.

The first surgeons appointed in the newly organized aural department were Dr. John H. Hinton and Dr. D. B. St. John Roosa, and during this year 923 patients with ear diseases were cared for. In 1871, we find that the number of new patients had increased to 1,996, and in the list of surgeons in this department we find the names of Dr. Robert F. Weir, Dr. Charles E. Hackley, and Dr. Albert H. Buck. In 1882, the number of new cases for the year had increased to 2,889, and there were 6 cases of mastoid disease. In 1888, the new cases numbered 3,526, and there were 39 mastoid cases; and, during this year, the operation for trephining the skull for brain abscess due to disease of the ear, was performed. This was the first time that such an operation had ever been performed in this country, and it is noteworthy that this institution has the honor of having been the pioneer in this work.

I think that we must hold the grippe responsible in a measure for the great increase in the number of cases from 1890 to 1902, for during these twelve years the new patients have increased from 4,089, in 1890, with 42 mastoid cases, to 10,235 with 355 mastoid cases in 1902. From one case of brain abscess, in 1888, the number of various brain complications has increased to 55 in the year 1902.

At first, after the organization of the ear department, the surgeons treated their patients in two very small and badly ventilated rooms in the old

building which stood on the corner of Thirteenth Street and Second Avenue. The department, in 1879, was given quarters in the Green Pavilion, a building adjoining the infirmary on Second Avenue. A few years later, a small room containing two beds was assigned to the ear department for their operative cases, but, as necessity demanded, the accommodations were increased so that at the present time the aural surgeons have two wards containing twelve beds each.

For a number of years the out-patient department has been cared for in a building, No. 222 Second Avenue, adjoining the Green Pavilion, which was purchased by the directors.

From this *résumé* of the growth of this department of the infirmary, it will be seen that the number of patients was increasing with such rapidity that even greater facilities for the treatment of cases would soon become an urgent, and indeed an absolutely imperative, necessity. As far back as October, 1892, the directors passed a resolution to the effect that the building, No. 222 Second Avenue, be held in reserve for the use of the aural department, and it was at that time the intention of the board to erect a separate building just as soon as the funds could be obtained.

As previously stated, the first case of brain abscess following disease of the ear, was operated on in this institution, and from that time, the aural surgeons of this institution have kept fully abreast of the best work done in this line in England and the Continent.

It is interesting to quote from the *Annual Report of the Directors* for the year 1896 in order to show the record of successful work in the ear department at that period, and also for an indication of the great need at that time for increased room and better facilities. The paragraph alluded to reads as follows:

"During the past year (1896), twenty operations on the cranial cavity were performed by the surgeons in the Ear Department, of which fifteen were successful. When we consider that, only a few years ago, such cases were allowed to die without any attempt to save them, the result of these operations, viz., 75 per cent. cured, speaks well for the great advances made in the science of otology. The directors and surgeons are particularly desirous to complete the infirmary building by tearing down the building No. 222 Second Avenue, and erecting a pavilion to be given over to the use of the Ear Department. It is the earnest wish of the directors that some friend of the institution will donate a sum of money sufficient for this purpose."

Unfortunately, up to the present time, it has been absolutely impossible for the Ear Department to

* An address delivered at the opening exercises of the Schermerhorn Pavilion of the New York Eye and Ear Infirmary, May 11, 1903.

meet adequately the urgent demands made upon it, notwithstanding the fact that various facilities have been given it since the date of the report just quoted, and the critically ill have been treated in one of the large general wards, instead of being isolated. In the event of a patient suffering from meningitis, the whole ward was disturbed by his noisy delirium, and those patients who had undergone serious operations were annoyed and depressed by the incessant crying of children who occupied beds in one of the large wards.

The operating room, until last fall shared alike by both Ear and Throat Departments, has been totally inadequate for the purpose, and the surgeons have frequently been compelled to wait their turn for an opportunity to operate. Such delays were not only wearisome and vexatious to the surgeon, but militated against the chances of recovery in grave cases.

Thanks to the generosity of the late Mr. W. C. Schermerhorn, who has placed not only this infirmary, but the community at large, under great and lasting obligations, this department now has the accommodation which it has so long needed. In this new aural pavilion, which is dedicated to-day, there are two operating rooms, special rooms for patients with brain complications, and a separate ward for children, as well as private rooms for pay patients.

I certainly express the feelings of the entire staff of the Aural Department when I say that no greater boon could have been secured for suffering humanity, and no more appropriate and enduring memorial to a generous giver have been devised, than the erection of the Schermerhorn Pavilion.

The purpose of this most generous gift will only be fully accomplished when the building is provided with a complete equipment of the most approved surgical appliances, furniture, bedding, and the various supplies necessary for a modern hospital. Provided with such a pavilion, we surgeons are confident that the achievements of the next five years will far surpass the results, however gratifying, of the past decade, trusting on the prompt surgical interference, under modern methods of aseptic treatment and advanced trained nursing, to save human life, and thus to add to the sum of human happiness.

New York State Medical Association.—At the nineteenth annual convention of the First District Branch of the New York State Medical Association held recently in Watertown, N. Y., Dr. J. O. Stranahan, of Rome, N. Y., was elected president; Dr. John R. Bassett, of Canton, vice-president.

THE NEED OF COMBINED ACTION AMONG THE VARIOUS MEDICAL SPECIALTIES.*

By J. W. PUTNAM, M. D.,
BUFFALO, N. Y.

Gentlemen: Before proceeding to address you formally, I desire to express my warmest thanks for the very great honor you have conferred upon me in choosing me for your twenty-ninth president. With the honor I accept also the responsibilities, and rely upon your help in making this a successful meeting.

The American Medical Congress was founded because the interdependence of the different branches of medicine was recognized by the master minds of the profession. The time has come when specialists need to broaden their interests and enlarge their views of the field of medicine. Specialism is so engrossing that its devotees are in danger of becoming narrow in their interests and their activities.

Of no class of physicians is this more true than of neurologists. The range of diseases we are called upon to treat is so large and so varied that it would seem impossible for us to become narrow. In the past few years we have been especially active in research along many lines. Our text books are models of exact and definite descriptions of diseases, careful observations of symptoms, detailed records of clinical history, and the minutiae of pathological findings.

Though our writers are accurate and complete in their observations, there is an evident tendency to specialize in our therapeutics. Our prognoses reveal to some extent the natural tendency of diseases. Our view of the future seems to be limited by our own resources.

It is important that as teachers and authors we bear in mind that the treatment of disease resulting in benefit to the patient is the ultimate goal of our efforts. It is to this end that our hospitals are founded and maintained by the charitable; it is for this purpose that our patients seek us, and for this that students read and study our books.

The chronic cases of paralysis with deformities from various cerebral, spinal, and peripheral causes form a large and hitherto hopeless class. For years those afflicted with diplegia, hemiplegia, and spastic paraplegia have sought medical aid in vain. In the books on nervous diseases which the physician consulted for guidance he found, until recently, at the best a statement that such a case might be benefited by appropriate mechanical appliances, massage, and

* The Presidential address to the American Neurological Association, at Washington, May 12, 1903.

electricity; he seldom found that definite statement of facts which the orthopædists have accumulated in the last decade.

Tendon transplantation and the principles which govern the operation should find a place in our chapters on treatment. It should be taught to the student from the neurological standpoint as well as from the surgical. The field is a new one. Old methods are giving place to better ones. This is a therapeutical measure which appeals specially to us, for it is designed to benefit our patients. It is our province to develop this practice; to study, investigate, and teach it, to consult with the surgeon on special cases, as we do in cases of brain tumor.

We have long ago made common cause with the surgeon in cerebral and spinal operations; let us extend it to the domain of surgery of the neuromuscular machine.

To the surgeon belongs the technique and this has been ably developed by such operators as Bradford, Gibney, Goldthwait, Townsend, and Whitman, of this country; by Robert Jones and Tubby, in England; by Hoffa, Lange, and Vulpius in Germany; and by Codivilla and Niccoladoni, in Italy.

To us belongs the duty of selecting cases for operation, and of enlarging its field of usefulness. The after care of the patient is as important as the surgical. The operation must be followed by an education, both mental and physical, which we must direct. It is only through cooperation that the best results will be obtained.

Hitherto the relation of neurology to obstetrics has not been sufficiently appreciated or emphasized. The effect of prolonged labor upon the child is being studied and requires much more careful investigation in order to determine the effect of cranial birth injuries upon the brain. The obligation rests with us to sound the note of warning, in season and out of season, that epilepsy is in a large number of cases due to cranial birth lesions. The lesson must be so impressed that it will be a rule with accoucheurs to examine the head for fractures or undue depressions after severe labors. When this practice has become a rule, and the cranial injuries are treated early and carefully, we may see as a result a diminution in epilepsy, idiocy, and cerebral birth palsies. It has not been my purpose to refer to the most excellent work done in our own lines of investigation, so much as to emphasize the fact that specialists in the other societies are developing principles and accomplishing results which are of vital importance to us, and that we are developing theories, and obtaining facts of equal value to them; and that, by joining our researches and making a united effort in investigating the causes of diseases and new methods of treatment, we may improve

somewhat the helpless condition of those for whom the prognosis has hitherto been unfavorable, and in other instances diminish in some measure the deplorable results which are to be found in our homes for the epileptic, the feeble minded, and the incurable paralytics.

Original Communications.

REPORT OF SOME SURGICAL CASES.*

By W. MONROE SMITH, M. D.,
ATLANTA, GEORGIA,

SURGEON TO TABERNACLE INFIRMARY AND TO MAC VICAR HOSPITAL; VISITING PHYSICIAN TO KING'S DAUGHTERS' HOSPITAL; MEMBER OF THE AMERICAN MEDICAL ASSOCIATION, ATLANTA MEDICAL SOCIETY, GEORGIA STATE MEDICAL ASSOCIATION, TRISTATE MEDICAL ASSOCIATION (GEORGIA, ALABAMA AND TENNESSEE), ETC.

In reporting the few surgical cases which follow, I do not do so on account of any original research, but because of the fact that they have been of special interest to me, on account of the uniqueness of some of them, and the extreme severity and seemingly utter hopelessness of at least one, in which case recovery followed surgical intervention.

CASE I.—In the latter months of the summer of 1899 I was called to see Mrs. S., white, aged fifty-nine years, whom I found in quite feeble health. In fact, she was at that time suffering from chronic dysentery, intestinal fermentation, etc., and was practically confined to her bed. Upon examination, I found her very much emaciated, and found a distinct tumor in the right hypochondriac region, reaching down and occupying the umbilical region to a level with the navel. It seemed to be in connection with the liver, as liver dullness was continuous. With her cachetic appearance the tumor was supposed to be, in all probability, malignant. She was put on treatment for her gastrointestinal derangement, which soon improved. She was given careful tonic and supportive treatment. On October 10th of the same year, her condition having so much improved, I made an exploratory incision over the seat of the tumor, expecting to remove the same, if found practicable. When the peritonæum was incised the tumor was at once seen to be a downward enlargement of the right lobe of the liver, and upon palpation was found to be quite hard and nodular and still more suggestive of malignancy. Upon the suggestion of my colleague, Dr. W. S. Goldsmith, who was assisting in the operation, a needle was stuck into the mass, and at once encountered a hardness which stopped its progress. It was then supposed to be a nest of gall stones in the liver tissue. Abdominal pads were then carefully placed around the liver to protect the peritonæum from infection, and the liver was then freely incised down to the point of obstruction, and

* Read before the Georgia State Medical Association in April, 1902.

sure enough, a nest of gall stones was found, mostly of rather large size, with characteristic facets, indicating very prolonged imprisonment in that location. The stones were then removed with forceps; in all, seventy-one stones were removed. The last few stones were situated very deeply, and were quite difficult to extricate, but success crowned our persistent and determined efforts. The liver was then stitched to the peritonæum, the wound freely irrigated with saline solution and packed with iodoform gauze, and the usual external aseptic dressing applied. The patient stood the operation fairly well, soon began to improve, and made an uneventful recovery. She has been under constant observation since, and has enjoyed most excellent health.

CASE II.—In November, 1900, I was called to see Mrs. D., white, aged sixty-three years, who was then suffering from a series of attacks of gall stone colic. She was then very much jaundiced as a result, and was thoroughly septic. She was put on the usual symptomatic treatment for such condition, but instead of subsiding, as usual, the pain, jaundice, and septic condition continued. An operation was advised and urged, and was promptly refused. General symptomatic, supporting and stimulating treatment was persisted in, but without material results, until she began to have hard septic chills every day, followed by free sweats and subnormal temperature. She had about four or five of such paroxysms, when the temperature went down to 94.5° F., with a tenacious tendency to remain in that region. The temperature then ranged from 94.5° F. to 96° F. for four or five days, in spite of the freest stimulation, hot saline infusions, continued artificial heat, etc. The pulse during this time was barely perceptible, and ranged from 140 to 160. In fact, we momentarily expected the death of our patient, but on December 8, 1900, about five weeks from the beginning of the illness, the temperature reached 96.5° F., and believing that this was as good an opportunity as could be procured, with the consent and assistance of Dr. Goldsmith (who had been in consultation in the case for several days), an operation was performed. Plenty of assistants were secured. The patient being anesthetized with ether (of which very little was required), a transverse incision was made over the region of the gall bladder and the index finger was introduced to explore. The gall bladder was found to be free of stones, but a mass of dense adhesions was found involving the lower part of the gall bladder and continuing down and including the ducts at their junction. This mass was punctured with the finger, as there was marked fluctuation, and of course this was known to be an abscess, when a great quantity of foul smelling pus escaped. The peritonæum was protected as thoroughly as possible with pads to prevent infection. The patient was in such a critical condition that no time was consumed in exploring the abscess cavity for the location of the gall stone, which was supposed to have ulcerated through the common duct and caused the trouble. A double rubber drainage tube was at once introduced, the wound closed up to the tube, aseptic dressing applied, and the patient put to bed, surrounded by an abundance of heat. During this

time assistants had been giving saline infusions and whiskey and other stimulants hypodermically. It only required a few moments to complete the operation as described. The patient was not expected to live for the next few days, but did not die; on the contrary, she began to improve. While she had a protracted convalescence, she improved steadily from the start, and has since then enjoyed most excellent health, and has been entirely free from other attacks of gall stone colic.

This case should have been operated upon very much earlier and the very close call thus avoided, but the patient would not consent to any operative procedure whatever until she was practically unconscious, and her friends had to decide for her. No stone came away during the drainage, and she may still harbor a stone somewhere in her body.

CASE III.—On March 23, 1902, I was called in consultation with Dr. P. L. Moon, to see a Mrs. B., white, aged thirty-five years, who had been suffering from so-called bilious attacks. She had suffered more or less pain in the epigastric region, with bilious vomiting, since her early girlhood. She had at this time, when seen by me in consultation with Dr. Moon, been suffering almost continuously for five or six weeks with colic and transient jaundice, which necessitated confinement to bed; she was at this time jaundiced. Dr. Moon's diagnosis of gall stones was confirmed, and an operation advised, to which consent was given. Assisted by Dr. Moon and Dr. Moncrief, I operated on her March 26th. The usual transverse incision was made over the gall bladder. The gall bladder was readily found, and was very much contracted; being, in fact, not half the size of a normal gall bladder. It was literally packed and jammed with gall stones; it was also adherent to all its neighbors. A loop of small intestine was very firmly adherent to it. The gall bladder was dissected loose from the adhesions, and brought up into the incision: pads were placed around it to prevent leakage into the abdominal cavity, and it was then opened. The bladder was very much thickened and very brittle indeed; so much so, that the utmost caution had to be exercised in handling it, to prevent tears. A finger was placed beneath the bladder, and the stones were milked out with it. After the bladder was emptied, upon search for stones in the ducts, two were found thoroughly packed down into the cystic duct, very near the junction with the hepatic duct. These proved to be quite tedious to get out, as they were quite hard in consistency (could not be crushed), and also on account of the depth of the wound. The incision was enlarged and the left hand introduced sufficiently to permit the index finger and thumb to reach the stones thus situated, and they were carefully milked back into the gall bladder, and from thence removed. The gall bladder was now stitched to the peritonæum with chromic catgut sutures, then thoroughly drenched with normal saline solution, and a drainage tube introduced into it and fastened to the abdominal wound. The drainage tube was allowed to remain for about a week, and was then

removed, and the fistula left has, at this time, the appearance of early healing.

The interesting peculiarity of this case to the author was the hypertrophied condition of the cystic wall, which must have been one fourth of an inch thick, the bladder not resembling the cyst in appearance at all, but looking like connective tissue; also the very contracted condition of the cyst upon its concrete prisoners, squeezing them as if they were in a vise; and absolutely no bile was found present in the gall bladder until after the stones had been removed from the cystic duct. Since that time the drainage of bile has been quite free, the patient has done quite well, and, I trust, will be able to appreciate the functions of the gall bladder, which to her will be a luxury, as she must have been devoid of that blessing, in my opinion, for years past. In all, forty-eight gall stones were removed.

CASE IV.—In June, 1901, I was called to see Mrs. T., white, aged thirty-three years, mother of two children, who was confined to her room as the result of marked anæmia and continued pelvic pain characterized by very severe paroxysms which necessitated opiates at those times for relief. Her bad health had come on almost immediately some five or six weeks previously, which marked the first attack of the above described paroxysms. Upon local examination, I found a mass corresponding in size to a foetal head, occupying the pelvis, which completely displaced the uterus transversely, the fundus lying against the right ilium. A diagnosis of hæmatoma was made and an operation advised. On June 16th following I performed the operation. An incision was made in the median line, and when the peritonæum was incised the diagnosis of hæmatoma was at once confirmed. It proved to be a hæmatoma of the left ovary, and it was thoroughly adherent to the surrounding organs. It was carefully dissected out, tied off, and cut between the ligatures. The mass, together with the ovary, was removed. During the manipulation of the mass the sac ruptured, and the abdomen, both internally and externally, was flooded with dark, liquid blood, and quite a puddle ran down on the floor. There were at least two quarts or more of this blood. The right ovary was now inspected, and was found to be inhabited by a small hæmatoma also. It, together with the hæmatoma, was removed as well. The abdominal cavity was then freely flushed with hot normal saline solution; the abdomen was closed up, layer by layer, with chromic catgut sutures without drainage, then dressed, and the patient was put to bed. Except for some stomach trouble, which was entirely independent of the operation, the patient got along quite well; in fact, had a normal convalescence.

The interesting feature of this case, which is the immediate cause of my reporting it to this association, is the unusual fact that, though both ovaries were entirely and completely removed, the patient continued to menstruate at from two to four weeks'

interval for some time thereafter, and then skipped some five months, but at the writing of this paper is again menstruating. My experience in the past with such cases has been that menstruation ceases at once after a complete removal of both ovaries. In looking up the subject some time since, I found that some one asserts (I do not remember the author or the source of my information) that in about 4 per cent of ovariectomy cases the patients do menstruate more or less regularly for an indefinite period of time thereafter.

CASE V.—In September, 1900, I was called to see Mr. P., white, aged thirty, whom I found suffering, as he asserted, from an attack of piles. His history was that he had been taken ill about ten days previously to my seeing him, with a protruding tumor from the anus, which caused him considerable pain and discomfort. He called in a physician, who at once pronounced his trouble an attack of piles, and promised and proceeded to give the young man a radical cure. The doctor's method was the injection hypodermically into the mass of some cauterizing solution, and he continued this treatment persistently, assuring the patient of an early convalescence; until, forbearance ceasing to be a virtue with the sufferer, the sanguine doctor was dismissed and I was called to the young man's relief. I found the patient more or less septic, sleepless, etc., and upon local examination of the rectum, I found a mass as large as a small fist and in a state of gangrene, protruding from the anus. It was sloughing freely, presenting withal a revolting appearance. A couple of days were consumed in stimulating my patient and evacuating the bowels, thus getting him in a better condition for an operation, and on September 23rd, the patient being anesthetized with ether and placed in the lithotomy position, and the anal region thoroughly shaved and cleansed, the following operation was performed: The sphincter muscle being thoroughly paralyzed by dilatation, the rectum thoroughly douched with saline solution, the junction of the mucous membrane with the skin around the anus was carefully incised and the intestine carefully dissected loose from its surrounding attachments. Caring for the sphincter muscles, the dissection was carried sufficiently up to permit the mass, together with intestine, to be pulled downward until healthy gut was found, when it was cut transversely across and stitched to the skin around the anus, perfect approximation being secured. About three inches of the intestine were removed with the mass. Silk-worm gut sutures were used, which were removed on the ninth or tenth days, when almost perfect union was secured. The bowels were not allowed to move for six or seven days after the operation, when they were evacuated by a dose of castor oil. In three weeks' time the patient was entirely well and back at his regular occupation as a printer. He has perfect control of the sphincter muscles.

Why is a Man said to "Laugh up his Sleeve"?—According to the *Chemist and Druggist*, it is because the humerus and the funny bone are up there.

SPERMATURIA.*

By ARTHUR R. ELLIOTT, M. D.,

CHICAGO,

PROFESSOR OF MEDICINE, POST-GRADUATE MEDICAL SCHOOL.

The object of this paper is to direct attention to a factor, which, in the experience of the writer, has proved a frequent confusing element in testing for albumin in the urine, viz., the presence of seminal elements in the urine. Spermaturia, a term first used by Grünfeld, may be applied to this condition.

A review of one thousand carefully and fully recorded analyses of male urines, taken from my records, reveals the fact that seminal elements were present in fifty-six instances, in all of which spermatozooids were features of the microscopic sediment. In forty-four of these fifty-six cases, the albuminous reaction was obtained. In the remaining twelve no reaction for albumin was present, but without exception in these cases, spermatozooids were found in very small numbers, and seemed from their infrequency to be accidental bodies. In twenty of the forty-four cases in which distinct reactions for albumin were obtained, no other morbid elements such as blood, pus, or casts which might be responsible for the presence of the albumin, were found. In the remaining twenty-four cases, casts, pus, or blood were present and to these might be attributed, more fairly than to the spermatic elements, the causation of the accompanying albuminuria. As the outcome of this investigation, twenty cases of albuminuria, varying in amount from a trace to 1 per cent. bulk of moist precipitate, were attributable to the presence of seminal elements, a ratio of 2 per cent. It would appear from this that these bodies in the urine are frequently the cause of false albuminuria.

My attention having been directed to the subject by interesting clinical experiences, a careful investigation of the literature failed to reveal to me any reference to the presence of seminal elements in the urine as a possible confusing factor in testing for albumin, and curiously enough, I was unable to discover any table of reactions which these bodies, when present in pathological amounts, might occasion. No accurate chemical analysis of human semen is recorded, the only one forthcoming being the old analysis of Vauquelin and Köl liker, which is as follows:

Water	90
Albuminous material	}..... 6
Extractives	
Ethereal extract	
Mineral material	4

According to Milscher, the fundamental constituent of semen is nuclein. Globulin and serumalbu-

min have been found in semen, and Posner asserts that albùmose is also present.

With these spare data the chemistry of human semen has evidently been dismissed by physiologists. My investigation of the subject has not been concerned with the chemistry of semen, but with the reactions which result from its presence in the urine.

Normal semen, as is well known, is a composite body, which consists of a mixture of the secretion of the testicles, the seminal vesicles, and the accessory glands (the prostate, Cowper's glands, and the glands of the urethral mucous membrane). According to Ultzmann, the fluid portion of the semen is made up of the combined secretion of the seminal vesicles and accessory glands, the testicles furnishing only the spermatozooids. Besides spermatozooids, the microscope shows spermatic cells, epithelium from the prostate and urethra, and molecular detritus.

Under certain physiological conditions, seminal elements may find their way into the urine in number sufficient to give rise to distinct reactions for albumin. Thus, in the first urine passed after coitus and pollutions, they are found in considerable amount. Such urines frequently appear hazy by transmitted light, and upon standing a distinct nebula separates out. This physiological spermaturia may appear, at first glance, to have little clinical importance. It has, however, been my experience a number of times to encounter distinct albuminuria due to these bodies, in urine submitted for analysis that had been voided upon rising in the morning, coitus after retiring the previous evening or nocturnal pollution being the undoubted cause. A professional colleague who makes many analyses for life insurance companies informs me that he has found spermatic albuminuria a frequent confusing factor, especially in urines submitted on Sunday morning, that being the time, one may infer, when sexual coitus is indulged in by the week day workers. A less important and a doubtful physiological cause for the presence of these elements in the urethra is extrusion of semen during defecation. Certain authors (Pickford, Davy, Lewin) consider that straining at stool may be sufficient cause to produce the escape of semen from the seminal vesicles. Curschmann and Fürbringer maintain that although some isolated spermatozooids may, under physiological conditions, be forced into the urethra during efforts at defecation, the passage of a considerable quantity of semen is only possible when insufficiency of the ejaculatory duct exists. No value attaches to this accidental spermatorrhœa, for it is necessary for these elements to be present in considerable amount to give rise to albuminuria.

A great variety of pathological conditions may

* Read before the Illinois State Medical Society at Chicago, April 30, 1903.

bring about the presence of seminal matter in the urine. Certain organic and functional perversions of the sexual apparatus are the most frequent ætiological factors. Of local anatomical affections the most important are chronic inflammation of the prostatic urethra and of the ejaculatory duct, together with dilatation and atony of the same. These conditions are most frequently consequent upon gonorrhœa, and are the predominant factors in morbid loss of semen during micturition and defecation. Certain other affections of the lower urinary tract may occasionally cause seminal leakage. Some of these are, urethral stricture, prostatitis, seminal vesiculitis, vesical calculus, habitual catheterism. Prostatic hypertrophy constitutes a very frequent cause of spermaturia in men of later middle and advanced life. In such case the development of the gland has rendered the ejaculatory duct incompetent. Certain rectal diseases may indirectly cause seminal loss. Among these are hæmorrhoids, fissure, oxyurides. Most important is the loss of semen noted in cases of true spermatorrhœa due to venereal excesses or masturbation, when spermatozooids may be found in the urine almost constantly. More especially is this escape of seminal fluid to be noted during and immediately following defecation. The morning urine, except when a pollution has occurred during the night, is more apt to be clear of these bodies than the urine of the day, the upright position and especially walking, jolting, riding, etc., having the effect of increasing the seminal leakage.

Certain affections of the central nervous system may be concerned in the production of morbid loss of semen. Among these may be mentioned tabes dorsalis, traumatic lesions of the spine, and myelitis. Fürbringer mentions having observed it in hysterical neurasthenia and also in cases of spinal neurasthenia during violent exercise. The urine voided after or during epileptic seizures is found pretty constantly to contain seminal elements.

As instances of the clinical confusion which may arise from the presence of these bodies, I submit the three following cases, which are chosen from a number in my case records as being most typical and illustrative.

CASE I.—A young man, twenty-four years of age, in good general health and leading an active life as canvassing agent, was referred to me in January, 1903, by Dr. Robert H. Babcock, of Chicago. Patient's application for life insurance, one week previous to consultation, had been refused on account of albuminuria, several urine analyses having been made. Four months previous to insurance examination, the patient had had an acute attack of gonorrhœal urethritis, the discharge lasting eight weeks, with deep urethral symptoms toward the end. During the two months' interval which had elapsed be-

tween cessation of urethral symptoms and the examination referred to, there had been no discharge, and the patient had considered himself cured and had resumed normal sexual relations without apparent detriment to himself or his wife. He had noticed on several occasions the extrusion of a drop of mucoid material during defecation, but this circumstance had caused him no concern. Patient is temperate in the use of alcohol, but is a heavy smoker of cigarettes. General physical examination failed to reveal anything abnormal. A single specimen of urine analyzed at the time of first consultation yielded a free reaction for albumin. No casts could be found, but the sediment contained great numbers of spermatozooids. A twenty-four hour collection of urine, submitted two days later, yielded the following results: Total quantity, twenty-four ounces; specific gravity, 1.028; urea, 3.4 per cent.; no sugar; albumin, 0.25 per cent. bulk; myriads of spermatozooids, and many spermatic cells, but no casts. A third specimen displayed practically the same characteristics. Patient was directed to submit three specimens, one to be collected before rising in the morning, one after breakfast and the daily stool, and one during the active portion of the day. No. 1 of these urines proved to be albumin-free and contained no spermatozooids; No. 2 contained appreciable amounts of albumin and large numbers of spermatozooids; and No. 3 also gave plain reaction for albumin and contained seminal bodies. This case seemed to be a pure case of spermaturia, due to incompetence of the ejaculatory duct, sequential to inflammatory involvement of the deep urethra, defecation and the activities of the day causing a leakage of seminal elements into the urethra. The kidneys were sound and the albuminuria false.

CASE II.—For this case I am indebted to the courtesy of my friend and associate, Dr. Walter A. Jaquith. The patient, a salesman by occupation, aged twenty-two years, had been examined for life insurance in December, 1902, and reported a good risk, except for albuminuria on account of which acceptance was withheld. Patient was first observed January 16, 1903. Physical examination failed to reveal any organic defect. Patient was highly nervous and complained of frequent nocturnal emissions occurring several times weekly, and often twice in one night. The urine was light in color, alkaline and turbid from precipitation of earthy phosphates. Distinct reaction for albumin was present and the microscope showed great numbers of spermatozooids and mucous cylindroids. No casts, renal cells, or pus, were present. This was a case of true spermatorrhœa, causing false albuminuria.

CASE III.—S. W., aged forty years, a sexual neurasthenic; has been under occasional observation for several years. Patient is a chronic dyspeptic and habitually constipated. Being an office man he leads an indoor life, and during the period of my observation has been under treatment at various times for sexual weakness. Many specimens of urine have been examined, several of which have proved to be absolutely free of morbid elements; other specimens, including the last three submitted

for analysis, have contained distinct amounts of an albuminous body. Large numbers of spermatozooids have been discovered in the sediment of each of the albuminous urines and to these bodies has been attributed the albuminuria. Examination reveals a slightly enlarged and tender prostate; no venereal history can be obtained.

Differential testing, the details of which it is not necessary to describe, reveals the fact that several albuminous bodies contribute to the reactions which seminal elements give rise to in the urine. Both coagulable and non-coagulable albumins are present. They consist of traces of serumalbumin, serumglobulin, nuclealbumin (mucin), and a distinct reaction for peptone is found in the filtrate after saturation of the urine with ammonium sulphate, by the aid of heat. No reactions for albumoses could be obtained.

Of more practical clinical interest is the manner in which urine containing these bodies behaves to the albumin tests in common use. With heat, heat and nitric acid, heat and acetic acid, and heat and acetic acid after previous treatment of the urine with saturated sodium chloride solution, a distinct, although not heavy albuminous cloud results. Heller's nitric acid contact method yields a faint reaction, much less distinct than that produced by any of the foregoing methods. The potassium ferrocyanide test gives a distinct reaction which is not affected by heat. This reaction does not develop so quickly as with ordinary urinary albumin, but only after a momentary interval, and becomes more pronounced after the test has stood for a few minutes. Moreover, the albuminous cloud does not precipitate in the test tube on standing, and only with the greatest difficulty is it thrown down by centrifugal precipitation.

The potassio-mercuric-iodide and picric acid tests give plain reactions which are partially dissolved by heat, to reappear again when the solution becomes cold.

The addition of strong acetic acid to the diluted urine yields the mucin reaction, as does also Almén's tannin test used in conjunction with saturated salt solution.

It will be seen from the foregoing observations that the reactions produced by the presence of seminal elements in the urine very closely resemble those produced by serum albumin and may easily prove a confusing element in albumin testing.

103 STATE STREET.

Crystallized Wisdom: Nature Study.—"Of nearly all the forms of 'play' children and men alike, in the course of time, tire; but the interest in nature increases with acquaintance, and the passage of time serves only to bring out new and unfailing sources of attractiveness and beauty.

"Age cannot wither her, nor custom stale
Her infinite variety."

—O. J. Stevenson, M. A., in the *Educational Monthly of Canada*, January, 1903.

DO OUR PRESENT WAYS OF LIVING TEND TO THE INCREASE OF CERTAIN FORMS OF NERVOUS AND MENTAL DISORDER?*

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That some forms of insanity are increasing I first proved to my own satisfaction while preparing a paper on *Teachings of Recent Investigations into the Causation of Insanity*, read at the annual meeting of the American Social Science Association in 1891. That neurasthenia and some of the allied neuroses seem to be also increasing I think there is little doubt. That part of this increase in nervous and mental derangement is due to our present methods of living I shall try to prove to-night.

By our present methods of living is meant our rapid and over strenuous life, with its varied and increasing demands upon us; our irregularities in eating, drinking, and sleeping; our tendencies to over-indulgence; and the possibilities of deprivation in some cases.

At first glance many of us may take a more pessimistic view of the effects of the present strenuous life than a closer study of the facts will warrant. That it may be harmful unless counterbalanced by variety, rest, and sleep there is no doubt; for "wherever wear and tear are in excess while rest and repair are deficient," the effects will be serious, if not in this generation, certainly in subsequent ones. All cellular activity requires cellular rest. A nerve cell which has had five hours' artificial stimulation has been found to require about twenty-four hours' rest before it can recover from the exhaustion and changes produced in it and regain its full natural activity. What takes place in the cell when artificially stimulated probably also occurs, although to a less degree, in the excessive stimulation of our rapid daily life. The normal symptom of cell exhaustion, viz., fatigue, is dissipated only when we take rest and sleep, during which the blood carries off the waste products and restores normal cellular conditions.

This brings up the subject of autoinfection. The usual form of autoinfection is that produced by morbid alimentary action. There is, however, a more injurious form caused by incomplete oxidation of the products of the exhausted tissue cells, leucocytes, etc. These products of suboxidation of waste

* Read at the monthly meeting of the Society of Alumni of Bellevue Hospital, May 6, 1903.

materials are extremely toxic, and anything which may interfere with complete oxidation results in their accumulation and becomes of grave importance especially in the individual who may be, by heredity, neurotic. Many consider autoinfection the prime cause of neurasthenia, in fact its underlying condition, and look upon neurasthenic symptoms as merely the manifestations of the effects of toxic substances on the sensory nerves or centres.

Dr. Roberts, a Western writer, has written upon this subject, and maintains that over mental or physical exertion, if unaccompanied by sufficient rest and sleep, would tend to cause an accumulation of suboxidized products which would react unfavorably upon the nervous system.

Again, some consider that autoinfection is at the bottom of nearly all the insanities, especially of melancholia. Most trained alienists, however, while admitting the frequency of autoinfection as a cause in many cases, are not prepared to admit it as a universal cause.

There is no doubt that autoinfection may contribute to the formation of the habit of fits in the epileptic; that it is a cause of convulsions in children; that it is a cause of the menopause neuroses; and even that autotoxæmia may be a factor in surgical shock from the sudden inhibition of proper elimination.

As regards insanity it is almost universally conceded that the majority of all cases of most forms of insanity are dependent on neurotic heredity on the one hand and stress of some sort, physical or mental, on the other. Where there is no faulty heredity the severest stresses usually fail in producing insanity, but may, of course, cause neurasthenia under certain physical conditions. By a faulty and neurotic heredity I mean a predisposition in its broadest sense; not only a tendency inherited from parents or grandparents, who may themselves have been insane or have had neuroses such as epilepsy, chorea, hysteria, or hypochondriasis, but also the tendency derived from ancestors who have been addicted to vicious habits of living, or in whom there has been unfortunate consanguinity.

Without going profoundly into the subject let us recall for a moment the fact that "all the potential qualities of every human being once existed within the germ-plasm of the two cell nuclei from whose union the future being develops"; and, with this in mind, we may more thoroughly appreciate the profound effects of heredity. Potential characteristics which are normal to the race and peculiarities which are normal to the parents all once existed in this protoplasmic germ and are reproduced in the offspring. Can we not find, right here, then, a suggestion that if normal states are thus reproduced,

abnormal conditions may be transmitted, in the form of variations, in the same way? Forel has shown that any poison which is capable of injuring the germ plasm of the parent will endanger the development of the offspring, and as an illustration he suggests that clinical evidence points to alcohol as such a poison, and he maintains that alcoholism in the parent produces degeneracy in the offspring. It is probable, however, that alcohol must have been indulged in to excess by a parent near the time of procreation or by the mother during gestation, to accomplish this. However, if the ratio of increase in the consumption of alcohol is greater than the corresponding increase in the population there should be found some increase in the number of certain neuroses and of certain forms of insanity, for alcohol next to heredity is one of the most important and stable causes of certain varieties of these affections. Published statistics show that there is a greater increase in proportion to the increase of population. In 1880, 10 gallons of liquors of all kinds were consumed per capita in the United States; in 1890, 15½ gallons per capita; in 1900, 17½ gallons per capita; and in 1902, 19½ gallons per capita.¹ This shows the increase in the United States. In New York city and State the proportion is probably higher. Some of this increase, which is, in reality, the most harmful from the point of view of our subject, is due to the rapidly increasing addiction of our women to drinking. Another point: A distinguished Scotch alienist, while my guest some years ago, informed me that at home he had a pint of claret daily at dinner, but in this country he could not take it, it did not agree with him. He thought there might be something about our climate that intensify the effects of alcohol in one not acclimated.

Alcoholic intemperance directly or indirectly leads to other excesses, and is a frequent cause of mental and moral, as well as physical, degeneration. Even a moderate use of alcoholics may be found injurious to our women.

Beard has said that we are the most nervous people in the world. This, he says, is due to our peculiar civilization (allowing great freedom) plus an exhausting climate (the extremes of heat, cold, and dryness), plus a nervous diathesis, plus immoderate mental and bodily exertion, or excessive proneness to be swayed by inclinations and passions.

Every man is capable of so much work, beyond which he shows some sign of breaking down. Dana suggests, however, that overwork, whether

¹ The proportionate increase in the consumption of the various kinds of liquor since 1880 in the United States is .09 gallon for spirits, 9.23 gallons for malt, and .07 gallon for wines, per capita, the greatest increase being for the least harmful malt.

physical or mental, does not cause neurasthenia, unless there is worry causing loss of sleep, or the habits of living are very irregular, with immoderate use of stimulants, drugs, or tobacco. I shall not take up the subject of the effects of drugs. New stimulants and narcotics constantly demand our attention. The latest has shown itself in Philadelphia, and its effects are vividly described in the secular press under the heading of "gasoline jags."

Starr, in speaking of neurasthenia, dwells first upon the effects of the wear and tear of our rapid mode of living, contrasted with the uneventful life of a man one hundred years ago; and, second, upon the bad effects of excessive eating and drinking causing arterial sclerosis. Under the first heading he considers mental strain consequent on the increased demands upon us, the increased number of sensory impressions and variety of ideas forced upon us by our increasing interests. There is scarcely time for the reception of impressions and no time at all for their proper assimilation.

Under this heading may we not also consider some of the moral and emotional stresses? Mercier speaks of excessive or unduly prolonged emotional excitement as attended by a greater disturbance of the mental mechanism and as productive also of greater exhaustion, at times, than long-continued intellection, because the normal processes utilized in intellectual effort are, it is thought, simple processes, while emotions call into action more complex activities.

The emotions are intensified by our present rapid methods of living, and drawn upon continually. Sudden and great reverses of fortune are attended by profound emotional disturbance. Religious excitement or the profound impressions of some new and attractive doctrine, or the teachings of some fanatic, may alter the conduct and living, if not cause actual mental disorder, in neurotic individuals, bringing about a moral epidemic or even threatening to change the structure of society and the unity of the household. Most of the fanatical epidemics are, fortunately for us, exotics. The Russian Doukhobors, insane fanatics, led by a recent prophet, set out on a crusade recently in Canada to convert the world. They were supplied with neither food nor clothing, relying on vegetation for both. The Dowie Colony, "Zion City" (already with a population of several thousands, medical men excluded), is near to our doors, and is an epidemic of irrationality; and what shall we say of "Eddyism?"

The tendency of our too rapid mode of living is to bring on neurasthenia or to develop a neurosis or mental disorder in those predisposed, or to jeopardize the future being by establishing a faulty heredity. Overindulgence in eating and drinking tends

to develop arterial sclerosis and may tend to cause apoplexies at an earlier age than formerly, and to conduce to senility and senile conditions.

The effects of our rapid mode of living are perhaps greatest in the immigrant. This is partly owing to some inherent racial peculiarities, partly to neurotic heredity, or tendencies, partly to deprivation, partly to competition, and partly to the fact that the sordid processes of evolution are before him. The immigrant to this country has to compete with perhaps the highest type of the dolicocephalic, or longheaded (in more senses than one), races in the world. Especially is this true in our large cities.

Let us examine briefly the effect of the immigration of inferior foreign types into this city and State. One reason so many fall by the wayside is that they suffer from deprivation, deficient alimentation, and resultant anæmia. In anæmia the nervous system suffers, of course, more than any other part. Again, when poverty exists, we find besides bad food and too little food, also insufficient clothing, exposure, overcrowding, and faulty hygienic conditions, from which arise various cachexiæ, alcoholism, and certain neuroses. It is chiefly in this imported foreign population that we find types of degeneracy, physical stigmata, perversions, mental enfeeblement, neurasthenia, insanity, and criminals. The immigrant in this case has been thrown on his own resources and has entered the strife as an inferior, and he becomes an easy prey to his physical and vital environment. Mental derangement in the negro is increasing—especially degenerative types, imbecility, idiocy and the dementias.

Some years ago (1890) I computed the percentage of insane in the New York State hospitals who were of foreign birth and foreign parentage, and found that outside New York city 50 per cent. had parents of foreign birth, and 30 per cent. were themselves foreign born. In New York city 78.32 per cent. of all cases admitted to the City Asylum had parents of foreign birth, and 67 per cent. were themselves foreign born.

At the Vanderbilt Clinic in the year 1902, 80 per cent. of the cases of neurasthenia belonged to our foreign population, Russian Jews predominating!

The causes of insanity and neurasthenia in these immigrants were chiefly faulty heredity, poverty and attendant evils, physical stresses, emotional excitement, intemperance and sexual excesses.

When the Vanderbilt Clinic opened there were 895 new cases of nervous diseases treated the first year (1888), while in 1902 there were 2,044 cases treated (976 in men and 1,068 in women) in the nervous department. Without working out the exact percentages of the

various forms of nervous and mental diseases treated there, I find that there has been a very marked proportionate increase in the number of patients suffering from mental diseases (double), especially imbecility (6 times as many), melancholia ($2\frac{1}{2}$ times as many), and general paresis (3 times as many cases); and a marked increase in neurasthenia (double), hysteria (double), chorea (nearly double), epilepsy (nearly double), tics (12 times), traumatic neuroses (3 times), alcoholic neuritis (3 times), facial palsy (3 times), and ophthalmoplegia (5 times); a slight increase in tabes, lateral sclerosis and hemiplegia.

General paresis has been called a product of civilization and syphilization. It was first described in 1820, and probably did not exist to a pronounced extent before that time. It has gradually increased in frequency, especially in cities—probably keeping pace with the urban increase in syphilis. The number of paretics admitted to Bloomingdale, a private asylum, last year, as compared with ten years ago, was slightly greater proportionately to the total admissions, and for the Manhattan State Hospital considerably greater. In the other New York State hospitals drawing patients from districts less densely populated and containing smaller cities, the proportion of admissions of paretics is also increasing.

Paranoia, an offspring of faulty heredity, has considerably increased in the diagnosis table of Bloomingdale—three cases in 1888, with 186 total admissions for that year; and seventeen cases in 1902, with 95 total admissions for 1902.

The ratio of the other forms of insanity is about the same as formerly. Just how much of this apparent increase in these forms of nervous and mental disease we can lay to our present modes of living it is difficult to say, but I think I have demonstrated the possibilities that a noticeable proportion of the increase is due to them.

The increasing dangers of modern life are offset to a considerable extent, however, by an increasing number of safeguards. The teachings of physiology and hygiene are more widespread; there is a tendency to return to a more intelligent training of children; there is increased and increasing inspection by boards of medical visitors to tenement districts and to schools; occupations are more and more interrupted by rest and recreation—even the light character of the prevailing entertainments of the theatres serves a good purpose. I wish I could say a good word for the newspapers. I am afraid the sensational ones, at least, are not beneficial. They certainly increase crime and strengthen some morbid tendencies. They may have something to do with the increase in the number of suicides of

which the life insurance statistics tell us. Suicide is a result of complex causes, *e. g.*, worries, anxieties, and disappointments of life, sometimes tending to humiliations and extreme despondency. The good newspapers, of course, are great aids to all progress. But the general practitioner of medicine, with his opportunities to study the predisposing influences at work in the family, if he informs himself more in regard to what we might call the neurotic diathesis, would offer perhaps the greatest safeguard of all to the development of nervous and mental disorder. "The natural tendency of the organism," says Herbert Spencer, "is to revert to the sound type." Our attempts at prevention, therefore, will be aided by Nature herself.

The subject of immigration is of exceeding importance in this connection. The fact that eight tenths of the cases of neurasthenia at the Vanderbilt Clinic, and two thirds of the insane of the State of New York, are either foreign born or of foreign parentage, points to possibilities of prevention by restricting immigration. But it is my province merely to point out some of the dangers and not to suggest a cure for them.

Therapeutical Notes.

In Suppurating Bubo.—Lieutenant-Colonel Zacarias Rojos de Molina (*Journal of the Association of Military Surgeons*, March), of the Mexican Army, in cases of suppurating bubo, has employed the following practice: He makes an incision sufficiently large, to completely discharge the contents; applying then a moist treatment by using a thick bandage of absorbent cotton, saturated with a 4 per cent. boric solution, renewing the same three times daily. He has never needed to employ any other therapeutic agent to obtain the desired effect—this treatment having the advantages of cheapness, cleanliness, and easiness of application.

For Gastrointestinal Atony.—*Médecine orientale* for May 10th ascribes the following to G. Sée:

- R Calcined magnesia } of each 30 grammes (1 ounce):
 Prepared chalk. . . }
 Powdered calumba. 2 grammes (30 grains);
 Powdered vanilla. 1 gramme (15 grains).
 M. Half a teaspoonful of this powder before each meal.

For Chronically Enlarged Glands.—*Médecine orientale* for May 10th attributes the following treatment for "scrofulous" glands to Bazin:

- R Lead iodide. } of each from 1 to 3 grammes
 Extract of cicuta. . . } (15 to 45 grains);
 Lard. 30 grammes (1 ounce).

- M. An ointment to be applied with gentle friction to enlarged glands in chronic scrofula. Potassium or sodium iodide may replace the lead iodide. Internally cod liver oil and syrup of iodine should be prescribed.

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AS TO SUBSTITUTION.

As many of the readers of the *New York Medical Journal* have addressed us with reference to an article entitled *The Dispensing Pharmacist as a Coadjutor*, which appeared in the issue of June 6th, we think it expedient to make answer specifically. The article expresses the opinions that have always been held by the editor. These opinions are diametrically opposite to the construction which, judging from the communications above referred to, has been in several quarters put upon them. The editor is and has always been, absolutely and entirely opposed to every form of substitution. There is, in our opinion, no possible explanation which might be considered as palliating the offense, save only the remote contingency mentioned in our article, namely, a manifest error or confusion on the part of the prescriber, and this the dispenser should, if within the limits of possibility, set right by a consultation with the prescribing physician.

This is, indeed, so remote a contingency, that practically it may be left out of consideration, and the principle remains that what the doctor orders, the druggist is in duty bound to give. As an honorable and conscientious agent between the physician and the patient he may allow himself no latitude in the premises whatever.

It would be superfluous to reaffirm our known position in this matter were it not for the curious misunderstanding which the article referred to seems to have inspired in some quarters.

THE VALUE OF INTRAVASCULAR INJECTIONS OF SOLUTIONS OF FORMALIN IN THE TREATMENT OF SEPTICÆMIA.

At the beginning of the current year a great deal of interest was aroused by statements published in the lay press as well as in the medical press, concerning a treatment of septic conditions which involved the use of intravenous injections of formaldehyde in solutions of one part in five thousand, or thereabouts. This method had been used with brilliant results in one case by Dr. Barrows, of New York, who, in a communication to this journal (*New York Medical Journal*, January 31, 1903) gave the history of this case and the details of the method employed by him in its treatment.

Since then a considerable amount of discussion *pro* and *con* has been going on, both in the medical journals and in the societies, concerning the true value of the treatment in question; particularly as it happened, soon after Dr. Barrow's announcement, that subsequent cases did not manifest satisfactory effects from the injection of formalin solutions, and that the suspicion naturally arose that the results obtained in the first case were in some manner accidental and not due to the treatment itself.

The question as to the treatment of septicæmia is of such great importance, that to have discovered a means of absolutely controlling this condition would seem to be as meritorious as to have found, as Lister did, the means of preventing its occurrence. It is not astonishing, therefore, that the attention of investigators has been directed toward a scientific examination of the value of formalin injection in sepsis. The first of these investigations has recently appeared in the June number of the *Postgraduate*, in the shape of a paper from the Pathological Laboratory of the Postgraduate Medical School, by Dr. Antonio Fanoni, of New York.

The article in question is a very exhaustive presentation of the whole question of intravascular medication. The author reviews in detail the history of the idea of injecting drugs directly into the systemic circulation through the veins, beginning with Wren, who, in 1656, injected diuretics to study their effect, and extending down to Guido Bacelli, who, in 1889, first injected quinine into the veins in cases of pernicious malaria. In 1890-91 Bacelli

injected Koch's tuberculin into the veins, and in 1892 began injecting mercuric chloride into the venous channels in treating malignant types of syphilis. Injections of mercuric chloride were employed in 1902 by Spissu and Serafini in the treatment of septicæmias and in anthrax infections, without satisfactory results, but Terni, of Brazil, obtained good effects with this method in bubonic plague, and Patella, in rheumatic polyarthritis. Mariani and Canalis, of Genoa, found, however, that septicæmia in rabbits could not be overcome by mercuric chloride solutions injected intravenously. All these researches proved that an antiseptic substance powerful enough to control the infection often killed the animal. Not only this, but, as the author emphasizes, even if the bacteria are destroyed, their toxins still remain to be dealt with.

In speaking of Dr. Barrows's case the author characterizes the result as simply marvellous, and inquires why it was that subsequent cases did not give similar results. He thinks that the favorable outcome of Dr. Barrows's case may be attributed, not to the formalin solution necessarily, but to several other factors. Thus, it is known that patients recover from septicæmia without any treatment; that saline solution injected into the blood in such cases produces good effects; and furthermore, not only was the woman in Dr. Barrows's case cured and her uterus thoroughly cleansed, but Dr. Barrows does not submit any proof by inoculation experiments that the germ in her case was a virulent one. The author believes that in practice we often have to deal with attenuated germs, and that this accounts often for the apparent success of one remedy or another. He thinks, too, that what was beneficial to the woman in question was the water and not the formalin dissolved in it. In order to prove this supposition, he instituted a series of animal experiments. He injected cultures of the streptococcus, the pneumococcus, and the anthrax bacillus under various conditions into animals, producing an experimental septicæmia, and then reproduced as nearly as possible the conditions of Dr. Barrows's case by treating some of the animals with formalin solution, others with simple sterile salt solution (0.7 per cent.), and finally keeping other animals without treatment for checks.

His results convinced him that the use of

1:5000 formalin solutions intravenously in rabbits, even in doses of 0.00031 and .00061 per 100 grammes of body weight, was not only useless, but dangerous in experimental septicæmia. These injections were followed by marked signs of illness in the rabbits and blood examinations in these animals at various times during the treatment showed that their resistance to the bacteria inoculated was diminished by the formalin instead of increased. The non-injected rabbits, indeed, lived longer than those treated with formalin.

In another series of experiments, with attenuated cultures of the pneumococcus, he found that a dose of 0.00031 gramme per 100 grammes of body-weight made the rabbits ill, but did not kill them, and that the same results were obtained with formalin as with saline solution or even without any treatment. The recovery of these rabbits he considers attributable solely to the attenuated state of the germ injected. In a case of sepsis two factors exert a decided influence; namely, the date of infection, and the virulence of the germs. The longer the septicæmia has been existing, the more difficult it is to overcome the intoxication of the blood. If the virulence of the microbe is not very great the patient has a chance for recovery, even without treatment; and so in some cases any method will give good results.

The animals injected with saline solution gave in every way better results than those in which formalin had been employed. Thus, the former showed bacteria in the blood later after inoculation, and not in such number as the animals treated with formalin. The author also found that the rabbits responded better to small doses of saline solution, repeated every six to twelve hours, than to single large doses. He therefore recommends, on the basis of his experiments, fractional intravenous injections of physiological salt solution (0.9 per cent.) in septicæmia and sapræmia, inasmuch as these injections give better clinical and experimental results than formalin solutions of any strength.

In our opinion, the article under review is a very important contribution to the study of the formalin injection question, and as such should receive the attention of all those who are interested in the subject. If Dr. Fanoni's conclusions stand unrefuted, we have an explanation for the failures which were

experienced with a number of cases of septicæmia treated by the formalin method, for example those reported by Dr. Park (Park and Payne, *Medical News*, April 4, 1903). At all events, the author has gone at his problem in the right manner, and has shown, in the only way that such a thing could be shown experimentally, that the value of formalin injections, like that of a great many other therapeutic measures, can only be determined after much more lengthened and painstaking investigation than has as yet been accorded to them.

LEPROSY AND FISH.

As we look back now, in the light of our present knowledge, upon the long cherished notion that in some way or another the fish caught on the southern shore of Long Island were productive of that region's unenviable reputation for the prevalence of tetanus, we may be pardoned if we decline to accede without question to the theory that the eating of fish somewhat lacking in freshness is the cause of leprosy. That theory has for some years now been persistently upheld by Mr. Jonathan Hutchinson, of London. So far as we have been able to observe, Mr. Hutchinson's arguments have made little or no impression upon the medical profession, and we cannot conceive how they could have made any, for we are convinced that we have positive knowledge that leprosy is the product of a specific microorganism; such a microorganism as putrefaction, either incipient or advanced, could not generate in fish. Fish poisoning is either rapidly fatal or else evanescent.

But Mr. Hutchinson is not easily discouraged; having failed to convince his professional brethren of the truth of his proposition, he is now arguing for it before the general public in England, and report has it that he has at least succeeded in alarming a large portion of the British people. The outcome of his efforts will probably be to render the public more than ever careful to avoid eating fish that are even on the verge of putrefaction, and increased carefulness in this respect is by all means to be desired. While, therefore, we may readily concede that Mr. Hutchinson's contention is likely to result in good, we must not allow it to turn us aside from the strictly scientific investigation of the ætiology, prevention, and treatment of leprosy.

Above all, harsh treatment of the individual leper we must continually fight against; it is both cruel and unnecessary.

THE ALLEGED OVERCROWDING OF THE PROFESSION IN AMERICA.

The high proportion of practitioners of medicine to the population in America is a favorite theme for pessimists. Doubtless there are in many regions of the United States more doctors than are really needed or than can make a comfortable living, and no doubt the proportion of physicians to the whole population is much greater than it is in most other civilized countries, but the showing by figures—bald figures—may, nevertheless, be to a certain extent misleading.

Ours is, in the main, still a sparsely populated country. It seems reasonable, therefore, to conclude that a given number of medical practitioners cannot attend to the wants of so great a number of people as could be ministered to by the same number of practitioners in a more densely populated country. The mere work of getting from place to place consumes so much time that it calls for an increased number of men. We have known a country practitioner to use up an entire winter's day in visiting one patient, having to stop frequently to dig a path through a snowdrift for his horse and sleigh, his way lying over mountainous and unbroken roads.

Then, too, our rural population is not so bountifully provided with hospitals and other institutions more or less equivalent, as the people of many other countries are, and apart from the question of supply, our people do not resort to them so readily. The self-reliant American wishes his sick to remain under his own roof. This may not always be for the best interest of the sick, but it is a fact. Moreover, the midwife's services and the attendance of the "club" doctor are far less relied upon with us than among many of the older communities of the world.

On the whole, we are inclined to think that, save for urban fields of practice, where a good living is the possible reward of the practitioner, and to which consequently there is a greater afflux, the supply of physicians in America is not so much in excess of the demand as the unexplained figures might lead one to suppose.

ANTIVACCINATORS AND THE SMALLPOX EPIDEMIC.

There appears to be quite a widespread epidemic of smallpox in England, affecting Durham, Lancashire, Yorkshire, Nottinghamshire, Derbyshire, Warwickshire, Staffordshire, Essex, and Leicestershire. Leicester is the great antivaccination stronghold in England, and has always been in the forefront of the resistance; indeed so numerous were the objections, "conscientious" and otherwise, that the powerlessness of the authorities to enforce the law there was doubtless one factor in the recent retrograde legislation in England. It is said that by far the larger proportion of the population of Leicester is unvaccinated. Under these circumstances, it is almost amusing to learn of the wholesale surrender which appears to be taking place there in the face of the enemy, the people applying for vaccination *en bloc*. If the panic occasioned by the actual approach of the disease in epidemic form can effect the restoration of the district to a safe condition of vaccination, it will be a cheap escape from the fate which the misguided town has been for so many years laying up in store for itself. We sincerely trust that the repentance, though tardy, may avail to avert the punishment.

ALLEGED EXTENSIVE FRAUDS BY PHYSICIANS.

A series of frauds of so essentially mean a character and so outrageously violating all principles dear to the medical profession, as those alleged to have been committed by certain physicians of New York now undergoing prosecution at the hands of the health authorities, seems almost impossible of credence. It is stated that several physicians have been in the habit of obtaining the health board's diphtheria antitoxine *gratis*, on their certificate that their patients were unable to pay for it, and then selling it to the patients at from \$5 to \$10 a vial. That there should be a few black sheep scattered through every profession who would descend, not only to criminal practices, but to mean ones at that, is not to be wondered at; but that any considerable number in any one community should be guilty, as alleged in this case, of such utter professional disparity, we refuse to believe until the facts are unequivocally proved against them. Every man is innocent until he is proved guilty, and the least that we can do is to suspend judgment. The most incriminating circumstances are at times susceptible of a perfectly innocent explanation, and we earnestly look forward to such in this case.

In the meantime, we may say that we have always consistently opposed the manufacture of antitoxine

for sale by the health authorities. The possibility that such charges should be brought, whether ultimately proved true or not, furnishes a further powerful argument in favor of our position.

News Items.

Society Meetings for the Coming Week:

MONDAY, June 15th.—New York Academy of Medicine (Section in Ophthalmology); New York County Medical Association; Hartford, Conn., Medical Society; Chicago Medical Society.

TUESDAY, June 16th.—New York Academy of Medicine (Section in General Medicine); Buffalo Academy of Medicine (Section in Pathology); Ogdensburgh, N. Y., Medical Association; Syracuse, N. Y., Academy of Medicine; Medical Society of the County of Kings, N. Y.; Baltimore Academy of Medicine.

WEDNESDAY, June 17th.—Woman's Medical Association (N. Y. Academy of Medicine); Medico-Legal Society, New York; Northwestern Medical and Surgical Society of New York (private); New Jersey Academy of Medicine (Newark); Philadelphia County Medical Society; New York Society of Dermatology and Genitourinary Surgery (private); New York Academy of Medicine (Section in Genitourinary Diseases).

THURSDAY, June 18th.—New York Academy of Medicine; Brooklyn Surgical Society; New Bedford, Mass., Society for Medical Improvement (private); Medical Society of City Hospital Alumni, St. Louis; Atlanta Society of Medicine.

FRIDAY, June 19th.—New York Academy of Medicine (Section in Orthopædic Surgery); Clinical Society of the New York Post-Graduate Medical School and Hospital; Baltimore Clinical Society; Chicago Gynecological Society; Manhattan Medical and Surgical Society (private).

Elephantiasis at Bellevue.—A case of elephantiasis of the right leg, in a man fifty-five years of age, is reported to be under care at Bellevue.

The Wayne County Medical Society, New York.—The society will take a vacation during the summer months and resume its meetings in September.

An Examination for Embalmers.—The State Board of Colorado held an examination for embalmers on June 6th. Nineteen persons were examined, including one woman.

Nurses' National Convention.—The convention of the Nurses' Associated Alumnae Association was recently held in Boston, and was attended by representatives from all parts of the country.

Gouverneur Hospital.—In December last a ward for the treatment of trachoma was opened in Gouverneur Hospital. Between that date and the end of this month, 1,412 old, and 976 new, cases were treated.

Jewish Hospital Re-elects President.—William B. Hackenburg was, for the twenty-fifth time, elected President of the Jewish hospital in Philadelphia, on May 31st. A portrait of President Hackenburg was presented to the hospital by Albert Rosenthal, Dr. S. Solis Cohen making the presentation speech.

The Richmond Academy of Medicine and Surgery.—The regular meeting of the Richmond Academy of Medicine and Surgery was held in Richmond, Va., on June 9th. The following was the programme. The subject for discussion: Gonorrhœa, Practical Therapeutics, Dr. Charles A. Ladenburg; The Use and Abuse of the Nitrites, Dr. A. B. Greiner, discussed by Dr. William H. Lyne.

A National Consumptives' Home.—The establishment of a national hospital for consumptives is being planned. It is to be on the boundary between Arizona and New Mexico. Patients without means will be cared for at the expense of the hospital. Dr. T. C. Bancroft, formerly of Kansas City, is at work on the plans. It is proposed to make the President of the United States honorary president, with a board of directors composed of the governors of all the States.

Bellevue Hospital Demands New Site.—A request has been laid before the board of estimate and apportionment, by the trustees of Bellevue Hospital, for the acquisition of the block lying between Twenty-eighth and Twenty-ninth Streets, First Avenue and the East River for the new Bellevue Hospital. The present site is considered insufficient in area to accommodate the projected improvements. The electric light plant on Twenty-eighth Street, it is also said, is an obstacle to improvement, and a menace to the health of the patients of the hospital.

A Medicolegal Society in Washington, D. C.—A medicolegal society has been organized recently in Washington, D. C., the officers of which are Dr. Robert Reyburn, president; Dr. William Hughes, vice-president; Charles M. Emmons, secretary; C. Robinson, treasurer, and Edwin Forrest, attorney. The meetings are held on the second Tuesday in each month and the membership is limited to fifty. The subject under discussion at the recent meet was the new lunacy laws for the District, and especially the section governing commitments to St. Elizabeth's Hospital.

Typhoid in Philadelphia.—The hospitals in Philadelphia are taxed to their utmost by the large and increasing number of typhoid fever cases that have occurred within the past few weeks. Preventive measures have been set on foot by the health authorities, but the actual cause of the epidemic is not certain, though citizens have been warned to boil all water used for cooking or drinking, and the milk supply of the city is being subjected to strict investigation. Eleven of these milk shops have been reported as uncleanly and unfit for the sale of milk. The latest reports give a still further increase. The cases are returned from all parts of the city, but are more numerous in the northwest section, fifty-eight cases being returned from the twenty-eighth, fifteen from the twenty-ninth, nineteen from the thirty-second, and twenty-seven from the thirty-eighth wards. There were sixteen cases from the first, ten from the twenty-fourth, eleven from the twenty-fifth, and eleven from the twenty-ninth wards.

Politics in Hospital Affairs.—On the ground that he is unwilling to take charge of an institution in which the management is affected by politics, Dr. Allen S. Oliver, of the Presbyterian Hospital, New York, who had accepted the office of superintendent of the Newark City Hospital, has written a letter of declination.

A Protest Against Home Study for School Children.—The committee on education and home study, of the Parents' Association, met recently in Philadelphia, and decided to bring before the board of education a petition signed by 2,000 clergymen, physicians, and parents, protesting against overwork and home study in the case of young and growing children.

Chicago Hospitals to be Sued.—As every hospital in Chicago is disobeying the city ordinance which requires unanimous consent on the part of adjacent property owners, the health department is about to start a series of law suits to compel these institutions to obey the ordinance requiring frontage consents, without which they are operating without a license.

The Red Cross Society to Cooperate with the Health Department.—The executive committee of the Red Cross Society in Philadelphia, met at the society's office on June 7th, to consider the question of cooperating with the Department of Public Health and Charities in an effort to lessen the ravages of infantile summer diseases among the poor. The mortality in Philadelphia from cholera infantum alone, during the summer months, is estimated at 500, and sometimes more.

The Police Court Building in Washington, D. C.—Resolutions protesting against the unsanitary condition of the police court building were presented to the district commissioners and the board of health on May 30th. It was alleged that the structure has so deteriorated into "a menace to public health, morality, and common decency that it cannot longer be tolerated without provoking protest against the dirty corridors, reeking with filth, when prisoners, black and white, are locked and huddled together like swine in a pen. These human prisoners are helpless to help themselves, and should be treated with as much consideration as animals are by society."

The Lying-in Hospital at Seventeenth Street and Second Avenue.—The report of the hospital shows that in the month of May there were 458 applicants for treatment, of whom 117 were admitted and cared for in the hospital wards. The number of children born was 96. In the outdoor department during the same period, 282 applied for assistance at their homes, and 235 were treated in confinement. The number of medical visits made was 848. In addition to this the Ladies' Auxiliary distributed garments, supplied caretakers during illness, and altogether made 795 visits to assist those in need of assistance. The diet kitchen gave provisions to those whose condition was absolutely destitute.

The Health of Chicago.—According to the *Bulletin of the Health Department*, the death rate for May, 1903, 16.69 per 1,000 of the population, is the highest since the abnormal rates during the period of the World's Fair in 1894, and nearly one fourth greater than the average of the last eight years. Pneumonia heads the list of mortality, being fatal in 646 cases out of the total of 2,675 from all causes, or more than 24 per cent. of the total.

Bequests to Medical Schools.—The Department of Medicine of the University of Pennsylvania has, by the will of Dr. Spencer Morris, probated at Morgantown, W. Va., been entrusted with a fund of \$20,000, the interest of which is to be offered annually to the student who presents the best paper in examination for the M. D. degree. This prize is to be perpetual. The Medico-Chirurgical Society of Philadelphia has by the same will been left \$12,500.

New York University.—The seventy-first annual commencement of New York University was held on June 3rd, in the auditorium of the Memorial Library at University Heights. In the absence of Chancellor McCracken, who recently sailed for Syria to visit his son, Dr. McCracken, who is seriously ill, the vice-president, the Rev. Dr. George Alexander, officiated at the exercises. For the first time, all the departments of the university held their exercises on the college grounds. A large class graduated from the Medical College (Department), Dean Edward G. Janeway, of the University and Bellevue Medical College, announcing the appointments and awards.

Milk Bottles and Typhoid.—In view of the present epidemic of typhoid in Philadelphia, Dr. C. A. Abbott, chief of the Bureau of Health, warns the public that all bottles in which milk is served to customers should be thoroughly scalded before returning them to the milkman. Dr. Abbott says, "Milk bottles are one of the prime causes of the spread of typhoid fever. Milk forms the principal diet in the treatment of typhoid fever patients, and doubtless the bottles are frequently allowed to stand in the room of the sufferer. The typhoid germs settle in the milk that remains on the sides and bottom of the bottles, and as milk is a first-class culture for the germs, they rapidly multiply in it."

Experiments with Plague Germs to be Forbidden in Germany.—Owing to the death by plague in a Berlin hospital, of the young Viennese physician, Dr. Milan Sachs, the German government has decided to issue a decree forbidding the further use of plague germs in experiments in Germany, the risk of infection being considered of more importance to the public than the knowledge gained by experiment with these deadly microbes. Dr. Sachs contracted the disease in Dr. Koch's bacteriological laboratory for infectious diseases. Dr. Sachs had been sent to Berlin by the Austrian government to prepare himself previously to using his services in perfecting the sanitary arrangement in Bukovina.

A Hospital for Astoria, L. I.—A movement is on foot to interest the public in the building of a hospital for Astoria. A committee has been appointed, consisting of Dr. Macfarlane and Mr. Peter A. Leininger, to confer with Dr. Potter, who is attached to the staff of Comptroller Grout in an advisory capacity, to ascertain what can be done by the city to aid this project. It is asserted that a small hospital could be maintained at a minimum cost and the protection afforded the community would far exceed the cost of the undertaking.

Sanatoria for Colorado Springs.—Dr. S. Edwin Solly, of Colorado Springs, is in New York, trying to interest people able to help in the establishment of two sanatoria, specially for consumptives, at Colorado Springs; one for well-to-do patients, and the other for those without means. The income from one sanatorium will, it is expected, pay the running expenses of the free institution, as well as defraying its own. The plan has been successful in Germany. Dr. Solly has been pledged \$75,000 by men in Colorado, and many prominent New York physicians have endorsed the undertaking.

The Harsen Prize Fund.—At the recent commencement of the College of Physicians and Surgeons of Columbia University, the following ten men out of a class of 171 were awarded the Harsen examination honors: A. J. Brown, J. P. Erskine, F. R. Humphreys, L. W. Kingsbury, R. S. Haynes, H. O. Mosenthal, H. W. Zinsser, P. F. Irving, W. S. Gregory, and J. G. Bullowa. This prize fund was established in 1857, by Dr. Jacob Harsen, of the class of 1825, Columbia College. The ten successful candidates have received appointments to New York city hospitals. Dr. Brown, Dr. Kingsbury, and Dr. Haynes being assigned to the Presbyterian Hospital; Dr. Erskine, Dr. Mosenthal, and Dr. Humphreys to the New York Hospital; Dr. Zinsser and Dr. Irving to the Roosevelt Hospital, and Dr. Gregory and Dr. Bullowa to St. Luke's Hospital, and Mount Sinai Hospital, respectively.

The Indiana State Medical Association.—The Indiana State Medical Society met at Richmond, June 4th and 5th. The name of the organization was changed to the Indiana State Medical Association, and the new form of constitution, as proposed by the American Medical Association, was unanimously adopted. The following were elected members of the council: First district, Dr. W. R. Davidson, of Evansville; second district, Dr. George Knapp, of Vincennes; third district, Dr. C. T. Hendershot, of Cannelton; fourth district, Dr. G. T. McCoy, of Columbus; fifth district, Dr. W. A. Boor, of Terre Haute; sixth district, Dr. J. C. Sexton, of Rushville; seventh district, Dr. W. N. Wishard, of Indianapolis; eighth district, G. W. H. Kemper, of Muncie; ninth district, Dr. Paul Barcus, of Crawfordsville; tenth district, Dr. G. F. Keiper, of Lafayette; eleventh district, Dr. Robert Hessler, of Logansport; twelfth district, Dr. A. E. Bulson, Jr., of Ft. Wayne; thirteenth district, Dr. C. A. Daugherty, of South Bend. The following papers were read: Stenosis

of the Œsophagus, by Dr. A. B. Graham, of Indianapolis; Ectopic Pregnancy, by Dr. Edwin Walker, of Evansville, and Dr. T. B. Noble of Indianapolis; Surgery a Specialty, by Dr. C. B. Steman, of Fort Wayne; Sixty-nine Successful Operations for Uterine Fibroids, by Dr. T. B. Eastman, of Indianapolis; Color Blindness, by Dr. J. B. Fattie, of Anderson; Late Ocular Manifestations of Syphilis, by Dr. T. C. Hood, of Indianapolis; A Case of Raynaud's Disease, by Dr. D. C. Peyton, of Jeffersonville; Bulbar Paralysis, by Dr. W. C. White, of Indianapolis; Spastic Contraction of Intestinal Muscularis as an Element in Obstruction, by Dr. H. O. Pantzer, of Indianapolis; A Study of Sound Vibrations, by Dr. F. E. Wiedeman, of Terre Haute; Non-tuberculous Hæmorrhages from the Upper Air Passages, by Dr. L. F. Page, of Indianapolis; Electricity as a Therapeutic Agent, by Dr. E. W. Longnecker, of Anderson; The X Ray in the Treatment of Skin Diseases, by Dr. F. B. Wynn, of Indianapolis; the Diagnosis of Smallpox, by Dr. Charles E. Ferguson, of Indianapolis; Deaf-mutism, by Dr. J. G. Wishard, of Indianapolis; The Rational Treatment of Traumatic Tetanus, by Dr. E. J. McOscar, of Fort Wayne; The Œtiology and Treatment of the More Common Nasal and Throat Affections, by Dr. L. C. Cline, of Indianapolis; Urethral Growths, by Dr. Joseph Morrow, of Indianapolis. Professor H. A. Hare, of Philadelphia, made an excellent address on The Unrecognized Debt of the Public to the Medical Profession. The following officers were elected: Dr. Jonas Stewart, of Anderson, president; Dr. Charles A. White, of Danville, vice-president; Dr. F. C. Heath, of Indianapolis, secretary; Dr. C. T. Hendershot, of Cannelton, assistant secretary, and Dr. A. E. Bulson, Jr., of Fort Wayne, treasurer.

Official News.

Infectious Diseases in New York:

We are indebted to the Sanitary Bureau of the Health Department for the following statement of cases and deaths reported for the two weeks ending June 6, 1903:

DISEASES.	Week end'g May 30.		Week end'g June 6.	
	Cases.	Deaths.	Cases.	Deaths.
Measles	356	13	471	18
Diphtheria and Croup.....	378	42	437	52
Scarlet fever.....	246	14	261	29
Small-pox.....	3	0	1	0
Chicken-pox.....	71	0	98	0
Tuberculosis	205	144	396	158
Typhoid fever	42	10	50	10
Cerebrospinal meningitis.....	0	9	0	9

Naval Intelligence:

Official List of Changes in the Medical Corps of the United States Navy for the Week ending June 6, 1903:

AMES, H. E., Surgeon. Detached from the *Texas* and ordered to the Naval Academy.

BAKER, M. W., Assistant Surgeon. Detached from the Naval Academy and ordered to the *Brooklyn*.

DUNCAN, G. F., Acting Assistant Surgeon. Ordered to duty with Recruiting Party No. 8.

FAHRENHOLT, A., Passed Assistant Surgeon. Detached from the *Independence* and ordered to the *Boston*.

GROVE, W. B., Passed Assistant Surgeon. Detached from the Naval Dispensary and ordered to the Naval Hospital, Philadelphia, Pa.

KEENE, W. P., Acting Assistant Surgeon. Ordered home to wait orders.

LUNG, G. A., Surgeon. Detached from the Naval Hospital, Philadelphia, Pa., and granted sick leave for three months.

PICKRELL, G., Surgeon. Detached from the Naval Academy and ordered to the *Texas*.

Public Health and Marine-Hospital Service Health Reports:

The following cases of smallpox, yellow fever, cholera and plague, have been reported to the surgeon-general, Public Health and Marine-Hospital Service, during the week ending June 6, 1903:

Smallpox—United States.

Places.	Date.	Cases.	Deaths.
Alabama—Mobile	May 23-30	6	
California—Los Angeles	May 16-23	1	
California—San Francisco	May 17-24	1	
Florida—Jacksonville	May 24-31	3	
Florida—Pensacola	May 16-23	2	
Florida—Baker County	May 16-23	1	
Florida—Columbia County	May 16-23	3	
Florida—Levy County	May 16-23	5	
Florida—Washington County	May 16-23	1	
Illinois—Belleville	May 23-30	4	
Indiana—Evansville	May 23-30	1	
Indiana—Indianapolis	May 23-30	4	1
Iowa—Des Moines	May 24-30	1	
Louisiana—New Orleans	May 23-30	8	
Maine—Patten	May 27	1	
Maryland—Baltimore	May 23-30	1	
Massachusetts—Fall River	May 23-30	16	
Massachusetts—Holyoke	May 23-30	1	
Michigan—Detroit	May 23-30	9	
Michigan—Grand Rapids	May 23-30	3	
Minnesota—Winona	May 23-30	2	2
Missouri—St. Louis	May 24-31	3	
Montana—Helena	May 1-31	3	
Nebraska—Omaha	May 23-30	1	
New Hampshire—Nashua	May 23-30	8	
New York—New York	May 23-30	3	
Ohio—Cleveland	May 23-30	1	
Ohio—Hamilton	May 23-30	3	
Pennsylvania—McKeesport	May 23-30	3	1
Pennsylvania—Philadelphia	May 23-30	41	7
Pennsylvania—Pittsburgh	May 23-30	19	3
Four cases imported.			
South Carolina—Charleston	May 23-30	1	
Tennessee—Memphis	May 16-30	4	
Utah—Salt Lake City	May 23-30	6	one case imported.
Washington—Tacoma	May 25-June 1	2	

Smallpox—Foreign.

Austria—Prague	May 2-16	14	
Belgium—Antwerp	May 9-16	7	
Belgium—Brussels	May 2-16		4
Belgium—Ghent	May 2-16		2
Canary Islands—Las Palmas	May 2-9	18	
Canary Islands—Santa Cruz de Tenerife	May 9-16	2	
Colombia—Bocas del Toro	May 12-19		1
France—Marseilles	Apr. 1-30		36
Germany—Hamburg	May 9-16	1	
Great Britain—Bristol	May 9-16	11	
Great Britain—Cardiff	Apr. 4-May 2	11	1
Great Britain—Dublin	May 9-16	17	4
Great Britain—Leeds	May 16-23	25	1
Great Britain—London	May 9-16	7	
Great Britain—Manchester	May 9-16	10	1
Great Britain—Nottingham	May 9-16	5	
Great Britain—Sheffield	May 2-9	1	1
Great Britain—Sunderland	May 9-16	1	
India—Bombay	Apr. 28-May 5		83
Mexico—City of Mexico	May 3-10	16	6
Russia—Moscow	May 2-9	3	
Russia—Odessa	May 2-16	6	
Turkey—Smyrna	Mar. 28-Apr. 5		1

Yellow Fever.

Costa Rica—Limon	May 14-21	4	1
Mexico—Tampico	May 16-23		5

Cholera.

India—Calcutta	Apr. 28-May 2	65	
India—Madras	Apr. 25-May 1	1	

Plague.

India—Bombay	Apr. 28-May 5	704	
India—Calcutta	Apr. 28-May 5	228	
India—Karachi	Apr. 26-May 3	187	156

Army Intelligence:

Official List of Changes in the Stations and Duties of Officers serving in the Medical Department of the United States Army for the Week ending June 6, 1903:

- DUVAL, DOUGLAS F., First Lieutenant and Assistant Surgeon. Granted two months' leave of absence on a surgeon's certificate of disability.
- GREENLEAF, H. S., First Lieutenant and Assistant Surgeon. Granted leave of absence for thirty days.
- LIPPINCOTT, HENRY, Colonel and Assistant Surgeon-General. Granted leave of absence for thirty days, with permission to apply for an extension of two months and fifteen days.
- MAUS, L. M., Lieutenant-Colonel and Deputy Surgeon-General. Granted leave of absence for twenty days.

Public Health and Marine-Hospital Service:

Official List of Changes of Station and Duties of Commissioned and Non-commissioned Officers of the Public Health and Marine-Hospital Service, for the Seven Days ending June 4, 1903:

- ALLEN, G. C., Pharmacist. Granted leave of absence for seven days, from May 29, 1903, under paragraph 210 of the regulations.
- BROWN, B. W., Passed Assistant Surgeon. To proceed to Memphis, Tenn., for special temporary duty.
- GOLDSBOROUGH, B. W., Acting Assistant Surgeon. Granted leave of absence for seven days, from June 3rd.
- GREENE, J. B., Passed Assistant Surgeon. Granted leave of absence for three days, from June 10th.
- KING, W. W., Assistant Surgeon. Granted leave of absence for two months, from June 10th.
- LUMSDEN, L. L., Passed Assistant Surgeon. Bureau order of May 26, 1903, directing Passed Assistant Surgeon Lunisden to proceed to San Juan, P. R., for temporary duty, amended so that he shall be relieved from duty at New Orleans, La.
- MASON, M. R., Pharmacist. Relieved from duty at San Francisco, Cal., and directed to proceed to Dutch Harbor, Alaska, for special temporary duty; thence to Nome, Alaska, and report to Acting Assistant Surgeon in charge for temporary duty.
- ROBERTSON, H. McG., Assistant Surgeon. Granted leave of absence for seven days, from May 29, 1903, under paragraph 191 of the regulations.
- SINCLAIR, A. N., Acting Assistant Surgeon. Granted leave of absence for twenty-five days, from June 24th.
- TAPPAN, J. W., Acting Assistant Surgeon. Granted leave of absence for one month, from May 25th.
- WICKES, H. W., Passed Assistant Surgeon. Granted leave of absence for eight days, from June 10th.

Board Convened.

Board convened to meet at the Marine Hospital, Boston, Mass., June 2, 1903, for the physical examination of an officer of the Revenue Cutter Service. Detail for the board: Surgeon R. M. WOODWARD, chairman; Assistant Surgeon W. C. RUCKER, recorder.

Marriages and Deaths.*Married.*

BREESE—SCHERMERHORN.—In Philadelphia, Pa., on Tuesday, June 2d, Dr. Arthur Bacon Breese, of Syracuse, N. Y., and Miss Rena Schermerhorn.

BUSHNELL—JOHNSON.—In North Arlington Heights, Virginia, on Wednesday, June 3d, Mr. Henry Davis Bushnell, of Pittsburgh, and Miss Edith Taber Johnson, daughter of Dr. Joseph Taber Johnson.

DE CASTRO—MURPHY.—In Brooklyn, N. Y., on Wednesday, June 3d, Dr. Edward Maurice de Castro and Miss May Murphy.

ERDMAN—LOVETT.—In Morrisville, Pennsylvania, on Thursday, June 4th, Dr. William Erdman and Miss Clara Wende Lovett.

FIELD.—VOORHEES.—In Morristown, New Jersey, on Thursday, June 4th, Dr. Peter Conover Field, of the United States Army, and Miss Cornelia Emilie Voorhees.

HARVEY—MCBRIDE.—In Kansas City, Missouri, on Wednesday, May 27th, Dr. G. Harvey and Miss Adalene McBride.

HUBER—BROWN.—In New York, on Tuesday, June 9th, Dr. John Busseur Huber and Miss Lucretia M. Harmon Brown.

HUTCHINSON—CASSATT.—In Cheswold, Pennsylvania, on Monday, June 8th, Dr. James P. Hutchinson and Miss Katharine Kelso Cassatt.

LOWELL—WADE.—In Brooklyn, N. Y., on Tuesday, June 2d, Dr. Albert Fay Lowell and Miss Helen Louise Cann Wade.

REEDE—SANNER.—In Washington, D. C., on Wednesday, June 3d, Dr. Edward Herain Reede and Miss Laura Josephine Sanner.

RIDPATH—HARKER.—In Philadelphia, Pennsylvania, on Wednesday, June 3d, Dr. Robert F. Ridpath and Miss Lillie K. Harker.

ROBERTSON—CURTIS.—In Warrenton, Virginia, on Tuesday, June 2d, Dr. Holcombe McGavock Robertson and Miss Irvine Curtis.

RUGH—STEVENSON.—In Abington, Pennsylvania, on Wednesday, June 3d, Dr. J. Torrance Rugh, of Philadelphia, and Miss Eleanor W. Stevenson.

SKILLERN—PORTER.—In Hackettstown, New Jersey, on Wednesday, June 3d, Dr. Ross Hall Skillern and Miss Eliza Michner Porter.

SPENCER—WILLIAMS.—In New York, on Wednesday, June 3d, Dr. Salem Spencer, of St. Louis, and Miss Mabel Williams.

WILCOX—HUNTER.—In Philadelphia, on Thursday, June 4th, Dr. Archibald Wilcox, of Minneapolis, and Miss Mary Hays Hunter.

Died.

BROWN.—In Cottage City, Massachusetts, on Monday, June 1st, Dr. A. W. Brown, in the eighty-ninth year of his age.

GOLDING.—In Brooklyn, N. Y., on Sunday, June 7th, Dr. John F. Golding, in the forty-ninth year of his age.

NOYES.—In Oneida, N. Y., on Tuesday, June 2d, Dr. Theodore H. Noyes, in the sixty-fifth year of his age.

RIGGS.—In New Orleans, Louisiana, on Thursday, May 28th, Dr. Ethan A. Riggs, in the forty-second year of his age.

SACHS.—In Berlin, Germany, on Friday, June 5th, Dr. Milan Sachs.

TAGERT.—In Chicago, Illinois, on Wednesday, May 27th, Dr. A. T. Tagert, in the fifty-seventh year of his age.

THOMPSON.—In Boston, Massachusetts, on Monday, June 8th, Dr. Augustin Thompson, in the sixty-eighth year of his age.

TUMBELTY.—In St. Louis, Missouri, on Thursday, May 28th, Dr. Francis Tumbelty, in the seventy-second year of his age.

WRIGHT.—In Cleveland, Ohio, on Monday, June 1st, Dr. Charles J. Wright, in the twenty-eighth year of his age.

OBITUARY NOTES.

DR. EDMUND LLOYD BIRKETT, a veteran English physician, died in England, on May 8th, in his ninetieth year. His name will be known to literary physicians as for many years editor of the *Guy's Hospital Reports*.

DR. JOHN F. GOLDING, of Brooklyn, died on June 7th, at his home in that city. He graduated at the College of Physicians and Surgeons, New York. He held the chair of toxicology and pharmacy at the Brooklyn College of Pharmacy.

Pith of Current Literature.

PRACTICE OF MEDICINE.

The So-called Anthracosis and Phthisis in Coal Miners. By R. S. Trotter, M. B. (*British Medical Journal*, May 23d).—The author calls attention to the fact that phthisis in coal miners is a very uncommon disease in England, notwithstanding the fact that for years their occupation has been held to be especially conducive to its development. True anthracosis is also rare; though all coal miners show a blackening of the lungs due to the inhalation of coal dust, yet such blackening is not necessarily due to a diseased condition of the lungs. Indeed, the author holds that the comparative rarity of phthisis among coal miners is probably largely due to the protective influence of coal dust and soot. Facts worth noting in this connection are: (1) Coal dust may remain imbedded under the skin for years without producing any irritation whatever. (2) The death returns from phthisis in a colliery district show a greater proportion of deaths among females than among males. (3) Colliery surgeons almost invariably state that phthisis is not so common in mining as in other districts where they have been in practice. (4) In the majority of phthisis cases which do occur, there is a strong family history of phthisis on one or both sides. (5) Phthisis often seems to attack successive families in particular houses.

Case of Infective Endocarditis Successfully Treated by Rectal Injections of Antistreptococcus Serum. By Sir D. Duckworth. (*British Medical Journal*, May 23rd).—The author reports a case of infective endocarditis, occurring in a boy aged fifteen years, in which sodium salicylate, quinine, calomel, fresh yeast, and intravenous injections of antistreptococcus serum were given, but without avail. Mixed antistreptococcus serum was then given daily by means of rectal injections, ten cubic centimetres at a dose. In two days there was improvement, which was very marked at the end of a week. Pain disappeared, the skin eruption cleared up, and in a month the boy was quite well.

Traumatism as a Factor in the Ætiology of Pulmonary Tuberculosis. By J. Weir, M. B. (*British Medical Journal*, May 23d).—The author reports the case of a man who had been struck over the base of the right lung a month previously with a pair of heavy tongs. He complained of general weakness, and there was an area of consolidation at the right base in the axillary line. Cough did not appear for several months, when tubercle bacilli were also found. The case illustrates the close relation that sometimes exists between traumatism of the chest and pulmonary tuberculosis. The injury bruises the chest muscles and hinders respiration; the morbid process spreads inward, causes pleurisy, which in time affects the adjacent lung tissue, rendering it more susceptible to the invasion of tubercle bacilli. As regard the connection between pleurisy and phthisis, the author holds that the theory that the pleurisy really precedes and causes the tuberculous infection, is quite as tenable

as the generally accepted view that the pleurisy is always due to an underlying latent tuberculosis of the lung tissue. The pleuritic thickening and adhesions, according to him, interfere with lung expansion and predispose to tuberculous invasion. The range of chest expansion in cases of pulmonary phthisis practically never approaches the normal or average of the healthy chest.

The Influence of Wind on Phthisis. By Dr. W. Gordon (*British Medical Journal*, May 23rd).—The author's conclusions are as follows: (1) West and southwest winds in Devonshire have a marked influence on phthisis, raising the phthisis death rate among populations exposed to them, and injuring those who have already developed the disease. (2) This bad influence is probably due to the fact that west and southwest winds are the prevalent strong, wet winds of the county. (3) It is reasonable to believe that strong wet winds anywhere may produce similar effects. (4) The bad effects may be possibly explained by the chilling and depressing nature of the winds and by their tendency to excite bronchial catarrh in those exposed to them.

Kernig's Sign.—M. Piéry (*Lyon médical*, April 26th) reports two cases, one of a syphilitic meningomyelitis with spasmodic paraplegia, the other, of a double sciatica mainly on the left side, both of which presented Kernig's sign, the latter more on the left than on the right side. The author reviews exhaustively the literature of the subject and studies the pathogeny of Kernig's sign. He concludes that it is due to a defensive contracture of the flexor muscles of the thigh which react to painful elongation of the inflamed nerves of the cauda equina (branch of origin of the greater sciatic nerve), the pain being evoked by the forced flexion of the thigh upon the pelvis with the leg extended.

SURGERY AND ANATOMY.

Surgical Treatment of Medical Nephritis.—Dr. Dario Maragliano, of Berlin, (*Gazzetta degli ospedali e delle cliniche*, April 26th) criticises the work of the different investigators who have been engaged in the study of the possibilities of surgical treatment in Bright's disease. His article contains a sketchy review of the work done since the time of Harrison, of London (1896), in the field of surgery for nephritis, but the portions which refer to the work of Pousson (Bordeaux), and of Edebohls (New York) are of special interest. As regards Edebohls he says, that this author in a recent sensational article (*Medical Record*, Vol. 40, No. 25), presented the results obtained in eighteen cases of chronic nephritis by surgical intervention. Edebohls started from a principle entirely different from that of the other observers in this field, and held that instead of nephrotomy, nephropexy with renal denudation was the desirable procedure in the treatment of chronic nephritis. Edebohls had observed that nephritis was cured by nephropexy, and this accidental result he applied in eighteen cases. Of these cases, eight were worthy of consideration, as in the remaining ten the time that had elapsed after the operation was not sufficient to

base any conclusions on them. The eight patients whose histories are analyzed by Edebohls were, according to this writer, completely and permanently cured of their peephritis by nephropexy in virtue of rich adhesions which formed between the denuded parenchyma of the kidney and the lumbar wall. This, according to the author, so improved the nutrition of the kidneys that their tissues became regenerated and healthy. The operation performed by Edebohls was virtually the nephrolysis suggested by Rowsing (in 1902). Even without nephropexy, which is entirely unnecessary if the kidney is in place, the present author thinks, some new vessels would form after the denudation of the kidney, and these would probably be of more value than the diminution in renal tension. The latter would, at all events, be only transitory, for the sclerotic process which goes on after denudation would form a new capsule which would compress the kidney as much as the old capsule did. It is doubtful whether the cases cited by Pousson and Edebohls were in reality cases of Bright's disease, for chronic nephritis does not necessarily mean Bright's disease. For example, Israel says that nephrotomy may be of benefit in some instances of chronic nephritis, but not in Bright's disease. The fact that Edebohls and Pousson speak of unilateral nephritis makes this doubt stronger, for Bright's disease is the result of changes in the entire organism—a systemic disease. The denudation of the kidney may, however, be of benefit in chronic nephritis in which the parenchyma of the kidney is alone the seat of pathological changes. It is possible that this operation may decrease the excess in renal tension and evoke the formation of new vessels which promote the nutrition of the organ.

Case of Pyopericarditis: Pyopneumopericardium: Pneumococcus Pyæmia. By Dr. W. K. Sibley, W. A. Lane, F. R. C. S., and G. Rowell, F. R. C. S. (*British Medical Journal*, May 23rd).—This case may be summarized as follows: A healthy boy, sixteen years old, developed a sore throat, followed in a few days by most of the symptoms, but without very distinct physical signs of pneumonia of the base of the left lung. On the eighth day after the onset of the attack an apparent crisis occurred. In a few hours the temperature again rose slightly, falling again to normal the following morning, to rise again in the evening of the next three days. Then came a period of five days with the temperature generally raised and with some slight increase of all the symptoms. For the next eight days the temperature was usually markedly subnormal, and during this time there existed the pulsus paradoxus. At no time was either an endocardial or an exocardial murmur heard. A left empyema was then opened but without the relief to the general symptoms which had been expected. The pulse, however, became much more regular and of better volume, and, as far as could be determined, of the same rate as the heart's beat. Ten days afterward the pericardium was opened, but with only a slight temporary general improvement, soon followed by a more irregular temperature. The patient died thirteen days after the pericardium had been opened, and twenty-three days after the opera-

tion on the pleura. The immediate cause of death seemed to be the result of internal hæmorrhage from the heart, due to a rupture of one or more small abscesses in its walls. The bacteriological examination proved the presence of pneumococci in great numbers in the blood, death being the result of a general pyæmia, due to the pneumococcus. Judging from the immediate result of opening the pericardium and the subsequent course of events, had there not been a general pyæmic infection, there was no reason why the case should not have recovered.

A Case of Enterotomy for Intestinal Stone.—Dr. B. F. Lezhtseff (*Roussky Vrach*, April 12th) reports a case in which he performed enterotomy and removed two stones from the sigmoid flexure. He strongly advocates enterotomy in cases of intestinal stones, and says that this method is superior to all others in such cases. It enables the surgeon to remove the intestinal concretions in a rapid and efficient manner, without any danger, if all the requirements of technics have been observed. It makes possible the rapid and thorough inspection of the entire region of intestine involved, and at times it enables the surgeon to alter the plan of the operation after this inspection. After enterotomy it is always clear what course is to be pursued in the after treatment in order to secure the prompt healing of the gut.

OBSTETRICS AND DISEASES OF WOMEN.

The Present Treatment of Puerperal Septic Infection. By Edward P. Davis, A. M., M. D. (*Philadelphia Medical Journal*, May 23d).—We have not as yet arrived at a clear understanding of the best way of treating this condition. For practical purposes we may divide the study of the subject under four heads. (1) The prevention of puerperal septic infection. This is best accomplished: (a) By maintaining, and if possible increasing, the patient's normal resistance to infecting microorganisms. Hence, one of the most important things to guard against is hæmorrhage. (b) By preventing, when possible, and in any case repairing, if practicable, all lacerations of the genital tract. (c) By carefully treating preexistent infections. (d) By *antisepsis* of dressings, of the patient's external genitals, of the physician's and nurse's hands, and the most rigid *asepsis* of all instruments used. Douching should not be practised. (2) Methods of treatment that have proved of value: (a) All ulcers of the vulva and vagina should be cauterized. (b) The vagina should be swabbed with lysol or bichloride solutions. The uterus should be thoroughly, but gently, scraped with a blunt curette and douched with at least one gallon of either 1 per cent. lysol or creolin solutions at a temperature of about 100° F. If the uterus requires packing, 10 per cent. iodoform gauze may be used. The vagina should always be lightly tamponed with dry bichloride gauze. At the end of forty-eight hours these dressings are removed and a 1 per cent. lysol douche is given. After this no more douching should be employed. (c) The general measures to be resorted to are: Unload-

ing the bowels, preferably with compound cathartic pills; liberal feeding; medication by strychnine and ergot, as required; the exhibition of alcohol to the point of tolerance without intoxication; the use of normal salt solution, either by the bowel or by hypodermoclysis, as the particular case demands. (d) The late operative measures are: First, the evacuation of all collections of pus (this is imperative); and second, hysterectomy. This latter procedure is only justifiable in those exceedingly rare cases in which an infected placenta cannot be removed from the uterus. (3) Methods of treatment which must be considered at present as experimental: (a) The employment of antistreptococcus serum. (b) The administration of nuclein, in order to increase the leucocytosis. (c) Inunctions with Credé's silver ointment or the intravenous injection of collargol. (d) Intravenous injection of formalin "presents for consideration one patient who survived the injection." (e) Hysterectomy, either vaginal or suprapubic (the latter has enjoyed the smallest mortality); ligation and exsection of infected and thrombosed veins, principally those of the pelvic structures (a procedure which would seem especially applicable in cases of pyæmia). Hysterectomy of the gravid infected uterus (fœtus dead) has in the author's hands given good results. (4) Methods of treatment that must be considered injurious: (a) Drugs given for the purpose of reducing temperature. (b) Unnecessary stimulation of the heart, a frequent fault. (c) The unnecessary checking of the purgation that not infrequently occurs as Nature's method of eliminating toxic material. (d) The needless resort to drugs in order to induce sleep, a practice which too often upsets the patient's stomach, the stronghold of defence. (e) A most pernicious mistake in treatment is that of making repeated intrauterine manipulations. There is one worse error, the intrauterine injection of bichloride of mercury.

The Surgical Treatment of Pruritus Vulvæ, with the Report of a Case Cured by Resection of the Genitocrural, Ilioinguinal, Inferior Pudendal and Superficial Perineal Nerves. By Barton Cook Hirst, M. D. (*American Medicine*, May 16th).—The treatment of idiopathic pruritus vulvæ is one of the unsolved problems of gynecology. Dr. Hirst believes that surgical intervention promises better results than any other line of treatment so far suggested. It is too early, as yet, to decide as to the value of nerve resection. Apart from the question of the cure of the condition by nerve destruction, one must carefully weigh the possible consequences. There is reason for believing that atrophic changes may take place and be followed by kaurosis vulvæ, and possibly also the operative intervention may favor the development of epithelioma of the external genitals. The author describes his method of exsecting the necessary nerves and gives the report of one operation. Dr. Hirst concludes his paper with the following queries: "(1) Which is the better of the two surgical treatments of pruritus vulvæ, exsection of the affected skin, or resection of the sensory nerve supply? (2) What is the best surgical technics for isolating and resecting the sensory nerves supply-

ing the vulva? (3) What has been the permanent result of this operative procedure in the experience of the members who have performed it or have had the opportunity of watching cases afterwards? (4) If a cure of the pruritus can be expected, is there a likelihood, or has anyone clinical evidence to present, of the development of kaurosis vulvæ, and possibly of an associated epithelioma?"

A Case of Dorsoanterior Frontal Presentation.—Professor F. Ahlfeld (*Zentralblatt für Gynäkologie*, April 18th) reports a case of a forty year old multipara, in whom he found the anterior fontanelle to the left and behind, this being the deepest portion of the head. The posterior fontanelle could not be reached. Forceps was applied and a living child extracted, although the right cheek was injured by the forceps. The case proves that the first and second position of the frontal presentation are possible.

New Symptom of Multiple Pregnancy.—Dr. Jentzer (*Zentralblatt für Gynäkologie*, April 25th) found in a multiparous woman, who had previously had a ventral fixation performed, that he could feel two foetal heads, and that he could knock them together. It gave the sensation of knocking two billiard balls together in water. The patient subsequently gave birth to triplets.

Vaginal Cæsarean Section in Eclampsia.—Professor A. Dührssen (*Zentralblatt für Gynäkologie*, April 18th) narrates the case of a twenty-five year old primipara who was operated on while in deep coma from eclampsia. The vagina admitted but two fingers and was extremely rigid. The cervix admitted but one finger. The perinæum was incised, then the anterior and posterior uterine walls were divided and the fœtus was extracted by the feet. The placenta was expressed and the uterus tamponed on account of atony. The operation required but eight minutes and the mother and child recovered. The author regards the vaginal Cæsarean section as free from danger and as permitting the birth of a living child, even if it is large and the uterus is still entirely closed.

Puerperal Struma.—Dr. Malade (*Berliner klinische Wochenschrift*, May 4th) speaks of the well-known swelling of the thyroid gland during parturition, which has nothing in common with the epidemic form of thyreoiditis. In some cases, the thyroid enlarges during pregnancy and undergoes a retrograde metamorphosis after the birth. The author reports three cases of acute puerperal struma. In one of the cases, the woman—on whom a version had been performed on account of placenta prævia—died suddenly. Her death was explained by the great pressure exerted on the carotid arteries by the greatly enlarged thyroid gland, leading to acute cerebral anæmia.

A Case of Anencephalia.—This interesting case is reported by A. Bustillo Lirola. (*Revista Médica Cubana*, May 1st).—The patient, a woman aged thirty-four years, who had previously given birth to eight healthy children, was first seen at seven in the evening, labor having commenced in the early

morning. When brought to the hospital, an indistinguishable mass was protruding from the vulva. This, the patient stated, had been the condition since noon. After careful washing and examination of the mass it was ascertained that it corresponded to what should have been the foetal head. Uterine contractions having ceased for six hours, and attempts to excite them having failed, the foetus was extracted artificially, when it was found that though it was well formed in other respects, the cranial vault was entirely lacking, and in its place was an empty space covered with skin upon which was an abundant growth of hair. Through the skin could be felt the sella turcica and other prominences of the base of the skull. The explanation of the prolonged labor was found in the fact that the size of that which corresponded to the head was not sufficient to open the way for the passage of the broad shoulders and remainder of the body.

DISEASES OF CHILDREN.

Observations on Empyemata in Children. By P. S. Blaker, M. R. C. S. (*British Medical Journal*, May 23rd).—The author's article is based upon a personal experience of eighty-one cases of empyema in children. He divides the cases into two main groups: "acute," or "primary"; and "late," or "secondary," the latter comprising about 80 per cent. of all cases. Nearly all cases of empyema in children are associated with pneumonia, either lobar or lobular. An empyema due to initial disease of the pleura alone must be a very rare affection. An empyema almost always begins as such, and very seldom as a simple effusion. In the acute cases, the signs of fluid in the chest develop simultaneously with those of pneumonia, and the patient is very ill from the start. There are vomiting, marked dyspnoea, cyanosis, and high temperature. Signs of fluid are heard over the chest, and puncture with a needle brings away a thin purulent fluid. In such cases death practically always occurs when the patients are under two years old, from extensive consolidation of the lungs, meningitis, pericarditis, or peritonitis. As a rule, the fluid withdrawn from the chest is teeming with pneumococci. In the secondary cases, the prognosis of which is much better, there is no lung consolidation, and the patient has an empyema pure and simple. Pneumococci were found in 65 out of 69 cases. Tubercle is a very rare cause of empyema in children; it was found in 3 out of 23 autopsies. As stated before, the younger the patient, the less the chances of recovery. A mixed infection, due to pneumococci and streptococci, is of bad omen.

All the cases were treated by opening the pleural cavity and draining it. Rib resection was done in 52 cases, and simple incision in 26. Of these latter 12 patients recovered and 14 died.

The after treatment is most important; the tube should be removed as soon as possible. After the second day it should be taken out daily, cleaned, boiled, shortened, and reinserted. When the discharge becomes thin and watery, the tube should be taken out altogether, being replaced by a thin gauze drain for a day or two. Aseptic dressings are preferable to antiseptic ones.

Vulvovaginitis in Children.—Dr. V. I. Doukelsky (*Roussky Vrach*, April 12th and 19th) draws the following conclusions after a detailed study of a number of cases of vulvovaginitis in children. The disease of children which is termed in the textbooks "leucorrhœa" or the "white flow" is in 80 per cent. of all cases a gonorrhœal vulvovaginitis. In the remaining 20 per cent. various vulvovaginal inflammations of infectious or simple character are met with. The latter may have either an acute or a chronic course. The infectious variety may be due to diplococcus infection, or to simple purulent infection, and is distinguished from the specific vulvovaginitis due to the gonococcus by its acute course and rapid tendency to recovery. The non-infectious vulvovaginal inflammations are always catarrhal, and are always of chronic type. The general health of the child has no significance in the ætiology of vulvovaginitis. In the majority of instances the contagion is communicated to the children by the mother. Cases of infection through sexual intercourse in children are distinguished by their severity, and sometimes are accompanied by high fever and complications. Infants may be infected by the mother with vulvovaginitis at birth. An inflammation of the glands of Bartholin is only met with in the acute forms. When this complication is absent, nothing but a bacteriological examination can distinguish the acute cases of simple infection from the gonorrhœal cases.

A Contribution to the Study of Neurasthenia in Childhood.—Dr. Luigi Capelletti (*Riformi medica*, April 29th) in an instructive article brings out the fact that neurasthenia is not, as is commonly believed, the sole heritage of the adult, but on the contrary is quite often found in childhood before the period of puberty. The ordinary belief that in youth there is nothing to cloud the mind and that the nervous system is not exhausted as it is in adults, has had its reflection on the view taken by most physicians who deny the existence of neurasthenia in children. In 1889, Boiadijeff showed the characters that neurasthenia may assume in childhood, and a number of authors before him have treated of this disease in the early years of life—the so called Beard's disease in children. The present author reports two cases of marked neurasthenia in children which he cites as examples. In children neurasthenia is somewhat masked and therefore is not generally recognized. According to Boiadijeff, all the signs of neurasthenia may occur in children. The following symptoms should be especially looked for: (1) Loss of attention, so that the child does not progress well in study at school. (2) Taciturn and melancholy moods (irritability, restlessness. (3) Exaggerated or deficient memory. (4) Loss of will power. (5) Unreasonable fear of school. There are besides the following physical symptoms: Headache, feeling of "helmet-pressure," slight vertigo, insomnia, muscular debility, loss of appetite, sense of fulness in the epigastrium, occasionally vomiting, constipation, rarely diarrhœas, in some cases dilatation of the stomach, emaciation, a yellow color of the face and a coated tongue. Frequently there are also sexual excitability, sometimes emissions, an irritable heart, a variety of vaso-

motor phenomena, such as blushing, sense of cold and heat, etc.

The symptoms cited here have been observed by the present author, but there is one psychical symptom which he has noticed particularly, and which he regards as characteristic of neurasthenia in children, and that is the great tendency to *constant doubt* in the mental operations of these children. Doubt permeates all their thoughts and actions, just as it does in the case of adult neurasthenics. This symptom is so constant and so marked in neurasthenic children, that its discovery is very significant in the diagnosis of a case. The element of doubt in the psychic state of a child is more noticeable in children than in adults, as a child naturally tends to be impulsive, and does not indulge in self analysis at each step as does the neurasthenic adult. The author thinks that attention to this symptom and to the other signs mentioned, will render cases of neurasthenia in children recognizable at an early stage, and that proper physical and psychical treatment, increasing the will power and strengthening the exhausted nervous system, would prevent the deplorable consequences of neurasthenia in adult life.

Congenital Dislocation of the Hip: Report of a Bloodless Reposition, Followed by Death, with an Analysis of Twenty-three Cases in Process of Treatment. By H. Augustus Wilson, M. D., J. Torrance Rugh, M. D., and W. M. Coplin, M. D. (*American Medicine*, May 16th and 23rd).—Of the operations recorded in the present paper, 8 were performed by Dr. Lorenz, 13 by the staff of the Jefferson Hospital, and 2 by Dr. Rugh. As only six months have elapsed since the operations were performed, it is too early to draw conclusions as to their final outcome. The points of chief interest follow: (1) The youngest patient was eighteen months old, the oldest was nine years and a half old. (2) The patients, after operation, had to remain quietly in bed for three or four days, before being allowed to sit up, and were sent home at the end of one week. (3) Radiograms, though possibly of some value, are often misleading and cannot be relied upon. (4) The four following cases were the only ones in which unfavorable symptoms developed: (a) M. I., aged four years. Double dislocation. Was under ether for thirty-five minutes the day before operation and recovered from the narcosis without any but the usual symptoms. The operation, performed on the following day by Dr. Lorenz, was succeeded by a considerable amount of shock. (b) K. C., aged seven years. The radiograph showed a favorable condition. Operation showed that the head of the femur had probably been removed two years previously during an operation for the relief of tuberculous hip disease. The reposition could, of course, not be performed. (c) M. H., aged eight years, developed œdema about the external genitals which necessitated catheterization. (d) B. D., girl, aged seven years and a half. Died two and a half days after operation. Double dislocation and attempted double reduction. This case is recorded with extreme fulness, but we shall only attempt to give the points that have impressed us most forcibly. The child was "delicate looking,"

of rhachitic tendency, and with a waxy and almost transparent skin. There was tuberculosis on the father's side of the family. Though not mentioned in the case history, the pathologist noted that on superficial examination "the axillary, cervical and submaxillary glands are notably enlarged." The day of the operation the urine showed a trace of albumin. The pathologist gave the following as the anatomical diagnosis based on the autopsy. "Bilateral congenital dislocation of the hip. Perforated foramen ovale. Persistent thymus. Atheromatous arteritis of aorta and coronary trunks. Acute catarrhal tracheitis. Acute catarrhal bronchitis. Acute catarrhal pneumonia. General tuberculous lymphadenitis. Acute hæmorrhagic nephritis. Latent or obsolescent rhachitis." Dissection of the hip joints and pelvic bones showed (1) That reduction of the dislocations had not been effected, and that, owing to thickening of the ligamentum teres and of the fibrous capsule, such reduction was impossible. (2) That in the attempts at reduction, on the right side, three fractures had been produced. First, an intracapsular fracture of the neck of the femur; second, a fracture of the ischium extending through the body; third, a fracture of the ischium passing transversely through the ascending ramus.

NERVOUS AND MENTAL DISEASES.

Acute Transitory Aphasia.—Dr. M. Rothmann (*Berliner klinische Wochenschrift*, April 27th) records a number of cases in which the patients were absolutely well, so far as the nervous system was concerned, until they were seized with acute aphasia. In none of the cases did the inability to speak last more than one hour. In one case, the author thinks great heat was the exciting cause by evoking toxins which circulated in the blood. In other cases, the cause assigned was an embolus, emotional excitement, mental strain, and accident with shock to the nervous system. The author does not include cases of acute aphasia arising in hysteria and paralytic dementia. He advises caution in assigning a purely functional origin to these cases.

Progressive Epilepsy.—The evolution of a case of generalized epilepsy with total loss of the intellectual faculties, which had its beginning in a partial epilepsy confined to the right side and accompanied with severe cephalic pain, justifies, in the opinion of A. Mestre (*Revista de Medicina y Cirugía de la Habana*, April 10th) the name he has given the condition, *i. e.*, progressive epilepsy. At the onset of the affection, convulsive movements were limited to the upper and lower extremities of the right side, being more marked in the former, and the patient retained full consciousness during the seizures. After the lapse of a month, the convulsive movements extended to the right side of the face; and the following month the left leg became affected. Within ten days after the appearance of convulsive movements upon the left side, a complete epileptic seizure took place, during which the patient was unconscious. Upon the following day, three generalized convulsions occurred,

and the succeeding day, a comatose condition ensued, which continued till death occurred two days later. At autopsy, marked hyperæmia of the meninges was seen, and the cortical veins, replete with blood, were distended, so that they stood out in relief against the surface of the encephalon. There was no hæmorrhage. Grayish granules of the size of a pin's head were seen upon the surface of the ascending frontal and parietal convolutions, these being disposed about the blood vessels and surrounded by a whitish, gelatinous exudate. The patient had shown no evidence of tuberculosis during life.

Nervous Complications of Influenza.—M. J. Hallé (*Presse médicale*, April 29th) reviews the changes in the nervous system which can follow an attack of grippe. Meningitis, either spinal or cerebral, may appear, and be of the congestive, serous or suppurative variety. Cerebrospinal meningitis may be evoked by the bacillus of influenza and may, in its course, be subjected to secondary infection. Hæmorrhage and cerebral softening may appear as a sequel to the disease, and symptomatic epilepsy has been observed. Grippal myelitis is not rare and the transverse dorsolumbar type is the most common. The spasmodic form of grippal myelitis is marked by pain in the extremities, exaggerated reflexes and epileptoid tremors, but sensation and the sphincters are usually intact. Ascending myelitis has been noted. Syncope, accompanied by Cheyne-Stokes's breathing and usually fatal, is not rare. One case of bulbar paralysis with nuclear ophthalmoplegia has also been recorded. Among the neuroses, coma, asthenia, hysteria—the last very commonly—epilepsy in predisposed subjects, and tetany, have been reported as sequels to influenza. Among the psychoses, melancholia, mania and the renewal of former mental disturbances, have been noted. Peripheral neuritis and peripheral paralysis and neuralgia have also been commonly seen.

GENITO-URINARY DISEASES.

Treatment of Chronic Urethritis.—M. Georges Luys (*Presse médicale*, April 22d) regards urethroscopy as a means of diagnosis far superior to any other method at our command, and believes it should be practised much more frequently than it is. By its help, polyps, vegetations, and papillomatous excrescences of the urethra may be detected. It renders visible also large strictures which are characterized by a dense infiltration of the mucosa occluding the urethral walls. In such cases, the urethroscopic picture shows no central point of illumination, but a gaping cavity. In a normal urethra, the openings of Littre's glands are scarcely visible, their color not differing from the surrounding mucosa. But in certain cases of chronic urethritis, the mouths of the glands are turgid, red, and surrounded by a characteristic halo; in other cases, simple pressure of the ureterscopic tube upon the glands causes a purulent, opaque, or clear fluid to escape from the glands. Again, the lacunæ of Morgagni, which lie in the penile portion of the urethra and offer a most suitable nidus for microbic growth,

remain practically inaccessible to all forms of treatment, except by urethroscopic means. These localized lesions are the ones which foster and keep up a chronic urethritis and which are rendered capable of attack by means of the urethral endoscope. The destruction by means of the fine point of the galvanocautery through the endoscope of the foci which keep up the chronic urethritis, is the best and most efficacious means of treating this form of the disease. The author illustrates his paper with excellent color drawings.

OPHTHALMOLOGY.

Adrenalin in Ophthalmology.—M. E. Martinet (*Presse médicale*, April 25th) says that in conjunctivitis, scleritis, and episcleritis, adrenalin checks the secretions and relieves the subjective symptoms, but has no curative value. It reduces congestion and aids the cure. It is a useful adjuvant in collyria and salves, since it favors absorption, more in conjunctivitis and scleritis than in iritis and glaucoma. In the last named it is an adjuvant to cocaine and permits mydriatics and meiotics to act in the presence of conjunctival hyperæmia which hinders absorption. Surgically used, it prevents hæmorrhage and not only arrests bloody transudation, but permits cocaine to exert its influence. It can be used in peritomies, in extirpation of tumors, in making conjunctival incisions, in enucleations, in grattage and in the removal of foreign bodies. It facilitates catheterization of the lacrimal ducts, and in glaucoma, in conjunction with cocaine, it permits the performance of a painless iridectomy and reduces the hæmorrhage to a minimum.

PHYSIOLOGY AND PATHOLOGY.

Duration of Life of the Stegomyia Fasciata.—The laboratory studies by which J. Guiteras (*Revista de Medicina Tropical*, April) determined the duration of life in the yellow fever mosquitoes upon which he experimented, are not without interest, in view of the fact that that mosquito retains its infectivity throughout its life. In a fatal yellow fever case the patient was bitten by eighteen mosquitoes five days after they were hatched. Seven were killed for the purpose of studying the salivary glands and intestines, and the remaining eleven died in from five to one hundred and fifty-four days.

The Relation Between Acetonuria and Acidæmia in Cases of Gastric Ulcer. By F. Golla. (*Lancet*, May 2nd).—Pathological conditions of the alimentary tract bringing about a state of partial inanition are accompanied by excretion of the acetone group of bodies. Acetonuria seems to bear a special relation to the upset of metabolic equilibrium resulting from a deprivation of carbohydrate material. The observations here reported were made on a number of cases of gastric ulcer treated by strict rectal feeding. The acetonuria as measured by the excretion of ammonia, is far in excess of that recorded in cases of gastroenteritis, etc. The relation between fat metabolism and acetonuria was strikingly demonstrated by the relation of the ex-

cretion of ammonia to the obesity of the patient. In three patients who were very emaciated, the amount of ammonia excreted was very small. Three of the cases showed a degree of acetonuria quite as great as that found in diabetic coma. In none of the cases was there any marked decrease in the CO_2 content of the venous blood, such as is stated to obtain in diabetic coma. In two cases of diabetes with acetonuria the author failed to find any decrease in the CO_2 . These facts throw some doubt on the acidæmia theory of diabetic coma. Sternberg holds that diabetic coma is due to the toxic β -amidobutyric acid, a forerunner of β -oxybutyric acid, and that death results from toxæmia rather than from acidæmia. Such a view explains equally well the good results of large injections of a sodium salt.

Pyronin-methyl Green: a Brilliant Double Stain for Cells and Bacteria. By William F. Whitney, M. D. (*Boston Medical and Surgical Journal*, May 7th).—This method of staining was first suggested by Pappenheim, who, however, did not emphasize sufficiently its general utility. It is useful in staining fresh isolated cells or smears of sputum, pus, and other fluids. The stain is made by mixing four parts of a 1 per cent. solution of pyronin (in distilled water) with one part of a 1 per cent. watery solution of methyl green. The solution will keep several weeks. For office use it is best made fresh each time. The author gives the best methods for using the stain for cover glass preparations, for fresh preparations, and for frozen sections. For cover glass preparations the method is as follows: A smear is made in the usual way, dried, and the stain applied. The cover slip is then heated for a few seconds, washed, and mounted in xylol balsam. All bacteria stain with the pyronin (brilliant red) while tissue elements take on various colorings. The red blood cells remain unstained, as do also the bodies of the neutrophilic leucocytes. The pyronin alone makes a good counter stain for use after Gram's method has been employed.

The Alkalinity of the Blood in Leucocytosis in Infectious Diseases.—Dr. V. F. Orlofsky, of St. Petersburg (*Roussky Vrach*, April 5th), investigated the question as to the dependence of the alkalinity of the blood upon the number of white blood cells. The alkalinity of the blood was first found to be essential to life by Loewy, who, in the 'nineties of the last century, showed, by testing the resistance of the red cells to disintegration, the differences in the alkalinity in the blood which took place with variations in the number of erythrocytes. This dependence of the alkalinity of the blood upon the number of red cells was also shown with more elaborate experiments by the present author in a previous publication (*Vrach*, 1901, Nos. 11 and 39). The question arose next, whether the alkalinity of the blood, which was found to be so important a factor in the health of the organism, also varied with the number of white blood cells. A number of authors have occupied themselves with the solution of this problem. Loewy and Richter found that the injections of various serums, peptone, etc., into the blood produced a rise in alkalinity, and at the same time a diminu-

tion in leucocytes (hypoleucocytosis), while after a time the same blood regained its normal alkalinity and there was an increase of leucocytes. The two observers named, therefore, concluded that the alkalinity of the blood depended upon the number of leucocytes therein. The variations in alkalinity and in the number of leucocytes observed by other authors who followed Loewy and Richter were insignificant, however, and all these researches did not consider the factor which, according to the present author, plays a very important rôle in this matter—namely, the number of red cells.

The experiments recorded in the present paper constitute a series of tests which take into account the number of white cells, of red cells, and the alkalinity of the blood after experimental injections of some well-known chemical substances, such as pilocarpine and spermin; after the administration of a diet which lowers the number of leucocytes, namely an albuminous diet following a protracted fast, and after the inoculation of animals with the cultures of some pathogenic germs. Finally, the author also studied the relations of leucocytosis to the alkalinity of the blood in a series of diseases. His conclusions give a negative answer to the question as to the dependence of the alkalinity of the blood upon the number of white blood cells. The most interesting of his conclusions is, however, that the organism succeeds very well in jealously guarding the alkalinity of the blood at a certain height, in both man and dogs, in spite of a variety of influences which tend to lower that standard. The alkalinity of the plasma remains normal in many pathological processes, or if it deviates from the normal, it does so within very narrow limits. A marked lowering of the alkalinity of the blood is only noted in severe diabetes mellitus, cancerous cachexia, or in the last stages of uric acid diathesis. In infections which are fatal in rabbits there is a lowering of alkalinity, but in man this lowering takes place in these diseases (influenza, typhoid fever, pneumonia, and articular rheumatism) only shortly before death. The question as to why the blood must remain alkaline is as yet unanswered.

The Relation of Meconium to the Fœtal Appendix. By Dr. A. Low. (*Lancet*, May 2nd).—In the course of a systematic examination of fœtal abdominal viscera, the author has observed that the disposition of the meconium with regard to the different portions of the fœtal intestinal canal is as follows: 1. *Small Intestine*. Meconium begins to distend the lower half about the middle of the fourth month, and continues to do so to a variable extent until the end of fœtal life. 2. *Large Intestine*. Meconium begins to distend the rectum about the beginning of the fifth month, thereafter tending to accumulate in the cæcum and then gradually distending the whole of the large intestine, so that after the seventh month dark green meconium distends the large intestine in its whole length. 3. *Appendix Vermiformis*. Meconium was noted to be present in the appendix as early as the middle of the fourth month and thereafter in nearly every case it was present in the appendix until the end of fœtal life. The amount of meconium in the appendix varies;

it seems to depend somewhat on the condition of the cæcum—if the cæcum is distended, then the appendix is always distended, but there may be meconium in the appendix while the cæcum is practically empty.

The Germicidal Action of Alcohol. By Charles Harrington, M. D., and Harold Walker, M. D. (*Boston Medical and Surgical Journal*, May 21st).—Different investigators have obtained discrepant results in their investigations of the germicidal action of alcohol. These discrepancies are due to two chief causes. First, to the use of different dilutions of alcohol, and, second, to the use of different kinds of organisms. The authors review the work that has been done in this field of medicine and then report the results of their own work. They append their conclusions at the end of their article. In general it may be said (so far as regards the more common forms of pathogenic bacteria): (1) That against dry bacteria, absolute alcohol and ordinary commercial alcohol are both totally lacking in germicidal qualities. Preparations of alcohol of a strength of 70 per cent. or less do have germicidal actions. (2) Against the commoner non-sporing pathogenic bacteria, in a moist state, any dilution of alcohol above 40 per cent. is effective. Dilutions of less than 40 per cent. are too slow and uncertain in their action against either dry or moist bacilli. (3) The most effective dilutions of alcohol, for disinfecting purposes, are those containing from 60 to 70 per cent. by volume of alcohol. This is true both with regard to dry and moist organisms. Such solutions will usually kill any of the ordinary pathogenic germs in five minutes. (4) The *Bacillus anthracis* is not affected by alcohol.

The Best Method of Preserving Anatomical and Pathological Preparations.—Dr. L. L. Heidenreich (*Roussky Vrach*, April 19th) found the following methods to give the best results in preserving the natural color and appearance of dead tissues.

The method of Melnikoff-Razwednikoff: The organs are first placed in a mixture of 10 parts of formalin, 100 parts of water, 0.5 part of potassium chlorate, and 3 parts of potassium acetate, which slightly bleaches the tissues. Then the organs are placed in alcohol, at first weak and gradually increasing to 95 per cent., which restores the normal color to a certain extent. Finally, after a few days, they are placed in the following mixture: Potassium acetate, 30 parts (by weight); glycerin, 60 parts, and water 100 parts. The tissues are left in this fluid permanently and regain their original colors.

The second method, which is also excellent for the same purpose, is that of Riche and Gothard. The preparations of these observers were admired by everyone at the International Congress in Paris. Their method is as follows: The organs are first placed in a solution of 150 parts of formalin, 1,000 parts of distilled water, 10 parts of potassium nitrate (saltpetre), and 30 parts of potassium acetate. They remain in this fluid for from one to two days, and are then transferred to 80 per cent. alcohol; after twelve hours the alcohol is changed to 95

per cent., wherein they remain for two hours. The colors then are brought out more distinctly. Finally, the organs are placed in a mixture of glycerin 100 parts; distilled water, 100 parts; and potassium acetate, 30 parts. The colors come out perfectly in this fluid, and remain unaltered.

A new method which the author himself has tried successfully, and which is less expensive than those described above is as follows: A compound known as "holzin" is sold in Germany for embalming and for anatomical preservation, but the author found that it did not preserve colors so well as the two methods described above. The compound consists of 3 parts of commercial formalin and 2 parts of methyl alcohol, and its 1 per cent. solution is about equivalent to a 1 per cent. solution of ordinary formalin. As a preservative it is satisfactory and not expensive, except that it does not keep the colors intact. The author used a mixture of 7 per cent. of holzin with glycerin and water (2:1), and from 10 to 20 per cent. of chloral hydrate. A human hand painted with this compound, for example, was preserved in perfectly intact coloring, and in all other respects without any change for a number of months in the open air of the laboratory. The fluid in question also proved excellent as an embalming liquid.

Agglutinating Property of Bile.—Dr. A. Cantani (*Centralblatt für Bakteriologie, Parasitenkunde und Infektionskrankheiten*, April 22d) finds that normal bile of rabbits, guinea pigs, and oxen possesses no agglutinating action on most bacteria. Exceptionally, the bile of animals suffering from infectious disease, has agglutinating properties; but the bile of animals immunized against typhoid and colon bacillus shows decided agglutinating action. This power is, however, not visible on the sera.

The Shiga Bacillus and Secondary Infections in Yellow Fever.—Having repeatedly obtained the agglutination reaction of the Shiga bacillus in a case of yellow fever in which hæmorrhagic symptoms were prominent, J. Guiteras (*Revista de Medicina Tropical*, April) believes it not improbable that secondary infection with the Shiga bacillus, belonging as it does to the hæmorrhagic group of bacteria, may be responsible for some of the symptoms of yellow fever, such as hæmorrhage, and remissions of fever.

Bactericidal Property of Bone Marrow.—Dr. A. Henke (*Centralblatt für Bakteriologie, Parasitenkunde und Infektionskrankheiten*, April 22d) has experimented upon the bactericidal property of the bone marrow by injecting cultures of *Staphylococcus pyogenes aureus* directly into the blood and into the marrow, as well by way of the trochanter major. In from two to four days the animals were killed. In none of the cases was an osteomyelitis found, combating the usual view that staphylococci evoke the disease. In very acute cases of the disease, the author has been able to isolate small rods which he has not identified. They were decolorized by Gram's stain, were movable, and did not liquefy gelatin. Injected intravenously into rabbits, these organisms invariably produce typical and characteristic lesions of the bones.

Proceedings of Societies.

FIRST ANNUAL CONFERENCE OF STATE AND NATIONAL HEALTH AUTHORITIES.

Held in Washington, D. C., June 3, 1903.

Surgeon General WALTER WYMAN in the chair.

The first annual conference of State and national public health officers, for which a call was recently issued by Surgeon General Wyman, in accordance with the provisions of an act of Congress approved July 1, 1902, met at the New Willard Hotel. Twenty-one States and the District of Columbia were represented.

Assistant Secretary of the Treasury ARMSTRONG, on behalf of the government, welcomed the delegates. He said that in the great work of improving the health conditions of the country cooperation between the States and between the States and the nation was the secret of success, and he promised in the name of the national government to do everything to further this end.

Surgeon General WYMAN read his opening address (see page 1053).

Dr. FOSTER, of California, gave a description of quarantine operations in that State, particularly in relation to the plague danger in San Francisco. He said that with the vigorous cleaning out of Chinatown the fear of another attack of this disease was rapidly disappearing. He attributed the success achieved to the hearty cooperation existing between the city, State, and national and health officers in endeavoring to stamp out the infection. Dr. Foster was followed by Dr. Townsend, Dr. Porter, Dr. Egan, Dr. Conniff, Dr. Bailey, Dr. Souchon, Dr. Young, Dr. Fulton, Dr. Baker, and Dr. Woodward.

At the suggestion of Dr. J. Y. PORTER, of Florida, a telegram was addressed to the Florida legislature expressing the hope of the conference that the act now pending before that body providing for the collection of vital statistics would receive favorable action.

At the afternoon session the discussion of local health and quarantine conditions was continued, each representative explaining the sanitary laws and the method of carrying them out in his particular State, addresses being made by Dr. Westbrook, Dr. Hunter, Dr. McAlester, Dr. Probst, Dr. Smith, Dr. Lee, Dr. Swarts, Dr. Simons, Dr. Tabor, and Dr. Cooper.

The conference adopted the following resolutions:

Whereas, The Conference of the State Boards of Health of the United States with the Public Health and Marine Hospital Service, having confidence in the earnest efforts and ability of the governor and State Board of Health of the State of California acting in harmony with the Bureau of Public Health and Marine Hospital Service to thoroughly eradicate bubonic plague heretofore existing in the city of San Francisco, do resolve that in the judgment of this Conference, so long as the present effective work is continued, there is no need for

quarantine restriction of travel or traffic to or from that State.

Resolved, That the methods of cooperation between national and State health authorities suggested by the presiding officer, meet the approval of the Conference.

A committee was also appointed to draft a resolution expressing regret at the death of Dr. Mathew Gardner.

The various States were represented by the following delegates: California, Dr. N. K. Foster; Connecticut, Dr. J. H. Townsend; Delaware, Dr. E. W. Cooper and Dr. Alexander Lowber; Florida, Dr. J. Y. Porter; Illinois, Dr. J. A. Egan; Iowa, Dr. R. E. Conniff; Kentucky, Dr. William Bailey; Louisiana, Dr. Edmond Souchon; Maine, Dr. A. G. Young; Maryland, Dr. J. S. Fulton; Michigan, Dr. H. B. Baker; Minnesota, Dr. F. F. Westbrook; Mississippi, Dr. J. F. Hunter; Missouri, Dr. A. W. McAlester; Ohio, Dr. C. O. Probst; Oregon, Dr. Andrew C. Smith; Pennsylvania, Dr. Benjamin Lee; Rhode Island, Dr. G. T. Swarts; South Carolina, Dr. T. Grange Simons; Texas, Dr. George R. Tabor; Utah, Dr. T. B. Beatty; West Virginia, Dr. Samuel F. Myers; District of Columbia, Dr. William C. Woodward.

Book Notices.

Mucomembranous Enterocolitis. Symptoms, Complications, Ætiology, and Treatment. By MAURICE DE LANGENHAGEN, M. D., Consulting Physician at Plombières, Vosges, France. London: J. & A. Churchill. Philadelphia: P. Blakiston's Son & Company, 1903. Pp. vi-115.

This booklet contains much written matter, little, however, of science. By one who is in search of scientific facts, more or less impatience will be manifested in the perusal of even this small book. He will ask, without doubt, why the author did not say in a few words what he needlessly took so many pages to say about an affection which is not universally conceded to exist and about whose pathology there is more or less discussion.

Words and illustrative cases which do not illustrate do not constitute science.

Hygiene and Public Health. By LOUIS PARKES, M. D., D. P. H. Lond. Univ., Fellow of the Sanitary Institute and Member of the Board of Examiners, etc., and HENRY KENWOOD, M. B., D. P. H., F. C. S., Assistant Professor of Public Health at University College, London, etc. With Illustrations. Philadelphia: P. Blakiston's Son & Company, 1903. Pp. xii-763. (Price, \$3.)

This volume represents the second American edition, the first edition of which was an American reprint of the sixth English edition of this popular work. The latter was reviewed in these columns some two years ago, and aside from a few minor changes in its production, such as an advantageous use of a lighter paper, making the volume slightly less bulky in its appearance, there is no change noted. In printing, the text has been respaced so as to occupy thirty-one additional pages.

Practical Physiology. By A. P. BEDDARD, M. A., M. D., Demonstrator of Physiology, Guy's Hospital; LEONARD HILL, M. D., F. R. S., Lecturer on Physiology, The London Hospital; J. S. EDKINS, M. A., M. B., Lecturer on Physiology, St. Bartholomew's Hospital; J. J. R. MACLEOD, M. B., Demonstrator of Physiology, the London Hospital; and M. S. PEMBREY, M. A., M. D., Lecturer on Physiology, Guy's Hospital. Illustrated by Numerous Diagrams and Tracings. London: Edward Arnold, 1902. Pp. xiv-495.

The authors of this volume, demonstrators and lecturers on physiology at various London hospitals, have collected in this work the essentials of physiology and its collateral subjects, such as chemistry and physics. The book is at once a handy reference work for the busy practitioner, and for the medical interne who wishes to refresh his memory in the field of physiology. The authors lay particular stress upon the importance of experimental physiology, and have endeavored to draw attention to the importance of the living animal as a unit, without selecting any special organ or set of organs.

The text is to the point, the work is novel in its arrangement, interesting in its composition, attractively grouped, and embodying within a small compass everything of value in this field. Profuse illustrations, well reproduced, are distributed throughout the work, but unfortunately but very few references to the literature on any subject are to be found in the volume.

Death and Sudden Death. By P. BROUARDEL, Professor of Medical Jurisprudence, Dean of the Faculty of Medicine, Paris, etc., and F. LUCAS BENHAM, M. D., B. S. (Lond.), M. D. (Adelaide), Member of the Royal College of Physicians of London. Second Edition. New York: William Wood & Company, 1902. Pp. xiv-336.

The second edition of the translation of this work of this eminent French author contains further illustrations in the shape of new cases collected from general literature. The subject matter has not received material modification. It still remains the classic on the signs of death and sudden death. The Australian translator has done English literature a great service in preserving in the translation the attractive and lucid style of Brouardel.

The Practical Medicine Series of Year Books. Under the General Editorial Charge of GUSTAVUS P. HEAD, M. D., Professor of Laryngology and Rhinology, Chicago Postgraduate Medical School. Volume I. General Medicine. Edited by FRANK BILLINGS, M. S., M. D., Head of the Medical Department and Dean of the Faculty of Rush Medical College, Chicago, and J. H. SALISBURY, M. D., Professor of Medicine, Chicago Clinical School. October, 1902. Chicago: The Year Book Publishers. Pp. 3 to 358. (Price, \$1.50.)

The second year's publication of this year book has lost none of the virtue which characterized its inception. It is still a concise, practical *résumé* of the important literature on general medicine of the preceding year. The subjects considered are fully

dealt with because the literature embraces material from the world's best writers. To one who wishes to keep informed of the advances in general medicine, this book may be recommended.

A Manual of Clinical Laboratory Methods. By JOHN BENJAMIN NICHOLS, M. D., Professor of Normal Histology in the Medical Department of Columbian University, Washington, etc. Illustrated. New York: William Wood & Company, 1901. Pp. 303.

This book, while it contains much of value, does not contain enough on the subject of clinical laboratory methods to make it more in demand than the numerous books which have appeared on the subject in the German and English languages. It certainly deserves commendation for its succinct and clear directions, for its lack of prolixity, and for its definite statements. It does not deal with the newest methods or most recent laboratory appliances. It can be recommended to students rather than to advanced workers.

Typhoid Fever. By J. T. MOORE, M. D., M. C. P. S., Professor of Theory and Practice of Medicine, Medical Department of Hamline University, Minneapolis, Minn. Chicago: G. P. Engelhardt & Company, 1902. Pp. 7 to 155. (Price, \$1.)

While this booklet does not seem to contain much that is original, and while what it does present might be found in almost any modern text book on the practice of medicine, it will probably be found of great service to those who have followed the author's lectures.

BOOKS, ETC., RECEIVED.

Bacteriology. A manual for Students and Practitioners. By Fred. C. Zapffe, M. D., Professor of Pathology and Bacteriology in the Illinois Medical College; Professor of Histology in the Department of Medicine and in the School of Dentistry of the University of Illinois, Chicago. Series edited by Bern B. Gallaudet, M. D., Demonstrator of Anatomy and Instructor in Surgery, College of Physicians and Surgeons, Columbia University, New York; Visiting Surgeon Bellevue Hospital, New York. Illustrated with One Hundred and Forty-six Engravings and Seven Colored Plates. Philadelphia and New York: Lea Brothers & Co. Pp. 3-350.

Pathology of the Skin. An Introduction to the Histology, Pathology and Bacteriology of the Skin, with special reference to Technique. By J. M. H. Macleod, M. A., M. D., M. R. C. P. Assistant in the Dermatological Department, Charing Cross Hospital; Physician to the Skin Department, Victoria Hospital for Children. With Eight Colored and Thirty-two Black and White Plates. Philadelphia: P. Blakiston's Son & Co., 1012 Walnut Street. 1903. Pp. vii-408. (Price, \$5.00.)

Transactions of the Vermont State Medical Society. For the Year 1902.

The Middlesex Hospital, W. Reports of the Medical, Surgical, Obstetric, and Pathological Registrars. For the Year 1901. London: H. K. Lewis, 136 Gower Street, W. C. 1903. Pp. 3-243. (Price, 2s. 6d.)

Forty-third Annual Report of the Medical Superintendent of the Matteawan State Hospital, Matteawan, New York. For the Year Ending September 30, 1902.

Die traumatische Spätapoplexie. Von Prof. Dr. Rob. Langerhans. (Berlin.) Berlin: August Hirschwald. 1903. Pp. 1-81.

Miscellany.

Extensive Surgical Resection of the Brain with Apparent Impunity.—In the *Surgical Clinic* for May we read the case of John Daly, who was taken to the Providence Hospital, Chicago, from the stock yards. While working on one of the buildings there, a fellow employee threw a rivet at him, and in reaching for it, Daly lost his balance, and fell to the ground, fracturing his skull. The fracture was about six inches long, extending from a point about two inches above the right eye, well back over the parietal region, to a point almost directly above the right ear. A considerable mass of the brain protruded, and in the operation it was found necessary to remove this. Of white and gray matter, nearly seven ounces were taken away. In addition to the principal fracture there were several smaller lines of fracture diverging from it, and before the operation was completed a portion of the skull five inches in diameter was removed. This allowed the surgeon to inspect carefully the brain, and to remove all the portions which had been injured. The cavity was covered with a flap of the scalp, which had been prepared prior to cutting away the fragments of bone and brain.

For a time Daly's life was in the balance, but the fact that he gave most promising signs of living immediately after regaining consciousness was far from being the most surprising feature of the case. An hour after the operation Daly was talking and laughing, and he complained neither of pain nor any other sort of discomfort. The only thing that bothered him was the bandage over his right eye, and this only because, "if some other fellow was looking for trouble, he would like to have both lamps working."

Since the day of his operation Daly is said to have been one of the most agreeable patients in the hospital. He is an Irishman, and brimful of native wit. All day long he talks and jests with the other men in the same ward. If occasion requires, he talks seriously; if the opportunity presents he philosophizes. At first there was a natural inclination among physicians, nurses and the other patients to regard some of his sayings and actions as the antics of a deficient brain, but now no one questions his soundness of mind. His relatives say that in no way is he different from his former self.

Inasmuch as the eight frontal and the anterior portion of the right parietal lobes, which were the parts removed, according to this account and the diagram accompanying it, contain several important nerve centres, it is extraordinary that so far there appears to be absolutely no loss of function.

Red Cross Nurses in Japan.—The following interesting account of the nurses of the Japan Red Cross Society is given by the managers of the Society in the *Hospital* for April 25th:

The Japan Red Cross Society has the power to summon its reserve nurses in sufficient numbers when the society has to undertake relief work in time of war, or on the occasion of a public disaster. In ordinary times they are allowed to live in their respective homes, nursing as they choose. But some of them get themselves appointed as

nurses in ordinary to the hospital of the society in order that they may further prosecute their studies, while not a few others enter the Nurses' Exterior Service Department, which is a special establishment for according those nurses means of support as well as opportunities for improving their technical knowledge.

The nurses of the society do not make it their object to earn their living by the practice of their profession. They desire to satisfy their patriotic inclinations by partaking of the general work of the society in time of war so far as it concerns the succor given to military patients. Therefore, whenever we are disposed to start our relief work, they vie with one another to report themselves in response to our summons. So did they rally to our satisfaction both in the case of the Japan-China War of 1894-1895, and in the case of the North China troubles of 1900.

The number of the reserve nurses trained by the headquarters and the branch establishment of the society is 1,518, of whom 195 have been educated at the headquarters, while the number now under training as student nurses is 659, of whom 120 belong to the headquarters. The number of sick-rooms in the hospital is 58, with 199 bedsteads, while the nurses on duty in these wards number 200, including the student nurses. The rooms are divided into six sections, to each of which one or two matrons and not less than six nurses are attached. The matrons are selected from among the senior, more proficient, and better conducted nurses of the hospital. The principal matters which a matron is required to take charge of are as follows:

1. To inspect the services of nurses under her direction; to transmit the orders of her superiors to the members of the section; and to communicate all that transpires in her section to the superiors.
2. To acquaint the members of her section with the directions and instructions of the doctor in charge with respect to nursing and to see them carried out.
3. To examine and keep the sick room journals, and similar documents.
4. To see the bandage material, surgical instruments, bed-clothes of the patients and ward furniture well cared for, and to distribute medicines and foods to the patients.
5. To pay due attention to the rooms being kept clean, and to see the electric light apparatus and stoves well taken care of.

The nurses attached to the wards have to faithfully discharge their duties in accordance with the instructions of their superiors, and are also required to hold themselves duty bound to guide the student nurses within the sphere of their duties, showing them practically examples to be followed.

The matron and nurses of each section have to serve from 8 a. m. to 8 p. m. each day. Besides, the nurses, in varying numbers from two to five per room, in accordance with the number of the patients, have to take night duty by turns, one set from 6 p. m. to 1 a. m., and the other from 1 a. m. to 8 a. m.

The nurses are all required to reside in the dormitories attached to the hospital and not to leave the hospital grounds without sufficient reason except on

Sundays, national holidays, and certain anniversaries. In the dormitories facilities are afforded to the inmates for receiving lessons in housekeeping and foreign languages, principally English. For the keeping of good discipline and for the purpose of control over the sanitary matters of the dormitories, a superintendent nurse is appointed, while the matrons are required to assist the superintendent in the respective dormitories to which they are attached.

The nurses on duty in the hospital wear uniforms established by the society. They have to observe the rules of decorum and to maintain proper discipline and reputable character.

The allowances to the nurses connected with the hospital vary from 12 to 25 yen* per month. The uniform and working costumes are given out by the society.

Out of the nurses despatched by this society during the North China disturbances of 1900 to minister to the sick and wounded soldiers, those who served in the military hospitals at home were one superintendent nurse, 16 matrons, and 163 nurses. The French and Austrian soldiers, wounded or sick, who were entrusted to the Military Hospital at Miroshima for treatment, were all tended by the nurses of the society. As to the service at sea, a superintendent nurse and 10 nurses, besides a number of male nurses, were placed on board the *Hakuai-Maru* and *Kosai-Maru*, which first sailed in July, 1900. They were despatched for the purpose of utilizing their services in connection with the more serious cases. These nurses had the care of the sick and wounded who were transported in those ships from Taku, China, to Njina in Miroshima ken. The patients thus transported were 1,498 Japanese and 98 French soldiers in the case of the *Hakuai-Maru*, and 1,292 Japanese, 25 French, and two Austrian soldiers in the case of the *Kosai-Maru*. Each of the two ships made seven voyages, and both were released from duty in the latter part of November, when the mouth of the Teiho commenced to freeze. It is a source of great satisfaction to us to be able to say that these nurses acquitted themselves splendidly in the pursuance of their onerous duties from the time of great heat in July till November, when the harbor of Taku became ice-bound, and it is a pleasure to add that not one of them fell ill during that period.

The Surgical Treatment of Puerperal Infection.—In a general discussion on puerperal infection, held at a meeting of the New York Academy of Medicine on May 21st, Dr. H. J. Boldt said, in substance: If surgical intervention is indicated at all for a patient with puerperal infection, if a satisfactory result is to be hoped for from such intervention, it is necessary, first, to have a correct appreciation of the pathological process present. That this is not always easy we all must acknowledge; it is, in fact, sometimes impossible. This is especially likely to be the case in instances seen but once, in consultation, without the opportunity of retaining the patient under observation. It is desirable, therefore, to transfer all patients with an apparently seri-

ous infection to an institution where they can be kept under constant observation, if conditions at their homes make this impossible. The uncertainty of appreciating correctly from a single examination is best realized by those of us who see many patients with puerperal infection in consultation, perhaps hazarding either a favorable or an unfavorable prognosis, only to learn subsequently of a different termination of the case from that of our prophecy.

In the consideration of the surgical measures, I shall refer only briefly to those about the utility of which there can be no doubt when an indication for their employment exists. In parametric abscess, and all other suppurative conditions, the abscess or abscesses should be opened as soon as their presence has been determined, but not, as is so frequently done, with a mere scalpel puncture, but by means of an *extensive* incision. The wound should be made as large as conditions will permit; then, after thorough cleansing with such solution as the operator may consider most satisfactory, it should be loosely packed with gauze, preferably with such gauze as may be relied upon to cause no toxic symptoms. The dressings should be changed as frequently as the condition may require, this being usually every second day.

If the uterus contains decomposing animal matter, it should be cleansed, preferably manually; a curette need rarely be employed for this purpose. It should be avoided, if at all possible, because in the hands of a novice it is a very dangerous instrument in such cases. Even in the hands of an expert it cannot be used without risk.

The indiscriminate curetting which, unfortunately, is still being done to a large extent in puerperal women who happen to have an elevation of temperature or who may perhaps have had a slight chill, cannot be too severely condemned. I have seen a number of deaths which in my opinion were indirectly due to that procedure. Another, although a minor intervention, compared to curetting, resorted to much oftener than necessary, is repeated intrauterine irrigation. The chills which the patients often have after such intervention may usually be ascribed to it.

It is understood that such grave surgical intervention as removal of the uterus should be considered only in those instances in which the source of the infection seems limited to the uterus, and where no other treatment is considered to be of avail; those in which the patients are thought to be doomed to die without it, and who with it might be saved; in short, the gravest forms of puerperal infection.

In reviewing the cases of puerperal infection reported in literature as cured by means of hysterectomy, I have been forcibly impressed that comparatively few stand careful analysis by any one having had large experience with such patients, as absolutely favoring the justification of the operation. We should bear in mind that sometimes seemingly hopeless patients recover. We have not yet reached such a degree of proficiency that we can say from the result of an examination of the secretions or of the blood that the patient is suffering from a definitely limited form of sepsis, but even if the patient is ill with bacteriæmia, and the local examination reveals that the uterus alone seems to be the source of in-

*A yen varies with the price of silver, but is approximately worth half a dollar.

fection, the parametria, the pelvic peritonæum, the tubes, and the ovaries free from induration, yet this would not invariably indicate that the uterus must be removed to save the patient's life. I say this most emphatically because I have seen patients whose blood showed pure cultures of microorganisms, but because their general condition did not, in my opinion, justify such grave surgical intervention, I relied entirely on other methods of treatment, and they recovered. On the other hand, patients have been observed from whose blood repeated cultures were made with negative result, and yet a number of them died under the clinical picture of blood poisoning. On post mortem examination, blood from the large vessels and the scraping from the peritoneal surfaces usually showed a streptococcic infection. This teaches an important lesson.

Having come to the conclusion that neither an examination of the blood nor an examination of the secretions from the uterus can, with our present knowledge, give us satisfactory information as to whether or not an operation is indicated, it behooves us to ask if any symptom will give such information. Let me refer briefly to the more important ones. In text books the occurrence of a chill in the puerperium is taught to be the initial symptom of puerperal fever. In my own experience chills have been absent in about one third of the cases. Therefore, while a chill is of importance, it is not an absolutely reliable symptom of a serious septic infection, even if followed by a high temperature and an accelerated pulse rate. All three symptoms may be caused by other factors and may soon disappear. It is the continuance of such symptoms upon which we base our diagnosis of puerperal infection. In referring to the symptoms I do not wish to convey the idea that it is difficult to make the diagnosis that a puerperal infection exists, but I do emphasize the fact that it is very difficult to deduce a correct indication for surgical intervention, especially the one now under consideration. I know of no other disease in the domain of surgery in which the physician is placed in an equally responsible position in detecting the indication for a major surgical operation. It is a matter of personal judgment. As an illustration: I have operated according to the rules laid down in a contribution on this subject on a previous occasion, namely, in patients ill with puerperal infection, the condition of the patient becoming more serious despite other treatment adopted, one or more chills having been experienced by the patient, the blood showing microorganisms; but my patients promptly died, whether vaginal or abdominal hysterectomy had been performed. Then I operated on a number of patients in whom the clinical picture left no doubt as to the seriousness of the puerperal infection that was present, but the blood showed a negative result, but they also died. In all these instances the source of the deadly infection seemed limited to the uterus. Sections of these uteri showed that the streptococci had invaded the muscular structure for some distance, but none were found to have traversed it as far as the peritoneal covering. Of course these were all desperate cases that were subjected to hysterectomy. It may be said that I waited too long before the operation was undertaken. That criticism will not hold with a

conscientious physician, because in my opinion it would be unjustifiable to deprive a woman of her pelvic organs so long as there was hope of cure by other means. Again, the criticism may be made that had an abdominal hysterectomy been performed instead of vaginal hysterectomy, my results might have been better, in view of the fact that statistics show a better prognosis for the abdominal operation. I maintain that the shock from an abdominal operation is much greater than from the operation done per vaginam. A vaginal hysterectomy with clamps seldom requires more than ten minutes; in fact, in patients with puerperal infection subjected to this operation by me the average time consumed was not more than six minutes. The point in my opinion is this, that in recoveries noted after abdominal hysterectomy the patients were in a better general condition, in fact, in such condition that I probably should not have considered the operation at all at the time.

Before going further in the consideration of our theme, I depart from it for a moment to ask for information, how to get positive results from the bacteriological examination of the blood in a few hours. I have been unable to get such definite results in less than from twenty-four to forty-eight hours, even in instances of positive bacteriæmia. This is too long a time to make this important method of diagnosis of therapeutic value to the patient. It has been alleged that bouillon cultures showed the result in twelve hours or less. I have tried various methods and found all wanting in rapidity. I should be extremely grateful to be informed of a method which can be shown to be reliable on this point.

To return to our subject. There are, however, instances of puerperal infection in which hysterectomy is indicated, namely, those in which the patients have decomposing placental structure in the uterus that *cannot* be removed through the natural channel. Such instances are extremely rare. I have not had the opportunity of seeing even one among the large number of patients under my observation. The operation is also indicated by the presence of suppurating and sloughing myofibromata. It is further indicated in instances of septic metrophlebitis, if it is possible for one to make the diagnosis of this condition, and with the proviso that the general condition still justifies the operation.

Whether the hysterectomy should be done by the abdominal or by the vaginal route must be determined by the local conditions, and with the consideration of the general condition of the patient. If it is possible to remove the organ without serious mutilation per vagina, that method should be the one of choice. If, however, that is not feasible, when the organ is too large and the vaginal canal too narrow, so that it is evident that the softened uterus would be subjected to so much traumatism as to contaminate the pelvic peritonæum and the fresh wounds with the septic interior, the abdominal route should be chosen. Furthermore, if the process is such that it is intended to probably remove the broad ligaments and some infected blood vessels, the abdominal route must necessarily be that of choice. That it is possible to remove infected veins with a successful result in puerperal pyæmia has been proved by Trendelenburg. A puerperal uterus

with a sloughing myoma should always be removed from above.

It is an accepted fact that an old gonorrhœic infection is prone to be rekindled in the puerperium, and that such pyosalpinges are likely to threaten life. In such instances, however, we are not combating an acute septicæmia. Such patients, if subjected to timely surgical intervention, are likely to recover. The pus sacs should be opened from below and drained. Whether a more radical operation subsequently will be necessary must be determined by the progress of the illness.

In instances of diffuse peritonitis, provided they are not of the foudroyant type, it is advisable to open the abdomen, to thoroughly evacuate all pus pockets and flush the abdominal cavity with saline solution, and to drain the abdominal cavity through a large incision in the cul-de-sac. The head of the bed should be elevated to permit of better gravitation to and through the opening made, as recommended by Dr. George R. Fowler, of Brooklyn, in the treatment of peritonitis.

It should be borne in mind that the women who have had a criminal abortion performed are most frequently attacked with the acute forms of infection. There are instances of what I term a chronic puerperal infection. The acuteness of the illness has at no time been so marked as it was in those patients ill with the foudroyant type of puerperal infection, patients who have passed a week or more without showing any improvement in their condition, the uterus being relaxed in consistence, a pelviperitonitis being present; the annexa being the seat of pus sacs. Such instances offer the most favorable prognosis among the severe puerperal infections; and it is in such conditions that I, as well as other operators, have had good results by resorting to radical operations. If, after a lapse of longer than two weeks after confinement or abortion, the general condition of the patient is fair, I prefer to operate by means of laparotomy; if earlier, per vaginam. Exceptions of course occur.

In the acute forms of puerperal septicæmia and pyæmia in which it is probable that the general circulation has been invaded by microorganisms, whether a bacteriological examination of the blood at the time of making the examination proves this or not, no method of surgical intervention is of benefit; on the contrary, it is likely to shorten life. In all puerperal infections the form of surgical intervention, if one is indicated, must be left to the judgment and conscientiousness of the physician, and the prognosis will vary according to the condition to be combated. With our present knowledge no strict rule by which one should be governed can be laid down.

The Treatment of Whitlow.—Mr. Stephen Paget, F. R. C. S. (*Clinical Journal*, April 8th) in a postgraduate lecture delivered at the West London Hospital, says: "It is almost impossible, in a bad case of whitlow, to do without an anæsthetic. In some cases it will suffice to freeze the skin with ethyl chloride; but, wherever it is practicable, a general anæsthetic should be given. It is true that cases do occur which can be cured by a very small superficial incision; but these are the exception, not

the rule. Indeed, with a finger, there is no distinction between superficial structures and deep structures. I think that when a finger is acutely inflamed, every one of its tissues, within the area of inflammation, is affected; there is no distinction, no line of demarkation, between skin and bone and tendons; they all suffer together, and they all suffer alike, except that bones and tendons are tougher than skin. Therefore, if the flexor aspect of the finger needs incision, the knife must be carried well down to the tendons; if the sides of the finger need incision, it must go well down to the bone. It is better to cut a finger almost to ribands than to let the tendons slough in their sheath, and so infect the whole hand.

"Whatever we do, some of these cases of whitlow will come to amputation of the finger, sooner or later. Some of them come to it sooner; that is to say, the patient arrives here with a finger that is past saving, the skin undermined and rotten, with one or more holes in it, the flexor tendons strangulated and bulging out of their sheath, and the bones here and there grating under the probe. In such a case a day or two may be spent in cleaning up the finger with baths and fomentations, and in improving the patient's health by food and wine, and tonics by day, and narcotics at night; and then, the sooner the finger is off the better. I think it is best, in such cases, not to remove the head of the metacarpal bone, and not to expect primary union; but to put in a few points of suture, and to leave the rest of the healing to be done by granulation tissue.

"In other cases, these fingers come to amputation later; that is to say, by free incision and careful and tedious dressing and splinting, the finger is 'saved,' and the surgeon rightly congratulates himself on his skill; but, a few weeks or months later, the patient comes back with the finger more or less flexed, stiff, wasted, cold, and painful; it is always in the way, it catches in everything, and is a constant worry to him. In almost all cases of this kind it is best to remove the finger, and have done with it. Of course, no two cases are alike; it may be right, in this or in that case, to try to make the finger straight and flexible and useful again by open division or splitting of webs and bands, and by skin-grafting. This was done with success in one case, a few weeks ago, by Mr. Pollock, my house surgeon at that time; but this operation is not always practicable. As for the forcible movement of these withered fingers under an anæsthetic, I believe that it is practically no good at all; and in nine cases out of ten, the patient and the surgeon will agree that the finger is better off than on. But, of course, the head of the metacarpal bone should be left. Indeed, I cannot see what right we ever have to remove this useful and innocent bit of bone; the loss of it does not really improve the look of the hand, or conceal the absence of the finger, but it does impair the grip and the dexterity of the other fingers.

"There is another point to be considered; whether the cut ends of the flexor tendons ought to be stitched in the wound or allowed to slip back into the palm of the hand. It is said that if they slip back they may carry infection with them. I do not

think there is much meaning in this phrase; if the cut tendon is so unhealthy as that, it will not be disinfected by any amount of stitching. Practically, I have never seen any harm come of leaving the cut tendons to look after themselves; and, if they do retire up into the palm, they leave the more room for the natural drainage of the tendon sheath."

The Clinical Study of Idiocy.—Professor G. B. Pellizzi, director of the psychiatric clinic at the Royal University, Sassari, Italy (*Journal of Mental Pathology*, vol. iii, Nos. 4 and 5) as a result of studies on the relation of clinical facts to anatomopathogenic findings, arrives at the following conclusions: (1) Given a case of congenital idiocy which becomes apparent during early infancy and which does not present any acute manifestations, it is impossible to make a positive diagnosis regarding the true origin of the affection on the basis of clinical facts. (2) The idea, introduced by Koenig and Freud, calling for the restriction, on clinical principles, of the limits of the so-called common idiocy (degenerative, genetic, evolutive, biopathic) is erroneous. (3) Neuropsychopathic heredity is generally found in cases of cerebroplegias. (4) The duration depends on the nature and the gravity of the lesions. The educability of these subjects also stands in relation to these conditions. (5) The dual forms of the idiocies as considered above must be taken broadly: It may be that developmental defects have their primary origin in pathological processes of the various cerebral zones; besides, the former may manifest themselves in a manner quite similar to that characteristic of pathological idiocies, as has been demonstrated in this paper.

Martial on Alcohol and Eye Disease.—Dr. Deneffe, in *Janus* for December, calls attention to the retrobulbar neuritis often caused by the abuse of alcohol, and points out that even in Martial's time (A. D., 54 to 98) the dangerous effects of alcohol on the eyesight were known. In support of this assertion he refers to Martial's Epigrams, vi, 78. As Martial is not quite so generally accessible as some of the other classics, we quote the epigram:

Pater nobilis, Aule, lumine uno
Luscus Phryx erat, alteroque lippus:
Huic Heros medicus: bibas caveto;
Vinum si biberis, nihil videbis.
Ridens Phryx, oculo, valebis inquit.
Misceri sibi protinus deunces,
Sed crebros jubet: exitum requiris?
Vinum Phryx, oculos bibit venenum.

which may be somewhat freely rendered as follows:

Phryx, good friend Aulus, of one eye had lost
The use, and in the other was dim-sighted.
To him his doctor said, "Count well the cost
Of drinking; if you drink, your vision's blighted."
Phryx, smiling, bade his eye a mock farewell,
And ordered flagons deep, as quick as winking,
One after one. Shall I the sequel tell?
While Phryx the wine, the wine his sight, was drinking.
K. W. M.

The Fissure of Sylvius.—It is common to suppose that this fissure was named after Jacobus Sylvius, or Jacques Dubois, of Amiens, the Galenic anatomist and tutor of Vesalius (1478-1555). A correspondent of *Janus*, however, in its issue for April, draws attention to a quotation from p. 470 of the *Anatome ex omnium veterum Recentiorumque observationibus* (Quintum aucta., Lugd. Bat., 1686) of Thomas Bartholinus, in which the demonstration of the fissure is attributed to Franciscus Sylvius, or François de le Boë, of Leyden, the iatrochemist (1614-1672). Bartholinus, describing what is now known as the fissure of Sylvius, says: "Anfractus si diligentius examinaveris, quod nos primus docuit. FRANCISCUS SYLVIVS, anatomicus magnus," etc.

The Emperor Claudius's Tribute to Medicine. Tacitus, in his *Annals*, xii, 61, speaking of Claudius Cæsar, says: He next referred to the granting of a tax exemption for the citizens of Cos, and discoursed at length on their [historic] antiquity. The Argives, he said, or at any rate Cœus, the father of Latona, were the earliest settlers of the island; a little later, the healing art had been introduced there, on the advent of Æsculapius, through whose descendants it had become widely renowned, and [the Emperor] mentioned the several persons by name, stating the time at which each one flourished. Moreover, he said that Xenophon, of whose [professional] skill he availed himself, was descended from that family, and urged the granting [of this exemption] on Xenophon's petition; so that the Coaus, freed for all time from every impost, might inhabit that sacred isle and devote themselves entirely to the service of the god [Æsculapius].

The Force of Habit and the Power of Mind are well described as follows in Marion Crawford's *Cigarette Maker's Romance*. "If it be not true that the ghosts of the dead haunt places familiar to them in life, yet the superstition is founded upon the instincts of human nature. Men begin to haunt certain spots unconsciously while they are alive, especially those which they are obliged to visit every day and in which they are accustomed to sit, idle or at work, during the greater part of the week. The artist, when he wishes to be completely at rest, re-enters the studio he left but an hour earlier, the sailor hangs about the port when he is ashore, the shopman cannot resist the temptation to spend an hour among his wares on Sunday, the farmer is irresistibly drawn to the field to while away the time on holidays between dinner and supper. We all of us see more and understand better what we see, in those surroundings most familiar to us, and it is a general law that the average intelligence likes the best that which it understands with the least effort. The mechanical part of us, too, when free from any direct and especial impulse of the mind, does unknowingly what it has been in the habit of doing. Two thirds of all the physical diseases in the world are caused by the disturbance of the mental habits, and are vastly aggravated by the direction of the thoughts to the part afflicted. Idiots and madmen are often phenomenally healthy people, because there is in their case no unnatural effort of the mind to control and manage the body."

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A SCALP-FACE. A NEW PLASTIC OPERATION.

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The face is the battlefield of plastic surgery. Defects caused by faulty development, trauma, and destructive affections, occur here more frequently than in any other region of the body. Epithelioma, tuberculosis, and syphilis are the three diseases which so often lead to extensive destruction of the tissues of the face, regardless of their anatomical structure, and which after cure or removal leave large defects and disfigurement that must be remedied by a plastic operation. Most of the plastic operations on the face are performed for their cosmetic effect. Vanity is a part of human nature, and differs only in degree in the young and the old, the civilized and the uncivilized, the beautiful and the homely. Tumors and other affections of the face excite early concern, so that treatment is sought when similar conditions in less conspicuous parts of the body would create no uneasiness in the mind of the patient, much less awaken a desire for relief. In some cases face defects are so extensive that plastic operations must be performed, not only for the purpose of removing an unsightly deformity, but at the same time with a view to restoring important functions. Such a case has been made the subject of this brief communication. The great vascularity and mobility of the facial skin present the most favorable conditions for all kinds of plastic work for the restoration of parts lost by injury or disease, and for the removal of disfigurements. Superficial defects can be remedied by transplantation of skin from remote parts of the body by the methods devised by Reverdin, Thiersch, Wolfe, or Krause, according to the nature and extent of the defect. Large and deep defects, such as the complete loss of one of the lips or cheeks, tax the technical resources of the surgeon most severely in

planning his operation with a view of meeting both the functional and cosmetic requirements. Only too often he in vain consults the text books for the desired information, and is forced at last to plan and execute an operation for which he has no precedent. The plastic surgeon must be resourceful. He must be familiar with the principles which underlie the plastic art, but he must rely on his own resources in carrying out the details. Each case must be studied on its own merits, and the plans made according to the indications presented and the nature of the environments. A striking defect of the present status of plastic surgery of the face is the difficulty encountered in restoring lost muscle tissue and muscle function. A new lip, a new cheek, or a new eyelid made by the surgeon may be quite satisfactory from a cosmetic standpoint, but is always devoid of muscle function. The complete loss of a lip or a cheek not only constitutes a hideous disfigurement, but likewise interferes with the prehensile function of the mouth, permitting the escape of saliva and food during mastication, and impeding perfect utterance of speech. It was an aggravated case of this kind that I desire to report, with a description of the different operative procedures I had to resort to in restoring the enormous facial defect.

CASE. Extensive scalp flap for restoration of both cheeks and upper lip. Temporal flap for eyelids. König's rhinoplasty. The patient who was subjected to the above operation for a most ghastly face defect was Christian Madsen, thirty-one years of age, a native of Denmark, now residing in Nebraska. He is married and the father of a healthy child. Family history without a taint and acquired specific disease can be safely excluded. He is under medium size and fairly well nourished. He is a farmer by occupation, and has lived a number of years in the State in which he now resides. He had an attack of illness when he was twelve years of age, the nature of which he is unable to state, but since that time he has considered himself in perfect health until the beginning of the affection of the face which gave occasion to treatment that resulted in such extensive destruction of tissue. Three years ago, a small swelling appeared in the median line of the upper lip, just below the nasal sæptum.



FIG. 1.—Appearance of the patient at time of first consultation.



FIG. 2.—Incisions for flap on left side.



FIG. 3.—The flap lifted from its bed and lowered over the eyes.



FIG. 4.—Result. The black stripes are gutta serena tissue.

This swelling he describes as a "yellow pimple." Six months later he consulted a physician, who prescribed an ointment. At times the soreness would disappear and the swelling become smaller, but the patient could always feel a hard nodule. During the summer of 1900 it disappeared entirely, but returned during the latter part of November, the recurrence being attributed by the patient to a cold attended by great irritation of the nasal mucous membrane. The swelling increased in size and became painful and tender. He consulted a clergyman who had attained some notoriety as a cancer doctor, who had no hesitation in pronouncing it a cancer. He applied a caustic paste which caused intense pain and extensive sloughing. This heroic treatment was continued for ten weeks. At the end of this time, the nose, the whole upper lip, both cheeks, and both lower eyelids had sloughed away. The patient asserts that during the entire treatment he was kept under the influence of opiates and was only partially conscious of what was being done. He was confined to his bed until the following spring, during which time he was very weak. The extensive surface healed slowly by granulation, cicatrization, and epidermization, and the general health gradually improved. The loss of both cheeks and the upper lip resulted in the continuous escape of saliva and a part of the food during mastication. He applied to several noted surgeons of Nebraska for relief, but all of them refused to undertake the task. He came under my observation at the St. Joseph's Hospital, in June, 1901. His appearance at that time is well shown in Fig. 1. The upper lip, cheeks, nose and both lower eyelids absent; conjunctivæ of lower eyelids everted and firmly attached to the underlying bone, extremely vascular and granular. Lacrymal ducts destroyed and obliterated by cicatricial tissue. Turbinate bones exposed, mucous lining of what remains of nasal passages swollen and very vascular. Lower lip everted by the masses of scar tissue on each side. Upper and crowns of lower teeth exposed. Upper maxilla covered with thin scar tissue firmly attached. General health of the patient fair. No indications of visceral disease or specific infection. No skin eruption or glandular hyperplasia. It was my intention first to restore the upper lip by a plastic operation, consisting in the taking of a flap from the side of the neck and lining the inner surface with thin skin flaps from over the angles of the lower maxilla; and later to cover the remaining face defect with flaps from the temporal regions. An attempt in this direction was made a few days after the patient entered the hospital. It proved a complete failure. The flaps sloughed, leaving the face, if anything, in a worse condition than before the operation. I then recognized the necessity of resorting to the scalp as the only source of tissue supply with which to cover the skeleton face. I advised the patient to return to his home and enter my surgical clinic at Rush Medical College in the fall, prepared to remain for several months, as it was evident that a number of operations would be required to accomplish the desired object.

The patient returned as requested, and entered the Presbyterian Hospital during the first week in November, 1901. All the subsequent operations,

twelve in number, were performed before the class in the surgical clinic of Rush Medical College, in affiliation with the University of Chicago. I decided to take a large flap from the scalp from ear to ear, and wide enough to cover the whole defect. As this plan appeared to be the only feasible one to borrow the necessary amount of tissue from the neighborhood, it became necessary to exercise the greatest caution against sloughing of the immense flap, and to guard against subsequent undue contraction by lining with skin that part of the under surface of the flap which would become ultimately a part of the cavity of the mouth before transferring the flap into its final position. The first object was realized by detaching the flap in different stages, and by lowering it gradually into position; the second indication was met by lining the under surface of the central two thirds of the flap with Thiersch's skin grafts before it was mobilized from its bed. The quite extensive baldness and excellent condition of the scalp constituted favorable conditions for the plastic procedure as planned. The entire scalp was thoroughly shaved and disinfected. Chloroform was the anæsthetic used in all the operations requiring general anæsthesia.

November 7th, the base of the flap on the left side was made by making the two incisions shown in Fig. 2, taken four weeks after this operation. This part of the flap was detached from the temporal and occipital fascia, and reunion was prevented by interposing between the wound surfaces broad strips of gutta percha tissue, and the wound dressed in the usual manner.

November 12th, the same operation was repeated on the opposite side and the wound treated in the same manner.

November 26th, the two anterior lateral incisions were united by an incision across the frontal eminences extending down to the fascia of the occipito frontalis muscle, from which the entire flap was lifted away. That part of the margin of the flap which was to form the lip was lined with a thin, narrow, long skin flap from the forehead, which was sutured to the under surface of the flap with catgut. The remaining part of the flesh under surface of the flap was covered with large Thiersch's skin grafts taken from the trochanteric region. These grafts were protected with strips of gutta percha tissue. The whole head was covered with a large gauze compress saturated with warm normal salt solution, and heat and moisture were retained by placing over it a gutta percha cover, and the whole dressing was held in place by a gauze roller. The new prolabium of skin united by first intention as well as the skin grafts.

December 3rd, the posterior incisions were extended within two inches of each other.

December 12th, the flap was completely detached, but remained in place, adhesion being prevented by the use of strips of gutta percha tissue.

December 21st, the flap was lifted from its bed and lowered resting over the eyes (Fig. 3), and the large granulating scalp wound was paved with Thiersch's skin grafts from the trochanteric region. Flap and field of skin grafting covered with salt water compress. Thiersch's skin grafting only in part successful and had to be repeated later.

January 2, 1902. The flap was sutured in position. From the lower angle of the anterior incisions an incision was made through the scar tissue, and, by reflecting the tissues on each side, a wide pathway was made for the attached parts of the flap. The upper maxillæ were vivified by dissecting off the scar tissue close to the alveolar process with forceps, knife, scissors, and sharp spoon. All the soft tissues with which the margins of the flap were to be united were thoroughly vivified, including the skin at the base of the nose. I was very apprehensive that the flap would fail to unite throughout. This fear proved to be unfounded, as union occurred throughout, with the exception of a limited space immediately below the nares, which was closed later after the nasal cavity had been opened by a transverse incision through the flap at the desired point. The result of the operation is well shown in Fig. 4. (The black stripes are strips of gutta percha tissue.)

April 10th. The left lower eyelid was made by taking a flap from the corresponding temporal region. The extropic inflamed conjunctiva was dissected away from the inferior maxilla to which it was firmly attached, and after lifting it to its normal level, the flap was sutured over it, using for this purpose a few silkworm sutures, the remaining ones being fine horsehair and catgut sutures. Special care was taken in suturing the conjunctival and upper flap margin accurately together. Speedy union by primary intention. Immediate and remote cosmetic and functional results excellent.

April 22nd. The same operation was performed on the opposite side with a similar satisfactory re-



FIG. 6.—Final result.

sult. A few cilia remained, and as they continued to be a source of irritation they were removed by electrolysis. The hair of the flap was destroyed by the use of the Röntgen ray.

The plastic operation for the function of the eyelids by a temporal skin flap is shown in Fig. 5. Before the patient left the hospital for the summer the nasal passages were opened by a transverse incision, which was kept open by the wearing of triangular tubes of lead, which corresponded in size and outline with the lumen of the passages. The patient returned in excellent health, during the winter semester of 1903, for the promised rhinoplastic operation. The upper lip appeared to be a little too long and disfigured by a transverse gutter-like depression. A long wedge-shaped piece, including the depression, was excised, and the wound sutured with horsehair. This little operation contributed much in improving the appearance of the upper lip. The last operation of any consequence was the rhinoplasty by König's method. The central eminence of the flap which corresponded with the location of the lost nose, was incised in a vertical direction in the median line of the face. The incision penetrated only one half of the thickness of the flap, and extended as far as the common nasal opening. The skin was then reflected on each side, making a wide bed for the frontal flap. The frontal flap, taken from the right supraorbital region and forehead, included the skin, pericranium, periosteum, and a bar of bone half an inch in width and nearly the entire length of the flap. This bar of bone was removed with a narrow chisel from the external table of the skull, and its attachments, with the overlying soft



FIG. 5.—Formation of the eyelid by a temporal skin flap.



FIG. 7.—Final result.

parts, were carefully preserved. The frontal defect was reduced in size by suturing, and after the bone became covered with granulations, was paved with small skin grafts, which contributed much to the speedy healing of the remaining defect. The flap united by primary intention. The bone is permanently embedded and forms a good support for the new nose. As the anterior part of the septum is absent the patient has been furnished with an aluminum support, which serves also the purpose of supporting the new alæ of the nose. The prominence caused by the twisting of the flap was excised and the skin used in covering the granulating wound of the forehead. This little operation was followed by a severe infection, which caused for a time intense constitutional disturbance and extended to the loose connective tissue about the orbits and ears. It appeared to be a streptococcus lymphangitis minus the characteristic local manifestations of genuine erysipelas. From this attack the patient recovered in a few days and left the hospital during the first week of the spring semester.

The final result of the thirteen different operations may be judged from the appearance of Figs. 6 and 7. A minute fistulous opening remains below and in front of the right ear, from which at times a few drops of saliva escape. This salivary fistula was caused by the caustic, which destroyed a part of the salivary gland on that side. The patient speaks plainly, there is no escape of saliva or food during mastication, and the skeleton face is

permanently masked by the scalp flap, imparting to the face if not a handsome, at least a slightly appearance. It is evident from the clinical history, as well as from the subsequent appearance of the scar tissue, that it was not so much the disease, as the careless use of the remedy employed in its treatment, that caused the ghastly defect which made it necessary to sacrifice nearly one half of the scalp to serve as a substitute for the tissues destroyed by the reckless use of the caustic.

WHOOPING COUGH.

A NEW METHOD OF TREATMENT.*

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History.—Very little is definitely known of the origin of pertussis, although the Greeks are said by Mason Good to have known the disease. In 1578, Baillou, of Paris, described it as an epidemic cough. Although Baillou considered it well known, it was still confused with the other spasmodic and catarrhal affections. In 1791, Danz published the first monograph on the subject. Cullen also described it, and at the same time there came the reports of the first epidemics of this disease. It was noticed that the greatest mortality occurred in Denmark, Norway, and Sweden. In Ireland it ranked fifth among the causes of death. An infinite number of drugs sprang up for its relief.

Ætiology.—The cause of pertussis has never been determined. It is most probably caused by a micro-organism. Many organisms have been described as having been found in the sputum. Afanassiev cultivated a short bacillus which, when introduced into the trachea of animals, produced an inflammation of a catarrhal character. Further investigations along this line have been very disappointing, as it is asserted that the organisms found are not sufficiently characteristic to enable us to say that they are the sole ætiological factor in the disease. In the early history of whooping cough it was thought to be an affection of the stomach. Bean regarded the disease as a laryngitis. Broussais thought it to be a bronchitis. Friedleben and Mussy held the view that the disease was caused by pressure of a swollen lymph node on the vagus.

Baginsky was the first to point out that the cough came from irritation of the larynx and trachea. Mayer-Huni, von Herff, Appolzer, Toeschner, and

* Read before the West End Medical Society, May 2, 1903.

Marcus all agreed that a catarrhal condition of the larynx and bronchi produced the affection; still other writers, such as Copeland and Webster, said that a pure neurosis was accountable for the condition. Linnæus, the great botanist, over two hundred years ago, was the first to hold to the "germ" theory; he thought that the disease was produced by inhalation of the larvæ of insects. Koplik has recently isolated a bacillus that resembles somewhat the bacillus of Afanassiev, which is thought by some to be the organism of pertussis. It is undoubtedly true that the disease is of microbic origin and that a specific germ will some day be discovered and a serum treatment instituted.

Lesions.—The lesions found upon autopsy are those of an inflammation of the larynx, trachea, and bronchi; a pulmonary emphysema is usually present. If a child dies during a spasm, a congestion of the brain and pelvic viscera is found.

Period of Incubation.—The insidious onset of whooping cough makes the incubation period a very elastic one. Some authors assert that only a few days elapse between exposure and the first manifestation of the catarrhal stage, while other authorities hold that the period is as long as from ten to eighteen days. If, after an exposure, sixteen days have elapsed without a cough, Holt thinks that there is very little danger of the disease having been contracted. It is probable that a certain varying resistance of the body to the infection is present in each individual, and that this is the reason of the broad limitations of the incubation period. Two children will be exposed to the disease and one be taken with it in seven days, while the other child will not be attacked with it for fourteen days. Why? They were exposed to the same source of infection! The answer is that the second child was not as "susceptible" to the microorganism; his condition possibly was better and his "resistance" was greater.

Period of Infection.—Whooping cough may be communicated from the commencement of the catarrhal stage to a period about two weeks after the spasmodic or whooping stage has ceased.

Mode of Infection.—The usual source of contagion is the patient. A very brief exposure in contact with or near the patient is sufficient to contract the disease. A third party rarely takes the disease unless exposed to a person who has come directly from the patient without change of clothing. It is very rare for pertussis to be spread by means of an infected room or clothing, as occurs in the case of measles or scarlet fever. It is undoubtedly the sputum and nasal secretion which are the disseminators of infection.

Predisposition.—Pertussis is essentially a disease

of childhood, although there are authentic cases of adults contracting the disease. In adult life it is apt to run a mild course. Quoting from Szabo's statistics, at Budapest, compiled from the records of one clinic for thirty-four years, and giving the ages of the 4,591 patients treated, we have the following:

Under 1 year.....	1,028
1 to 2 years.....	1,008
2 to 3 years.....	659
3 to 4 years.....	904
4 to 7 years.....	803
Over 7 years.....	189

Young infants are very frequently attacked and the disease is one of the most to be dreaded among this class of patients. The percentage of cases occurring in babies under six months of age is small, and nurslings are less commonly attacked. Rilliet and Barthez report a case in which the cough set in on the day after birth, the mother having contracted the disease four weeks prior to her delivery. Immunity is usually insured by having had one attack; hence the rarity of pertussis during the later years of life.

The disease is most prevalent during the winter and spring months and is more frequently seen in girls than in boys. It seems to be of a more severe nature in the female sex. The susceptibility to pertussis is very great, it being second only to that of measles. It is seen to flourish in asylums, schools, etc., where a crowded state exists, and also where an unhygienic condition prevails.

Symptoms.—Most writers recognize three stages in whooping cough; each stage has its own symptoms:

1. The catarrhal stage.
2. The spasmodic stage.
3. The stage of decline.

The Catarrhal Stage.—The child seems to have an ordinary cold in the head, a coryza, accompanied by a short, dry, hacking cough. He feels well, eats well, and would sleep well were it not for his cough, which is usually worse at night. Or on the other hand the child may be slightly "out of sorts," have slight loss of appetite, and be peevish. There may be slight fever, possibly a degree or two. Some children whoop from the very beginning of the disease. If we listen to the chest during the catarrhal stage, we often find nothing there, while in other cases there are the usual signs of an ordinary bronchitis. An interesting case was seen a few months ago where a girl, aged three years, began to have a short, dry, persistent cough which was worse at night; this cough lasted for ten days in spite of treatment. There was absolutely nothing in the chest, and no elevation of temperature. Adenoids

were suggested and a few were removed. The child did not once cough again after the operation, but, after an absolute cessation of this cough for two weeks, the same kind of cough returned, and the child finally developed a case of genuine whooping cough. Now, was this a case where the disease had been aborted in its catarrhal stage by the removal of the adenoids, possibly removing the infected nasopharyngeal tissue which might have contained the organism of pertussis, or was it an instance of a true adenoid cough relieved by operation, followed by exposure to and contraction of whooping cough? I think that the latter view is the correct one. We have, then, in the catarrhal stage, a dry intractable cough that nothing seems to help. This cough now gradually becomes more and more paroxysmal in character and soon enters the

Spasmodic Stage.—This stage dates from the first appearance of the whoop. The paroxysm commences with from five to twenty short explosive coughs of increasing intensity, followed by a long-drawn inspiratory effort as the air is drawn into the lungs; this produces the characteristic whoop.

The child may have four or five of these fits following each other in quick succession until the plug of mucus is expelled; when these paroxysms are over the patient is usually worn out. These attacks often end with vomiting. There may be from five to sixty such paroxysms during twenty-four hours. During these fits the child's face becomes dusky red and cyanosed; the eyes are swollen and watery, and there may occur extravasations of blood into the conjunctivæ. Nose-bleed is often seen. Moist bronchial râles are heard in the chest, and there may be at times a slight elevation of temperature. When the child feels these paroxysms approaching, he drops his toys and runs to his mother or nurse for support, or grabs any firm structure that happens to be near him. In severe paroxysms, vomiting is frequent and the sphincters may be opened. Crying brings on an attack.

In young infants the paroxysms are often followed by convulsions. The paroxysms are more apt to occur at night than in the day time, and are more frequent in a warm, stuffy room than in the open air. Oftentimes no whoop occurs, but the baby coughs until he is almost asphyxiated. The plug of laryngeal mucus is undoubtedly the irritating cause of the paroxysm. The spasmodic stage usually lasts from four to six weeks, and it is somewhat longer during the winter months. The whoop ceases and the disease enters the

Stage of Decline.—This stage consists of a simple bronchitis and lasts about one month; it may be protracted during the winter months.

The complications of pertussis have purposely been omitted.

Treatment.—The treatment of whooping cough may be divided into three kinds:

1. General.
2. Medicinal.
3. Mechanical.

General.—Nearly all cases of pertussis do best when kept in the open air, although I have seen three cases lately in which the paroxysm was immediately evoked when the child went out of doors. In the nursery at night good ventilation must be maintained. If it is possible, it is wise frequently to change the sleeping rooms of children suffering with whooping cough, and also to change their bedding, as reinfection may take place and a short attack become prolonged. The food should be weakened, and in older children the diet should be fluid. The bowels should be kept regular.

Medicinal.—The drugs employed in the treatment of this disease are legion, and include nearly the entire pharmacopœia. The local application of drugs by insufflation, swab, or spray to pharynx, nose, or larynx, have met with no success in my hands. I consider them both a great danger and a great nuisance. The use of inhalations is, however, of great service in allaying the paroxysms, and also useful in the stage of decline where a persistent bronchitis is present. Inhalations of pure steam or creosote vapor are best given by means of the croup kettle. These inhalations may be given twice or thrice daily, especially when the child is going to sleep for the night.

Carbonic acid gas per rectum has been tried by Norton in a series of one hundred and fifty cases, in which it is alleged that a marked improvement was noticed regarding the number and severity of the paroxysms.

In cases where there is marked spasm of the glottis, inhalations of chloroform are very useful. The drugs given by mouth which have proved to be the most efficacious in the cases I have seen, are antipyrine in combination with sodium bromide and quinine. In administering these drugs, the method employed by Dr. C. C. Kerley, has proved, in my experience, to be far ahead of any other. It is as follows, and consists in the alternate use of the antipyrine mixture and quinine. A child two years old, for example, is put on the following:

R Sodium bromide.....3 grains;
Antipyrine.....1 grain;
Syrup of ipecac.....4 minims;
Water to make 1 drachm.

This constitutes one dose.

He is given this mixture every two hours for three or four days. The child is then given three



Stockinette Band.

stockinette band a single width of elastic bandage is sewn, extending entirely around the body and covering the abdomen. This bandage is sewn on when very slightly on the stretch. This elastic abdominal belt is used to control the obstinate vomiting seen especially in nurslings, where the infant in some cases would die without its use, on account of the inanition caused by the incessant vomiting. This is a very simple measure, as the old sea-sickness belt is well known, but its application to the vomiting of whooping cough is, I think, entirely a new feature, and one which I have failed to find mentioned in my perusal of the literature of pertussis. The most aggravated cases of vomiting in nurslings have been seen to stop immediately upon the application of the elastic abdominal belt. Should the vomiting continue after the belt has been applied, tighten the belt slightly, and in most cases the vomiting will cease. This form of treatment will not, of course, stop *every* case of vomiting, but its good effects have been manifest in so many cases that its mention in connection with this grave symptom of whooping cough has seemed to me justifiable. Not only does this infant belt prove of advantage in the control of vomiting, but it is

grains of quinine sulphate every three hours for another three or four days, and is then put back on the antipyrine mixture. The only drawback to the use of quinine is that in some instances it upsets the stomach, but the alternate administration of the quinine with the antipyrine mixture seems in a great degree to obviate this disadvantage. I have discontinued the use of all other drugs in the treatment of whooping cough.

Mechanical.—For a prolonged spasm of the glottis, intubation is indicated.

We come now to the consideration of the part of the title of this paper which refers to a new method of treatment. Can we have, you ask, anything *new* regarding the treatment of whooping cough?

For the past six months I have used with marked success, the simple, yet new application of an old principle, to the description of which I ask your attention for a few concluding moments. A stockinette band is placed upon a baby with whooping cough, in the same manner as is done by orthopædists before applying the plaster of Paris jacket. This band extends from the axillæ to the pubes and fits the baby snugly. Two shoulder straps are used to prevent the band from slipping down. Upon this



Elastic Abdominal and Chest Bands.



Elastic Abdominal Band.

also of marked advantage when applied around the chest, in aborting the paroxysmal stage; when wearing it, the paroxysms will be noticeably of a milder nature. The only disadvantage of this method is, that in some cases it causes a slight eczema of the underlying skin, but it seems to me that its advantages so far counterbalance this slight disadvantage, as to render it really of no consequence whatever; this eczema clears up immediately when the belt is removed.

In closing, I draw the following conclusions:

(1) Whooping cough is a self-limited disease and runs its course in the same way as does a pneumonia.

(2) The medicinal treatment which has proved the most efficacious in my hands, is that devised by Dr. Kerley, namely, the alternate use of antipyrine with bromide and quinine.

(3) The application of an elastic belt to the abdomen or thorax (or both), as occasion requires, combined with the above mentioned medicinal treatment, has proved itself to be, in the experience of the writer, the best and most effective method in the treatment of whooping cough.

165 WEST EIGHTY-FIFTH STREET.

THE USE OF THE X RAY IN THE EXACT LOCALIZATION OF A FOREIGN BODY.

By L. D. WEISS, M. D.,

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The patient was a young woman who, one year ago, while sewing on a machine, ran the needle into her finger and broke off the point therein. She said that it pained her whenever she made particular use of the finger, as in piano playing, etc.

I took two radiographs of her hand. In the first, the end of the needle is seen embedded in the terminal phalanx, seemingly right on top of the bone

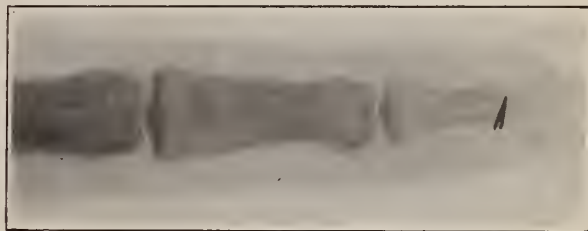


FIG. 1.—Anteroposterior view of foreign body.

structure; a portion of the eye of the needle can be distinctly seen, for the needle broke off right at its eye.

In the first radiograph the location of the foreign body is somewhat misleading, as the needle seems to lie right on the bone, when as a matter of fact it is situated quite a distance from the surface of the bone, as can be seen from the second radiograph (which was taken with the finger held at right angles to the first radiograph), wherein the foreign body shows up as a small dot in the meshes of the fascia, superficial to the flexor tendons.



FIG. 2.—Lateral view of foreign body.

The first radiograph plainly showed the location of the needle point, while the second showed how deep the incision had to be to cut down upon it. Having in this way exactly determined the location of the object it was easily removed.

157 WEST ONE HUNDRED AND ELEVENTH STREET.

Eastern District Hospital.—Dr. Claude Graham Hoffman, who for a long time has been house surgeon of the Eastern District Hospital, was given a farewell dinner by his friends on June 2nd, prior to his departure for Louisville, Ky., where he will practise medicine.

TREATMENT OF THE COMMON CLINICAL FORMS OF GONORRHŒA IN THE FEMALE.*

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Gonorrhœa in the female is, as a rule, a malady to which not much attention is given by the general practitioner, or investigation by either the gynæcologist or obstetrician; one reason for this may be that women are prone to conceal or deny their sexual life, and should the disease be chronic the patient may be ignorant of its presence. A genitourinary gynæcologist would seem to me the type of a practitioner required in such cases; and for this work there is a wide field of usefulness for those having the training and inclination, for as matters stand there is unfortunately a large element of truth in the statement of a well-known Philadelphia surgeon, that the proof of gonorrhœa in the female is for some male whose urethra is virgin to clap, have intercourse with her; although even then, I might add, the male might escape and she still have gonorrhœa.

One hears much of the evil results of syphilis, but it is now recognized by competent observers that gonorrhœa in the female is more serious than syphilis; syphilis, as far as my observation goes, is milder in the female than in the male.

When I look back at the cases I have had of gonorrhœa in the female, I recall many complicated with ovarian disease and pus tubes, in which I have had the pus tubes removed and have found the gonococci in both the tubes and ovaries. In many cases of cystitis, labial abscesses, and abscesses of the glands of Bartholin, I have also discovered this organism. These latter abscesses are usually poulticed by the patient or her doctor until rupture occurs, or if incised, the opening is usually made so small there is imperfect drainage; as a result it is often followed by a chronic infecting sinus, difficult to detect, but effective in propagating gonorrhœa for an indefinite period. It is principally in this class of cases, nearly always chronic, that the patient thinks nothing is the matter with her, and the urethra will show nothing, and doctors will examine her and declare her free from disease, while some of her lovers will become infected and some will not, depending entirely upon whether or not the male organ escapes the drop of pus, sometimes more, sometimes less, sometimes none, at the sinus opening.

Dr. Joseph Price has well said that were the male sexual organs partly abdominal, as the female are, there would be less gonorrhœa.

The gonococcus has a special predilection for the urethra, and for practical purposes almost every case of purulent urethritis in the female is gonorrhœal in character. To detect this, have your patient hold her urine some time before her visit to your office, then strip her urethra, which will usually show a discharge if she is diseased; but first cleanse the urethral meatus of any vaginal or uterine discharge that may be present.

In gonorrhœa of the female, as in the male, the urethra is primarily affected, second the cervix, third the vagina, fourth the vulva, fifth the rectum, and sixth the inguinal glands. Specialists differ in the classification, however, nor is it important. It is a cause for regret that the onset of gonorrhœa in the female is so insidious, and the symptoms are usually so mild, that she rarely presents herself to a physician until some of her male friends have told her that she has infected them, as she may honestly believe herself to be suffering from a cold in the bladder; but in a few days she is likely to find a burning sensation on urination, that something is wrong, and that it is not leucorrhœa. When a patient presents herself in the acute stages, put her to bed, if possible. The treatment of uterine gonorrhœa in the acute stages should be purely symptomatic; all local measures, if the patient is in a febrile condition, should be avoided, owing to the risk that, through the accompanying disturbance of the uterus, the spread of the gonococcus to the tubes and the peritonæum may be increased. No antipyretics should be used; treat the inflammatory phenomena on general principles. During the acute stage you may give your patient a powder composed of salol, potassium bicarbonate, and sodium bromide, in suitable doses; this powder will lessen the ardor urinæ, as it is alkaline as well as being a urinary antiseptic; give the powder every two hours, in large draughts of water.

When the very acute condition has subsided, inject the urethra (with a glass syringe) with about half an ounce of 5 to 10 per cent. argyrol, the patient having first urinated; the patient can give herself a urethral injection by the aid of a hand mirror. Since employing this method I have observed no bladder involvement; should the bladder become infected (in fact, a posterior urethritis) instillations of silver nitrate 2 to 5 grains to the ounce, or of copper sulphate may be used; or the bladder may be flushed with potassium permanganate, 1 to 2000 solution, or silver nitrate in similar strength. Should the infection, despite this treatment, persist, give internally urotropin, sandalwood, or copaiba, with endoscopic applications through a Koch tube (or Kelly's does very well) preferably of silver nitrate, to the neck of the bladder. Dilata-

* Read before the Philadelphia Obstetrical Society, April 2, 1903.

tion of the urethra is effective here, also local applications to the urethra of a preparation of iodoform, 5iv, Peru balsam and compound tincture of benzoin, 5i, on a cotton-wrapped applicator; silver nitrate, 2 to 10 grains to the ounce, may also be used, if preferred, along the urethra. Should the purulent drop from the meatus become chronic, one must search for the cause, which will usually be found in the urethral follicles, or Skene's glands. Disease of the urethral follicles, urethritis of Guérin, is best treated by dilatation, ordinary straight rounds lubricated with Finger's iodine ointment or argyrol, 20 per cent in lanolin. If Skene's glands are infected you can feel the enlarged glands roll under your finger along the side of the anterior urethra (Kelly's paper on this subject before this society leaves little for me to say). A small nasal or urethral speculum or bent hair pin will expose the orifice of the gland; in this condition I prefer to inject the gland with either silver nitrate, 20 grains to the ounce, or carbolic acid, employing a blunt point hypodermic needle. Vaseline will protect the adjacent tissue. Disease of Skene's glands is a troublesome complication that will often tax one's ingenuity to effect a cure. The two-glass test may be employed in the female malady as in the male, although not so satisfactorily as in the male, to determine the character of the urine as well as the presence or absence of "Tripperfaden." Gonorrhœa of the cervix is almost always present with a urethral infection. To make a positive diagnosis, microscopical examination of the cervical secretion is necessary. Preliminary to treatment, clean off the cervical secretion and inject a few drops of 20 per cent. argyrol or 2 to 3 per cent. protargol with a long glass pipette or a syringe with a long nozzle carefully inserted into the os, being careful previously to expel the air, or you may have the disagreeable experience, alarming to your patient and annoying to yourself, of uterine colic. It is well, if possible, to have daily or alternate daily treatment, until the microscope shows no more pus or gonococci. Small wool tampons saturated with 20 per cent. argyrol may be left against the cervix, in order to avail one's self of the continuous gonococcicidal properties of the drug, as it causes no irritation. If the uterus will permit of it, a small strip of gauze saturated with the argyrol may be inserted gently to assist drainage. For irrigating, the following remedies are useful: Carbolic acid, 5ii; zinci sulphocarbonate, 5ss; glycerin, 5iii. A teaspoonful of this mixture to a quart of hot water; lysol, creolin, normal salt solution, or potassium permanganate, 1-2000, or argyrol, 1-500, protargol, 1-500. Lydston, of Chicago, believes in frequent douchings of the uterus with potassium

permanganate, and it is very good as a cleansing agent, but as a curative measure, in either male or female, it will be found disappointing. However, any cleansing antiseptic agent will do if not too irritative.

Nitrate of silver, sulphate of copper, 10 to 30 grains to the ounce, applied to the cervical canal, 25 per cent. of argyrol or 5 per cent. of protargol or iodine and carbolic acid, are effective agents. Some time after the acute stage of a clap in the female, I paint the entire vaginal and mucous membrane of the cervix with nitrate of silver, 10 to 15 grains to the ounce; also in this stage, to get rid of the catarrhal process, no remedy is more efficacious than a mixture of argyrol 25 per cent., ichthyol 25 per cent, glycerin 50 per cent.; a tampon saturated with this solution may be inserted and allowed to remain from six to twelve hours, its removal to be followed by a copious hot douche while the patient is in the recumbent posture. Ichthargan is also beneficial in this stage, as are also tannin and iodoform. If your various forms of medication have failed, curetting must be resorted to. It is unfortunate that curetting is so often followed by a profuse, persistent leucorrhœa. In the main I am not much in favor of curetting, as it may light up pelvic peritonitis. With the above described methods carefully carried out, the virulence of the infection usually subsides. I repeat, it is meddlesome surgery to treat the uterus locally during the febrile stage, because of the danger of aggravating the condition and thus favoring its communication to the tubes and ovaries. My experience shows that it is better to place the patient in bed with absolute rest until subsidence of the very acute symptoms and constitutional disturbances. It is not my intention to go into a systematic discussion of the treatment of female gonorrhœa in all its phases, but merely to deal with the most common forms of the disease as seen in daily practice and present some of these methods of treatment experience has proved of value.

Nor can I close my paper without emphasizing the fact (too often overlooked by gynæcologists and physicians) that one of the most important points to which the surgeon's attention should be directed is the condition of Bartholin's glands, because so often it is the infection of these structures that is responsible for the propagation of gonorrhœa to the male, and it will be found on close observation, that these glands present minute sinuses, which form niduses wherein the gonococci are harbored indefinitely, and which from time to time discharge pus which often spreads to the adjacent portions of the female generative organs and thus sets up a recurrence of gonorrhœa; this accounts for many

cases of apparently fresh infections.

Treatment of this condition must be thorough and radical; after disinfecting the surface the sinus should be freely incised, the diseased glands curetted, and the entire surface involved freely swabbed with 50 per cent. solution of argyrol twice daily, carbolic acid, or strong nitrate of silver solution, 60 grains to the ounce. Should the argyrol treatment be employed, it should be used for three or four days successively, and then alternately, until the condition is eradicated.

1315 SOUTH FIFTEENTH STREET.

PERTUSSIS WITH UNUSUAL CEREBRAL SYMPTOMS.

By EDWIN E. GRAHAM, M. D.,
PHILADELPHIA.

The following case was seen in consultation with Dr. Gordon on March 19th: The child's name was Sarah G., aged nineteen months. She had always been healthy until the development of pertussis two months before. The paroxysms had been very severe, but not frequent. Three weeks before, the child became dull, heavy, and apathetic, but took nourishment well and did not cry. This stupor gradually became more marked. During this period the pulse averaged 65 to 75, the highest pulse rate being 80; the temperature was usually normal or subnormal. The child vomited occasionally, but took liquid nourishment fairly well from a spoon. For the five days preceding my visit, the stupor had gradually become more marked. The patient gave constantly little moans and occasionally moved the arms and legs slightly. Cheyne-Stokes respirations had been present since the increase in the stupor. The temperature was 101.6° F.; respirations, 28; pulse, 150. The child felt the prick of a needle. Sensation was evidently better preserved on the left than on the right side, the prick of a needle on the right foot often causing the left foot to move distinctly, while the right foot moved very little. Sensation for heat and cold was well preserved.

The attacks of pertussis were now infrequent and very light, amounting simply to a few coughs. The pupils were dilated and responded sluggishly to light. The greatest circumference of the head was 18¾ inches. She moved both arms and legs, the motion, however, on the left side being better than on the right. Both eyes were occasionally opened sluggishly; there was no facial palsy and no spastic condition.

The child's family history and previous personal history were good. When eight days old it had one convulsion, probably from improper feeding. It walked at the age of fifteen months, and before the attack of pertussis it spoke a few words and understood language perfectly.

The child was admitted to the Jefferson Hospital the next day, March 20. During the following five days until its death, on March 25th, the temperature varied. On March 23rd it rose abruptly to 106°, but was reduced promptly by a sponge

bath. Later, on the 23rd, it again reached 103°; on the 24th, it touched 103.8°, and again 103°. The sponge bath was given on all occasions when the temperature reached 102.6°, and was invariably followed by a prompt reduction of the fever. The respirations continued of the Cheyne-Stokes type, varying from 30 to 80 in a minute. The pulse ranged from 130 to 180. After admission to the hospital, a progressively increasing spastic condition was noticed, involving both the arms and legs. The stupor gradually became more marked, and the child was kept alive by means of feeding with a tube, four ounces of peptonized milk being introduced into the stomach every fourth hour.

Physical Examination on Admission to the Hospital.—The heart's sounds were normal, although somewhat weak. Scattered over both lungs, both anteriorly and posteriorly, were heard numerous small, moist râles. The child was distinctly emaciated. The eye examination, made by Dr. Sweet, showed the media clear, marked astigmatism, optic discs clearly outlined, and no evidence of pressure to be found.

The urine was clear, amber-colored, specific gravity 10.18, acid, no albumin, no sugar. Microscopical examination showed crystals, triple phosphate, amorphous urates, a few squamous epithelial cells, many leucocytes, no red cells, no casts.

A lumbar puncture was made on March 22nd, the report of which follows:

REPORT.

Specimen.—Fluid from spinal canal. Material for examination consists of 10 cubic centimetres of turbid, slightly blood-tinged fluid, containing a few small coagula of reddish color. The fluid was alkaline in reaction and highly albuminous (⅓ moist layer). After centrifugalization the sediment consisted of erythrocytes and leucocytes. A differential count of the white cells (in stained preparations) showed lymphocytes 91 per cent., and polymorphonuclear leucocytes 9 per cent. Spreads stained for bacteria yielded negative findings.

Inoculations made upon various media remained sterile.

A rabbit and guinea pig were inoculated, but up to the present time they have developed no symptoms. Should symptoms develop a subsequent report will be submitted.

[Signed] RANDLE C. ROSENBERGER,
Demonstrator of Bacteriology.

Approved: W. M. L. COPLIN.

Theodor, in six hundred and thirty-eight cases of pertussis, saw hemiplegia in a child of eight years: the child improved rapidly and was able to walk in fourteen days. In a second case, that of a boy of five and a half years, complete paralysis of left arm and leg developed: the boy recovered completely in ten days.

Leroux, in a study of thirty-eight cases of paralysis in pertussis, found the greatest number of cases in young children between the ages of one and five years. A number of the cases were complicated with bronchopneumonia, influenza, scarlet fever,

and tuberculosis. Cerebral paralysis, as a rule, came on suddenly; more rarely, hemiplegia or monoplegia came on slowly.

Lectures and Addresses.

POSTPUERPERAL SEPSIS.*

By JOHN B. DEAVER, M. D.,

PHILADELPHIA, PA.

SURGEON IN CHIEF, GERMAN HOSPITAL.

Mr. President and Gentlemen: When asked by the committee of your society for an address, I felt that no better subject could be selected than one bearing upon postpuerperal sepsis, not only from the practical importance of the disease itself, but because of its associations with a distinguished surgeon, a most courteous gentleman, and a resident of your city, the late Dr. John Light Atlee.

Infection of the uterus occurs too frequently, even in this day of asepsis and antisepsis, this era of surgical cleanliness, and calls for the strongest condemnation of those medical men and nurses by whose neglect of the cardinal surgical principle of cleanliness the disease is fostered.

Though abortionists, irresponsible doctors, and midwives are usually responsible for such a condition, it is also true that it may occur from certain pathological lesions entirely beyond the control of a careful physician; which may exist at the time of pregnancy and precipitate sepsis. An old infection of the tubes may rupture during the mechanical action of the uterus in emptying itself, or, by the reduction in vitality of the surrounding tissue from compression, the bacteria of such a pyosalpinx may be excited to a new virulence.

A dermoid cyst may rupture, an ovarian cyst become twisted on its pedicle, or a subperitoneal fibroid nodule may be softened and the low vitality of such tissues induce their infection by bacteria that in a state of health would not affect normal cells.

The woman may also have had a previous endometritis, more or less chronic in nature, the bacteria of which lie dormant in the interstices of the uterine mucous membrane giving rise to a virulent sepsis after delivery. But the greatest cause of septic states of the puerperium is the introduction of pathogenic microorganisms into the vagina by the examining finger of the attending physician, or by the giving of an antepartum douche.

In the normal woman the vagina contains no pathogenic bacteria, and its secretions are strongly germicidal to such an infection. This power is due to the marked acid reaction, to the presence of the vaginal bacilli of Döderlein, and to the phagocytic action of the leucocytosis excited by chemotaxis.

That the invasion of the vagina by pathogenic microorganisms can be caused by unclean examinations was proved by Semmelweiss, in 1847, who reduced the mortality from puerperal sepsis in the Vienna General Hospital from 11.4 to 1.27 per cent. by simply requiring students to wash their hands in chlorine water. Krönig showed that a lysol douche did not destroy infecting microorganisms, but actually increased the time in which the vaginal secretions would destroy such bacteria.

The different manner in which the destructive consequences of this most unfortunate condition demonstrate themselves are too well known to every active abdominal surgeon.

From the anatomicopathological standpoint there are three forms viz: Endometritis, metritis, and perimetritis, all depending upon infection.

Endometritis arising during the puerperal state is usually the result of a piece of membrane or placenta remaining in the uterus and becoming attacked by microorganisms. Decomposition followed by inflammation of the endometrium results, and this virulence of the infecting bacterium determines the severity of the lesion.

In putrid endometritis a retained portion of the decidua, afterbirth, or blood clots has undergone putrefactive changes and the uterine cavity is filled with a pulpy, reddish brown, foetid mass. The removal of this mass by curetting reveals a sharp line of demarcation between it and the healthy myometrium.

Septic endometritis, on the other hand, is caused as a rule by streptococcus infection, and the endometrium is usually covered by a dry, dirty-yellow membrane with areas of necrosis.

As a result of endometritis the Fallopian tubes may become infected, and in turn the ovaries, resulting in a salpingitis, salpino-oophoritis, pyosalpinx or a tuboovarian abscess, the latter being one of the fortunate terminations of puerperal infection which has traveled beyond the uterus. Where the infection travels to the fimbriated extremity of the Fallopian tubes and is not confined there by the closure of the abdominal os by adhesions, the pelvic peritonæum becomes involved, the starting point of what may be general peritonitis. This statement teaches that, in the class of cases coming under the care of the surgeon early with all the evidences of local infection and the presence of tenderness of

* Read before the Lancaster County Medical Society, March, 1903.

the cul de sac, as elicited by vaginal touch, it is best to open the cul de sac freely by an incision through the posterior vaginal vault, packing the cul de sac with iodoform gauze. This can be done in connection with cleansing the uterus, if the latter is indicated, without risk of increasing the pelvic peritoneal infection, by carrying out the former procedure with every possible aseptic and antiseptic precaution.

Where the infection is not highly virulent and the patient's resistance excellent, the peritonitis may confine itself to the pelvic peritonæum. It is in the latter class of cases, where the pelvic cellular tissue becomes involved secondarily, that perimetritis occurs. The latter condition was formerly designated pelvic cellulitis; in fact the two conditions are synonymous, except that the former results from infection of the genitalia, while the latter can occur in disease of the bone or bowel.

The pelvic cellular tissue is extraperitoneal and forms a sort of bed or matrix in which the pelvic organs are imbedded, as well as the surrounding blood vessels, nerves, and muscles that form the pelvic floor. There is very little cellular tissue behind and in front of the uterus, as the rectum and bladder are in close proximity, and none at the upper portion of the uterus, owing to the close attachment of the peritonæum. On either side of the uterus, in the broad ligaments, there is considerable connective tissue. It is interesting to note that during pregnancy there is a greater amount of cellular tissue than ordinarily in and near the broad ligaments and especially behind Poupart's ligament. As the result of this difference in the anatomical arrangement of the connective tissue in the pregnant and nonpregnant state, it is not uncommon, in perimetritis occurring after delivery at full term, to find swelling in the groin above Poupart's ligament, while, in the nonpregnant state, it is very rare to meet with swelling in this locality as the result of cellular tissue inflammation. As the uterus ascends during pregnancy the peritonæum at the sides is lifted up, which brings the base of the broad ligament practically on a line with the brim of the pelvis; this also makes a triangular area at the side of the uterus destitute of peritonæum, and in this wise the excessive amount of cellular tissue behind Poupart's ligament is accounted for.

The perimetric form is frequently mistaken for and styled "pelvic cellulitis"—a misnomer. This form of the disease, as already stated, is the result of infection of the serous covering of the uterus and neighboring peritonæum, infection which has traveled through the Falloppian tubes. If the infection is confined to the Falloppian tubes, one or both, there may result a tuboovarian abscess, usually a favorable condition for operation. It will be

seen, therefore, that if the pelvic cellular tissue becomes involved, it is only secondary to a pelvic peritonitis. If abscess formation occurs as a result of the latter, while from the location of the collection it is necessarily a pelvic abscess, it does not mean that it is the result of pelvic cellulitis alone, but of a pelvic peritonitis as well; the latter being the primary lesion of the floor of the pelvis. These abscesses become extraperitoneal through Nature's effort to protect the general peritoneal cavity. They can be opened extraperitoneally by an incision through the vault of the vagina or above the outer half of Poupart's ligament, depending upon the site of the most prominent part of swelling. Where the inflammation is not confined, but excites a pelvic peritonitis that is not disposed to become limited by generalizing itself, the case is serious.

I do not believe that pelvic cellulitis as a primary condition occurs, except by infection introduced by way of a wound through the peritonæum, tears in the vagina or cervix which take place during childbirth, or by extension of pus from the upper to the lower retroperitoneal space. I question the wisdom of the practice advocated by some surgeons of repairing a recently torn peritonæum or cervix by doing the ideal operation. The tear having occurred, cleanliness and drainage are to my mind the surest road to recovery. I would particularly advise those of you who are not doing surgery daily to follow the latter practice. The expert operator is at times justified in doing that which he could not conscientiously advise the occasional operator to do.

The uterine wall may be directly attacked, as a result of septic endometritis, with ulceration, necrosis, or localized collections of pus within the uterine muscle.

The uterus is frequently boggy, œdematous, and friable throughout, or else the inner layers of the muscle may alone be involved, with sloughing off of masses of tissue (dissecting metritis).

In most cases of metritis a septic lymphangitis and thrombophlebitis is present, frequently followed by pyæmia.

The symptoms of the various forms of puerperal sepsis depend upon the virulence of the infection, the nature of the tissues attacked, and the resistance of the organism to absorption of septic products. The most common type is a simple sapræmia from the absorption of the toxins produced by the putrefaction of shreds of decidua, blood clots, etc. Upon the second or third day after labor the temperature rises and the lochia may have a foul odor; the appetite is impaired and there may be slight nausea and chilly sensations. The pulse is usually a little faster than normal. In these cases early recogni-

tion will confine the operative treatment to the vagina and uterus and simply necessitate thorough cleansing of both cavities and the establishment of drainage with iodoform gauze. All symptoms will usually disappear thirty-six hours after operation.

Septic endometritis, from infection by streptococci and occasionally staphylococci or pyogenic bacilli, may assume serious proportions and give rise to a general and fatal sepsis.

Such infections have their starting point in a torn or abraded surface in or near the vaginal outlet, with an extension of infection upward or else primarily in the uterus itself.

The symptoms at first are purely local and at this time most amenable to treatment. If allowed to pass this stage in its development we may meet with any or all of the complications and extremely dangerous conditions of a full fledged puerperal sepsis. The lochia becomes foul, the mucous membrane of the genital tract reddened, the temperature elevated, and the pulse increased, with perhaps some chilliness. It is at this time that prompt, vigorous disinfection of the genital tract is indicated, with active stimulation. It is always better to err on the safe side and disinfect the parturient tract of every patient who has a rise of temperature with disturbance of the lochia, than to allow one woman to progress to general infection.

To defer curetting, cleansing, etc., until the patient is constitutionally infected with perhaps a septic peritonitis is virtually locking the stable after the horse is stolen. Early recognition of the danger and the immediate institution of proper treatment is the *sine qua non* to a successful issue in the majority of cases. Conservative treatment is the early institution of radical measures, which results in saving life; not the waiting until the "eleventh hour" in hope that Nature, by establishing a leucocytosis or what not, will by chance accomplish a cure.

The best possible curette is the finger, but the use of the dull curette is warrantable. I would advise against the use of the sharp curette, and with either instrument, dull or sharp, always against too much curetting; it is simply necessary to empty the uterus of decomposing matter. Too much activity with the curette exposes the patient to infection from the breaking down of Nature's barriers, in the shape of inflammatory exudate, and in this way opening up avenues of infection, thus doing more harm than good with the instruments. In those cases where there is decomposed material in the uterus and already commencing pelvic peritonitis, it is advisable not only to empty the uterus, but to open the cul de sac by an incision through the posterior wall of the vagina and introduce drainage. I am sure that cases which would otherwise end in

general pelvic peritonitis can often be aborted by this method of treatment. In fact, if this operation is done under strictly antiseptic conditions, little if any harm can accrue, granting that nothing abnormal is found. What usually takes place upon incision of the posterior vaginal vault is the escape of a serosanguineous, serofibrinous, or purulent fluid, depending upon the degree of peritonitis.

The preparation of the field of operation is as essential here as elsewhere. The vulva and pubic region are to be shaved, and the vagina thoroughly cleansed. During the operation the external parts are bathed constantly by the bichloride and carbolic solution, which is allowed to flow from an irrigator. An antiseptic pad is adjusted upon completion of the operation. After each urination the parts are to be washed with bichloride, etc. I think it safer to allow the patient to pass her urine than to use the catheter: First, because I believe it bad practice to suspend the function of the bladder; and secondly, the use of the catheter is too often followed by cystitis, a condition I have seen quite as troublesome to correct as the one for which the operation was done. If a catheter is used it should be a glass or a metal instrument, for these are the only instruments that can be sterilized. It is fitting to say a word here relative to lysol as an antiseptic wash. Personally, I regard it as of little use compared with bichloride and carbolic acid. In short, to use lysol I consider much like sending a boy on a man's errand.

If treatment is delayed, the temperature rises to 103° or 104°, the pulse becomes weak and rapid, the tongue coated and the breath foul; thirst, nausea, anorexia and a gradually progressing weakness and circulatory embarrassment presage the development of a general sepsis.

Locally, the mucous surface becomes ulcerated or covered with a false membrane, and involution of the uterus is arrested. But such is the progressive nature of these infections that an endometritis, *per se*, is rare, and a salpingitis, metritis, or pelvic peritonitis are coincident.

This brings up the question of abdominal section for puerperal sepsis, a most difficult problem, involving as it does the assumption that the attending physician has an exact knowledge of the lesion present. For instance, the disease manifests itself in some cases as a phlebitis of the uterine sinuses and of the veins of the broad ligament. The constitutional symptoms are pronounced; rapid pulse, high temperature, irritable stomach, with, in some cases, a disposition to diarrhoea; associated with this condition of the vessels there is endometritis, giving rise to an offensive purulent discharge, often blood stained. Local examination shows a hot vag-

ina, an enlarged, painful and movable uterus, which offers more or less resistance to touch, suggestive of infiltration; fulness and increased resistance in either vaginal vault indicative of a like condition of the broad ligaments; and the absence of fulness in either the retrouterine or vesicouterine pouch. In this condition operation promises nothing; on the contrary, it may do much harm by breaking down septic thrombi, often favoring foci of inflammation, to say nothing about the risk of cerebral or ptomaine emboli. Curetting is especially harmful.

The treatment which promises most under these circumstances is supporting; stimulants, large doses of tincture of iron, thirty drops every three hours, quinine, ten grains in twenty-four hours, plenty of milk and concentrated nourishment; locally, vaginal and intrauterine douching with bichloride and carbolic solution, antiseptic pads, etc., and ice bags constantly applied to the lower quadrant of the abdomen. The bowels are to be opened two or three times daily with salines. Convalescence is usually prolonged.

In a percentage of these cases convalescence is interrupted by the development of foci of suppuration which, in my experience, has usually occurred in the broad ligaments, one more often than both being affected. This manifests itself as a unilateral swelling, which can be detected by vaginal, rectal, and abdominal examination, and to the sense of touch presents a boggy feeling, a sense of resiliency or perhaps fluctuation. The general condition of the patient usually bespeaks the presence of pus. We find a hectic temperature and moist skin; the tongue is usually red, but not always so; chilly sensations are complained of or a decided chill may occur. At this stage of the disease operation is indicated, and the selection of the best avenue to evacuate the collection will depend on the point at which it is most accessible; this may be through the vagina or immediately above Poupart's ligament. It is my experience that in these cases recovery usually occurs. I have seen spontaneous evacuation above Poupart's ligament, followed by recovery, take place in a number of cases.

Another class of cases met with after labor at full term have as their most prominent feature a large purulent collection in one or other side of the pelvis, a condition frequently described as cellulitis and abscess. To this term the writer takes exception, for he is convinced that these cases originate from sepsis carried through the Falloppian tubes into the pelvis, where the inflammatory exudate breaks down and forms an abscess circumscribed by an adventitious membrane so closely resembling peritonæum that operators pronounce it such, and record the case as one of abscess of the broad liga-

ment. I have studied these cases very carefully and from an anatomical standpoint I have never been able to make them out other than cases of circumscribed peritonitis, and not suppurating cellulitis. Cases of this class frequently occasion a bulging of the rectouterine cul de sac so far as to make it feasible to evacuate it through an incision in the vault of the vagina. That they can be so evacuated does not disprove their true nature.

In septic metritis, which always means involvement of the annexa and probably of the peritonæum, radical surgery is unfortunately called for. Total hysterectomy, with the removal of the entire area of infection, tubes, ovaries, broad ligaments and uterus, should be performed. It is better, I think, in most cases at least, to perform this operation by the vaginal route, packing the entire true pelvis with iodoform gauze.

In closing, I cannot do better than quote from a paper written by Dr. Oliver Wendell Holmes, in 1843. Dr. Holmes says: "I have no wish to express any harsh feeling with regard to the painful subject that has come before us. If there are any so far excited by the story of these dreadful events, that they ask for some word of indignant remonstrance, to show that science does not turn the hearts of its followers into ice or stone, let me remind them that such words have been uttered by those who speak with an authority I cannot claim. It is as a lesson rather than as a reproach that I call up the memory of these irreparable errors and wrongs. No heart can tell the heart-breaking calamity they have caused; they have closed the eyes just opened upon a new world of love and happiness; they have bowed the strength of manhood into the dust; they have cast the helplessness of infancy into the stranger's arms, or bequeathed it with less cruelty the death of its dying parent. There is no tone deep enough for regret, and no voice loud enough for warning. The woman about to become a mother, or with her new-born infant upon her bosom, should be the object of trembling care and sympathy wherever she bears her tender burden or stretches her aching limbs. The very outcast of the streets has pity upon her sister in degradation when the seal of promised maternity is impressed upon her. The remorseless vengeance of the law, brought down upon its victim by a machinery as sure as destiny, is arrested in its fall at a word which reveals her transient claim for mercy. The solemn prayer of the liturgy singles out her sorrows from the multiplied trials of life, to plead for her in the hour of peril. God forbid that any member of the profession to which she trusts her life, doubly precious at that eventful period, should hazard it negligently, unadvisedly, or selfishly."

THE SURGERY OF THE PROSTATE FROM THE STANDPOINT OF PERSONAL EXPERIENCE.

BEING THE ORATION IN SURGERY.*

BY GRANVILLE MACGOWAN, M. D.,

LOS ANGELES, CALIFORNIA.

(Continued from p. 1062.)

I have operated on forty-nine individuals ranging in ages from forty-nine to eighty years, for enlarged prostate with retention and catheter life, by what is known as total prostatectomy—which, of course, does not mean the removal of the organ—for this is not possible, except it be thoroughly ripe, when it can be stripped off the urethra like a bead off its string, as in the cases reported by Gibson and Paul Thorndyke. Prostatectomy means rather the removal of such tumors as can be shelled out, or if it be necessary, cut out, in order to clear the channel for the free passage of the urine. Twenty-eight of these were perineal operations. Twenty-one were suprapubic. Of those operated on through the perinæum there were four who died. Two of these, the youngest, were aged forty-seven and forty-nine years respectively, and had carcinoma of the prostate. One of these had also an impassable stricture, requiring perineal section without a guide. The prostate was known to be enlarged but was not believed to be obstructive until an attempt was made to enter the bladder with the finger through the membranous urethra; the hard nodules, four in number, felt fibroid and were removed. The individual died from secondary hæmorrhage on the fourteenth day. He was an alcoholic, and had had total retention for three days when he came into my hands. The man of forty-nine years was a poor farmer who had led a catheter life for three years. There was increasing difficulty in the passage of the instrument, until its introduction became almost impossible. The prostatic prominences felt smooth, but were dense and rather difficult to excochleate. They did not look cancerous or feel distinctly so, but proved to be carcinomatous upon microscopical examination. This man died within twenty-four hours from loss of blood. The third had fibrous stricture of the entire urethra complicated by cancer of the prostate. This was recognized as cancerous, but there was an obstructing nodule which could not be removed by the Bottini, and it was cut away as a palliative measure of last resort. He died from secondary hæmorrhage. The fourth was a large, fat asthmatic, aged seventy-three years, with an enormous prostate.

Operation was required to relieve him of atrocious suffering of long duration. He contracted the grippe on the fifth day, and died of cardiac failure from non-septic pneumonia on the ninth day, when his prostate wound was nearly healed. Of the suprapubic cases, my first, a man aged sixty years, was complicated by stone and an impassable stricture and died on the third day, of uræmia. This was before I commenced to use normal salt solutions by hypodermoclysis in my operations. My third case, a poor and ignorant Mexican, seventy-four years old, commenced to urinate naturally and left the hospital before his wound was thoroughly healed. He was careless and got fly blown. He returned to the hospital three weeks after he had left, the whole pelvis filled with maggots, which had eaten through the cartilage of the symphysis, causing separation of the bones. He died in a few days. The next fatal case was that of a man upon whom I had done a Bottini operation for a pear-shaped median intravesical projection. My assistant had turned on too great an ampèreage and the platinum knife being too hot it did not close the blood vessels. The result was a profuse hæmorrhage within an hour, to which my attention was called by the ward nurse after I had finished a prostatectomy upon another man. His bladder was opened suprapubically and no cut or tear I made in the operation stopped bleeding till he died in a few hours. Two years ago, a patient upon whom I had done a combined prostatectomy died on the seventeenth day. His suprapubic wound was almost healed and he was urinating naturally. We had not had a single adverse symptom: he had been sitting up in bed talking pleasantly to his nurse and a relative, making plans for the future, when he put his hand to his heart with a sudden cry of pain and was dead before they could assist him, probably from embolism. No post mortem was allowed.

In 1902, I operated on a man aged sixty-eight years, who had been ailing for many years with stone in the bladder and a very tight stricture, together with an enlarged prostate. He had had a number of severe hæmorrhages caused by the stone, which was a very rough one, and was much exhausted. He had a great terror of operations, and it was only when he was very sure that he would die, that he consented to be operated upon to satisfy his wife and his children. He refused to take proper nourishment, or could not take it, I do not know which, and died of exhaustion about ten days after operation.

To those who calculate by percentage alone, this list of nine deaths may seem a high one, but in all these cases but two, a painful death was certainly known to be rapidly approaching, and the operation

* Delivered before the Medical Association of the State of California, at Santa Barbara, April 21, 1903.

should in no way be charged with the death. In the case of the farmer aged forty-nine years, with cancer, if I had suspected the nature of the disease before operation, I should have done a Bottini upon him or have established suprapubic drainage with a DePezzer or Senn drainage tube and thus have prolonged his life. With the case of hæmophilia the death is hardly chargeable to prostatectomy, but rather to the carelessness of a hospital assistant in not watching the ampèrage of the current used to heat the blade in the preceding Bottini operation, for the pear-shaped nodule with its pedicle was cut in half as beautifully as if done with a knife. I do not know that the man who was supposed to have died from an embolus did so at all, but his prostate had been removed seventeen days before and he had not left the hospital, for his wounds were not entirely healed. He died suddenly, and death may have been caused by the operation. The maggot case was clearly criminal neglect on the part of the patient and his relations in removing him from the hospital. Deducting these 5 cases from the total of 49, we have 4 deaths in 44 cases, which is $9\frac{1}{2}$ per cent., including two cases which in the light of my present experience I should never have operated on except by the Bottini method.

From reading the text of almost any modern work on general surgery the average physician might readily conclude that these operations were very uncertain in their results and very dangerous. This represents ultraconservatism, the disagreeable point of view which always tends to retard the advancement of good work in surgery. And then, again, after reading the articles published by certain operators, who have no deaths and whose cases are always thoroughly healed and recover the voluntary power of urination in eighteen or twenty days, grave suspicions that the reports are doctored to gain a desired reputation for extraordinary skill are more than likely to be entertained. The former make the operation too difficult to attract the ordinary surgeon, the latter make it appear so easy and so certain in its results, that it must inevitably cause great damage and loss of life by its being entered into very lightly by many who are incompetent to perform it properly or take good care afterward of those operated on. No one operation is suitable to all cases, and the ultimate results which are very excellent in the majority, are sometimes far from being perfect. Performed as they are upon old men whose bladders are diseased and misshapen, whose urethras are often the seat of tight strictures, and whose kidneys act very imperfectly, whose nutrition is poor and who, too frequently, have diseases of other vital organs, the wonder is, not that we do not always obtain perfect success, but that we ever

do so, and not that we sometimes lose a man from operation, but that any ever get well.

The coast is well charted and it is not necessary for us to be wrecked upon the known reefs or points of rocks that may be seen. A death from uræmia, where proper precautions have been taken before, during, and after operation, is entirely unnecessary. Death from purulent infiltrations of the abdominal wall or the perinæum is also easily prevented. But the perils of secondary hæmorrhage, of thrombosis, of testicular abscess, of multiple abscesses of the kidney, or of the imperfect removal of the obstruction by perineal operation, are things which cannot always very well be provided against.

I wish to emphasize the fact that it frequently is not the largest or most prominent tumors, those which are the easiest felt by the finger, that form impediment to urination. It sometimes happens that large tumors easily shelled out are removed from both sides of the urethra and a few small nodules situated directly beneath the mucous membrane of the bladder neck are left, because they are not deemed of importance or because they are not easily enucleated, and afterward it is found that the patient cannot empty the bladder, or can do so only very imperfectly, because the real obstruction was not taken away. In order to obtain a perfect and lasting result *all* tumors should be removed, for any which are left may readily grow and become larger. This is very well exemplified in some bladders which are in my possession, where nodules which at the time were deemed too small to bother with, subsequently grew to proportions which could ultimately have caused obstruction.

(To be concluded.)

Wisconsin State Medical Association.—The fifty-seventh annual meeting of the Wisconsin State Medical Association was held in Milwaukee, on June 3rd. A new constitution was adopted which implies a complete reorganization of the association, together with a change in its relations toward the American Medical Association and the local societies. Henceforth only one component medical society shall be chartered in any county. In the event of the existence of two societies an effort shall be made to consolidate them in one society, or if this be found not feasible a new society shall be formed by the authority of the State Association. The following officers were elected: President, F. E. Wallbridge, of Milwaukee; first vice-president, James J. Mills, of Janesville; second vice-president, C. C. Gratiot, of Shullsburg; secretary, Charles S. Sheldon, of Madison; treasurer, Sidney S. Hall, of Ripon. Edward Evans, of La Crosse, was selected as delegate to the meeting of the American Medical Society, in 1904, at Atlantic City, N. J.

Our Subscribers' Discussions.

A SERIES OF PRIZE ESSAYS.

[Questions for discussion in this department are announced at regular intervals. So far as they have been decided upon, the further questions are as follows:

XXIV.—How do you treat delirium tremens? (Answers due not later than May 11, 1903.)

XXV.—How do you treat the summer diarrhœa of children? (Answers due not later than June 10, 1903.)

XXVI. How do you treat habitual abortion? (Answers due not later than July 10, 1903.)

XXVII.—How do you treat paraphimosis? (Answers due not later than September 10, 1903.)

Whoever among our subscribers (with the limitations mentioned below) answers one of these questions in the manner most satisfactory to the editor and his advisers will receive a prize of \$25. No importance whatever will be attached to literary style, but the award will be based solely on the value of the substance of the answer. It is requested (but NOT REQUIRED) that the answers be short, if practicable, no one answer to contain more than six hundred words.

Only subscribers to the NEW YORK MEDICAL JOURNAL (including regular and volunteer officers of the medical corps of the United States Army, Navy, and Marine-Hospital Service, commissioned or under contract) will be entitled to compete, and all persons known to be engaged in medical journalism are disqualified. This prize will not be awarded to any one person more than once within one year. Every answer must be accompanied by the writer's full name and address, both of which we must be at liberty to publish.]

The prize of \$25 for the best essay submitted in answer to question XXIII has been awarded to Dr. Clarence A. McWilliams, of New York, whose paper appears below:

PRIZE QUESTION NO. XXIII.

THE TREATMENT OF INGROWING TOENAIL.

By CLARENCE A. McWILLIAMS, M. D.,
NEW YORK.

As usually seen, this condition affects the nail of the great toe, most frequently on its outer side, although both sides of the same nail and likewise the nails of both great toes may coincidentally become affected. It consists either in a curving of the nail toward the plantar surface in such a manner as to cut into the adjacent soft parts, or the cuticle at the side of the nail overgrows and overlaps the latter, in which condition the term "overgrown skin" is more appropriate than "ingrown nail." In either case the overlapping cuticle, on account of the pressure of the sharp edge of the nail, becomes ulcerated, and this ulcerated surface becomes covered with granulations which exude pus, more or less local cellulitis being a consequence. We have then two elements of trouble, each of which aggravates the other, and each of which must be considered in treating the condition: (1) The buried

edge of the nail, (2) the overhanging inflamed soft parts. The condition is almost invariably an acquired one, and that, too, in adolescent or adult life. Hence the question of prophylaxis is very germane to our consideration of the treatment because the trouble may be readily avoided in the majority of instances by rectifying influences which cause it. These are as follows: Pressure of a shoe or tight stocking which is too narrow, crowding the toes together. This crowding is also aided by high heels which cause the feet to descend into the front of the boot. Shoes should consequently be worn which have low heels, and which are of sufficient breadth so as not to cause any pressure of the toes together. The overgrowing of the cuticle is favored by the injurious practice of rounding off the corners of the nail, which procedure buries the angle in the cuticle, consequently the nail should be pared squarely across, at right angles to its long axis, leaving the corners untrimmed and long enough to project beyond the fold of skin on each side. We are usually called upon for advice in the matter only when the condition is more or less developed, and our treatment will naturally then divide itself into, first, palliative treatment; secondly, radical treatment. Palliative measures are in order in mild cases, and consist, in the first place, in providing properly fitting, wide shoes with low heels. All pressure is to be removed from the toes. If the ingrown nail be on the outer side of the great toe, a small roll of gauze may be inserted between the great toe and the second one, close to their bases, and next to the web, where it may be held by a small strip of adhesive plaster. This will separate the two toes, and will remove the pressure pain. This roll should not project far enough forward to impinge on the sensitive overgrown cuticle. This latter may be drawn toward the plantar surface by applying small adhesive plaster strips circularly. The buried nail edge should be elevated by inserting under it a small roll of cotton or lint, or tinfoil by means of a probe, everting at the same time the nail edge by a pair of forceps. The lint may carry on it some astringent medication, such as powdered lead nitrate, or a solution of alum (5vi to ʒi of hot water). This lint treatment is often as painful as a cutting procedure and may require the application of cocaine to carry it out satisfactorily. The bending of the nail is made easier by scraping its centre thin with the edge of a piece of glass or a knife. Granulations should be thoroughly curetted away under local cocaine anæsthesia, and the raw area should from time to time be touched with the silver nitrate stick. Severe cellulitis may be combatted by interdicting walking, and the continuous application of cold soothing lotions (lotio plumbi et opii, liq. alumin. acet., sol.

bichloride 1-2000, or Thiersch's sol.). The simple device of Dr. G. B. Webb will be found very serviceable in not too advanced cases.

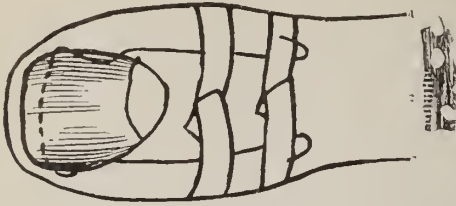


FIG. 1.—Showing application of silver wire to hold aside fleshy parts from nail.

As the drawing shows, it consists of a piece of silver wire of the thickness of an ordinary pin, carefully bent to fit under the free surface of the nail, catching and lifting up the lateral nail edges as far back as the cuticle. Artery forceps will act as pliers. The ends are carried along the dorsum of toe and strapped down to the skin with adhesive plaster. Cotton should be twisted about the points which have previously been bent away from skin. By this means the ragged edge of nail is replaced by the smooth, round, non-irritating surface of the wire. There is no discomfort if the wire is properly moulded and the patient is able to wear a boot without pain. This wire must be worn till the nail grows out properly.

Radical measures should be adopted at once in all severe cases without resorting to palliative ones, and even in many mild cases the quickest and least painful procedure is often a cutting one. Palliative treatment will often fail, and we are many times finally forced to operate, hence, we shall save much time for our patients if we operate at once. In addition we can promise a cure by the latter method, which we can rarely do by palliative procedures. The following simple method, which is a modified Auger's operation, has given me invariably good results, and I have never had a recurrence after it has once been properly performed.

Operation: If there is time to do so, the foot and toes are prepared the evening before the operation as for any surgical procedure. The granulations on the cuticle, being a great source of subsequent infection, should be particularly disinfected. If they are not too tender, curetting them away will be the surest means. The toes should be very thoroughly scrubbed with green soap, followed by ether, then alcohol, and bichloride solution (1-1000). A green soap poultice should be left on the toes till the time of operation, or they may be wrapped in gauze soaked in formalin solution. Disinfection should be gone through again just preceding the operation. If haste is necessary, disinfection may be performed just previously to the operation alone. The four outer toes and the foot should be envel-

oped in sterile towels. A small round rubber tourniquet is wound about the base of the toe and tied tightly. This renders the operation less painful by confining the cocaine solution in the toe. It has the additional advantage of making the procedure bloodless so that at no time is it necessary to ligate any vessels. Ethyl chloride is sprayed upon the side of the toe until it becomes perfectly white (frozen). This renders the insertion of the hypodermic needle, the barrel of which is armed with cocaine solution, 2 per cent., entirely painless. Three injections only of cocaine are necessary—one at the very base of the nail in the matrix, a second in the middle of the side of the nail, and a third under the nail bed in front.

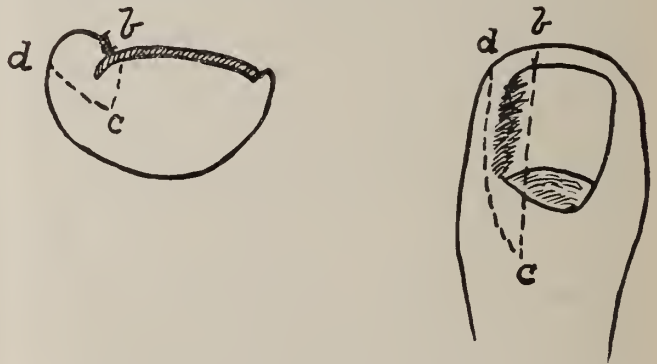


FIG. 2.—Showing incisions from the upper surface and diagrammatically.

The drawings explain the incisions fully. The first, b, c., is made directly through the nail, beginning well beyond its base, and carried down to the phalanx itself underneath. A second incision, c, d., passes through the prominent overhanging cuticle, at such a point that the soft parts on the side, after the operation, shall be flush with the new formed nail edge. The two incisions join underneath on the phalanx, and all the soft parts, together with the nail included between these two incisions, are excised in a wedge-shaped manner. The most important point in the operation consists in going far enough back beyond the base of the nail, and sufficiently deep, to excise all of the matrix, which will prevent reproduction of the offending nail edge. A couple of silk sutures may be passed to bring the raw edges together, or it may be left unsutured, since the bandage will bring the raw surfaces together fairly well. If a thick dressing is applied, the patient may hobble about on the foot at once, and after three or four days, walking will be comparatively comfortable. A wet dressing will allay any inflammation. Ten days usually suffices for the wound to heal. Both sides of the same nail may be done in a similar manner at the same sitting, and with very little increase in the local discomfort. This operation has given me perfect results in a

large number of cases, and I have never seen a recurrence of the difficulty after its proper performance. For completeness of description, I add some other methods of procedure which are in use, but which have never given me the same satisfaction as the above method. The cure of an annoying ingrown nail makes for the doctor a very grateful patient. The above method is so simple that no physician need hesitate to perform it, even though he be not a surgeon. Avulsion of the nail is sometimes practised, either its half or the entire nail. The nail is torn out forcibly with the forceps (under cocaine anæsthesia), a knife blade being pushed up under it to free it from the matrix. This may effect a cure but it is very uncertain as the nail may grow out again in exactly the same condition as it was previously, while in addition, it may reproduce itself deformed (clubbed). Touching the side of the nail with a red hot iron or cautery after avulsion may prevent recurrence. It takes a much longer time to heal than the preceding method.

Cotting's operation is particularly applicable to cases in which there is much infection of the soft parts.

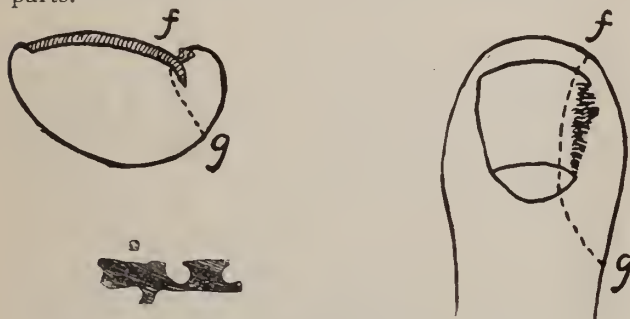


FIG. 3.—Showing from upper surface and diagrammatically the shaving off of soft parts.

In this operation all the soft parts are sliced off flush with the side of the nail, so as to leave a raw surface extending from a level with the base of the nail to the end of the toe, the entire plane of which very nearly equals the dorso-plantar diameter of the toe. The curved portion of the nail (including most particularly its matrix) is then cut off, and the raw surface allowed to heal by granulation. The cicatrix will tend to draw the soft parts away from the edge of the nail. This operation is usually followed by good results so far as a cure is concerned, and it is relatively simple. It leaves a large scar, it requires a much longer time to heal, and is more painful than the operation first recommended in this paper by the writer. There is a considerable number of other operations recommended for the relief of this condition, which need not be described. Finally for cases which obstinately recur, or in which the nail has become greatly deformed, or the entire matrix inflamed, extirpation of nail and matrix may be performed by rectangular incisions.

In summing up the treatment, then, of ingrown nail, I should advise in mild cases where there is no great amount of local tenderness and inflammation, and where the nail edge is not immovably imbedded in the lateral cuticle, properly fitting wide-shoes and the paring of the nail squarely across. In addition the nail edge should be lifted out of its bed by the efficacious device of Dr. Webb (see above) or by the insertion of lint or tinfoil, and the granulations curetted away. When these measures have been tried without proportionate benefit for a reasonable length of time, or when these measures are very painful in their application in the milder cases, a cutting operation should unhesitatingly and confidently be recommended. In severe cases palliative measures only waste time and discourage the patient. Of the operative procedures the modified Auger's method, as given above, will produce a permanent cure in the quickest time and with the least pain.

50 EAST FIFTY-THIRD STREET.

Dr. William S. Thomas, of New York, writes:

Excepting in advanced cases, the treatment should be palliative before a radical operation is advised.

Palliative Treatment.—A narrow strip of gauze soaked in a saturated solution of alum is tucked well under the ingrowing edge of the nail with the flat end of a probe. If there is much inflammation the overlying bandage is kept wet with the alum solution until the acute symptoms have subsided.

If the nail is deeply ingrown, moistened lead nitrate powder is applied along its edge and the toe bandaged. In two days the edge of the nail is softened and is removed easily. Granulations and pus disappear when the edge of the nail ceases to cut into the tissues.

While under treatment the patient selects a pair of shoes and brings them to the surgeon for approval. They should be low heeled and roomy at the toe, but the important feature of a proper shoe is its inner margin. This should be a straight line, and not curving outward at the toe.

Operation.—In aggravated cases the following operation gives promise of a cure. The toe is scrubbed with green soap and water, the nail cut short and thoroughly cleaned the day before, and a sterile dressing bandaged on. At the time of operation the foot is scrubbed as before and soaked in a hot 1 to 1,000 bichloride solution. A 2 per cent. cocaine solution is injected through a fine needle intracutaneously, not subcutaneously, beginning at the tip of the toe and proceeding along around the affected side nearly to the joint. If this is done carefully there need be no pain at any time after the first prick. A drop of cocaine solution is

then injected deeply at three or four points along the ingrowing edge. Next the needle is thrust to its full length under the nail near and parallel to the affected edge and the piston pressed during its slow withdrawal. The previous cocainization has made this deep puncture painless. The toe is tightly ligated at its base with a tape to lengthen the duration of anæsthesia and make the operation bloodless. After five minutes, when the effects of the cocaine are well diffused, a scalpel with its edge forward is plunged vertically into the dorsum of the toe a little anterior to the joint, with its edge forward and well toward the affected edge of the nail. It is carried down the inner side of the bone but not deeply enough to pierce the skin of the plantar surface. It is then brought forward with a sawing motion, severing the edge of the nail with its matrix. The next incision, starting at the same point as the first, is carried forward in the flap so as to remove in a wedge-shaped piece all of the fragment of nail and matrix. The edge of the remaining matrix is trimmed and the flap is sutured to the toe with a few stout silk sutures, one of which pierces the nail and all inserted with a curved Hagadorn needle. Dry sterile gauze and bandage are applied before the ligature is removed, to prevent hæmorrhage.

The foot should be kept elevated as much as possible for four days, when the sutures are removed. Asepsis and bandaging are continued for a week when union will be firm. If there is any infection of the wound, rest, elevation, and a wet dressing will relieve pain and cause resolution.

(To be continued.)

Therapeutical Notes.

The Local Treatment of Chancre and Chancroids.—Lieutenant-Colonel Zacarias Rojas de Molina (*Journal of the Association of Military Surgeons*, March), the Mexican delegate to the association, said that, after having exhausted all modern means, he had fallen back on the classic "black wash," without regard to formula, whether French, English, or American. It was cheap, clean, and easy of application. He advised the patient to take a thin sheet of absorbent cotton, and soaking it well in the preparation, taking care to shake the contents of the bottle previously, cover the ulcer therewith. This was repeated four times a day.

When the ulcer is of an indolent or phagedænic character he has infallible success with the application of the following powder:

- R Salicylic acid.....2 parts;
Talc or zinc oxide.....10 parts.
M. After three or four applications of this powder, the ulcer is cleaned, and the use of black wash is continued until complete cicatrization is effected.

In indurated chancre he makes use of no other topical means than that described in the treatment of chancroids, black wash.

On the appearance of the infarction of the inguinal glands, which is a characteristic symptom of a syphilitic infection, he gives the patient one mercurial pill, formula Ricord, every day; and he has observed that with this practice the secondary manifestations do not present the usual intensity.

The Opium Habit.—Dr. Elliott I. Osgood, of Chu-Cheo (*China Medical Missionary Journal*, April) gives a very satisfactory account of the success attained in the breaking up of the opium habit among the Chinese at Chu-Cheo. Dr. Osgood's plan was to give four pills daily of either Dr. Macklin's or Dr. Beebe's antiopium prescription, and supplement this, at the time of the craving or other symptoms, with glonoin, sparteine, digitalis, or passiflora (the tincture of the passion flower). The craving nearly always ceased at the end of three days.

Dr. Beebe's pill is as follows:

- R Quinine sulphate.....12 drachms;
Extract of cannabis indica.....11 drachms;
Extract of nux vomica.....10 drachms;
Sodium phosphate.....2 ounces.
M. Make into 1,280 pills.

Dr. Macklin's prescription is:

- R Quinine sulphate.....2 grains;
Extract of belladonna..... $\frac{1}{8}$ grain;
Extract of nux vomica..... $\frac{1}{8}$ grain;
Extract of cannabis indica..... $\frac{1}{4}$ grain.
M. For one pill.

Some of the patients, says Dr. Osgood, complained that the latter pill increased their craving, but a change to the former satisfied them. Glonoin ($\frac{1}{100}$ grain) acted well in the restlessness and sparteine ($\frac{1}{4}$ grain) was a splendid heart tonic.

With the departure of the craving, a building up process was adopted. The tonics used were usually arsenous acid, $\frac{1}{120}$ grain, struchnine sulphate, $\frac{1}{120}$ grain, and hydrochloric acid, 1 drop; or nux vomica, $\frac{1}{10}$ grain, and zine phosphide $\frac{1}{25}$ grain. This dose was given three times daily. Of passiflora, Dr. Osgood says that it "is the finest remedy for sleeplessness we have used. For these opium patients two teaspoonfuls divided into two doses was necessary, but for an ordinary person from ten to fifteen drops will induce refreshing sleep. There are no evil after effects. With this remedy the opium patient almost invariably got sleep each of those first three nights when the craving was on."

For Acute Respiratory Catarrh.—*Progrès médical* for May 23rd ascribes the following to Bocquillon-Limousin:

- R Pure sulphanilic acid.... 10 grammes (150 grains);
Sodium carbonate.....8.05 grammes (140 grains);
Distilled water.....200 grammes (6 $\frac{2}{3}$ ounces).
M. From 3 to 6 dessertspoonfuls daily, in two doses.
R Pure sodium sulphanilate. 10 grammes (150 grains);
Distilled fennel water... ..200 grammes (6 $\frac{2}{3}$ ounces).
M. Three tablespoonfuls twice daily.

NEW YORK MEDICAL JOURNAL

AND

PHILADELPHIA MEDICAL JOURNAL.

CONSOLIDATED.

A Weekly Review of Medicine.

ESTABLISHED IN 1864.

FRANK P. FOSTER, M.D.,
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PUBLISHERS' ANNOUNCEMENT.

It is with very great satisfaction that the publishers announce the consolidation of the New York Medical Journal and the Philadelphia Medical Journal. This is in line with the most conspicuous tendency of the present time in the conduct of great enterprises—that of amalgamation. Harmonious constituents bound together by unity of management, and sustained in their combination by concentration of resources, form a whole which is vastly more powerful than any one of its elements alone. From their inception both journals have been governed by the same policy; they have both worked for the best interests of the medical profession and of humanity, regardless of commercial considerations. Each journal has had a very wide circle of readers composed of the best elements of the profession, and each, we believe, has exerted a strong influence for the betterment of medicine. Issued as a unit from this date, the amalgamated journals will enjoy all the advantages of a centralized and economical management, which cannot but give them still greater strength and usefulness. Whatever features in each journal were specially appreciated by its readers will be continued, and no effort will be spared to institute such new ones as experience, coupled with constant observation of the profession's needs, may indicate as being called for. The general offices and editorial rooms will remain at No. 66 West Broadway, New York, with branch offices in Philadelphia and Chicago.

THE CONSOLIDATION OF THE NEW YORK MEDICAL JOURNAL AND THE PHILADELPHIA MEDICAL JOURNAL.

As has been briefly set forth in the foregoing Publishers' Announcement, the *New York Medical Journal* and the *Philadelphia Medical Journal*, beginning with this issue, are to constitute a consolidated journal. In bringing about the consolidation the publishers have not been actuated solely by a desire to enlarge the subscription list, though they do not profess to have been unmindful of the advantage to be derived from such accretion. They have cherished the far higher purpose of combining and furnishing to an enlarged circle of readers all the features thought to be of special value in the two journals. We shall exert all possible efforts for the realization of this purpose.

Before the consolidation the *New York Medical Journal* was free of all commercial influence, and so was the *Philadelphia Medical Journal*. Two journals more harmonious in their aims and methods do not exist, and it is most fitting, therefore, that they should so combine their resources as to further those aims and improve those methods to the utmost. This we believe to be wholly feasible under the unification of the two. Fortunately, the two cities, New York and Philadelphia, are of such ready access to each other that we apprehend no difficulty in dealing with medical matters of local interest in each city, especially as we shall maintain a Philadelphia office at which the editor will frequently be present. If New York is the larger of the two towns, and therefore presumably the scene of more events, we do not for a moment forget that Philadelphia is conspicuously glorious in the annals of medicine or that she is destined to be forever a leader in the progress of our profession. We shall see to it that she is fittingly represented in our columns.

We have a few words in particular to say to the readers of the *Philadelphia Medical Journal*—a host of cultured and progressive physicians. They have done well to subscribe to such an excellent journal. Let us assure them that their favorite periodical is not to be merely absorbed—snuffed out, so to speak. Though it loses its distinctive title, it will perpetuate itself as an integral part of our united publication, even as a woman, when she marries, does in-

deed lose her father's name, but parts with not one whit of her individuality or of her influence. We have received from the accomplished editors of the *Philadelphia Medical Journal* a clean and able journal; we shall endeavor so to sustain its excellence as to merit the continuance of its patronage.

THE CHICAGO DRAINAGE CANAL.

In the opinion of the Chicago Department of Health, proceedings in the suit of the State of Missouri and the city of St. Louis for a Federal injunction against the further operation and development of the main drainage channel of the Chicago sanitary district, on the ground that such operation and development are or will be injurious to the water supply of St. Louis, have reached a stage which justifies the publication of the results of the chemical and bacteriological examinations of the streams between Lake Michigan and the Mississippi River, made for the purpose of determining their sanitary condition and quality both before and after the opening of the drainage canal. This publication is further justified, in the department's opinion, by the fact that certain medical journals published in Illinois have said that "from a sanitary standpoint the canal, after an expenditure of forty to fifty million dollars, is a failure, a blunder;" that "the city of Chicago continues to be a centre for dissemination of typhoid bacilli to all parts in the surrounding country;" that "in the history of the present drainage canal, from its inception to its completion, the bacteriologist and scientific sanitarian is conspicuous by his absence;" that "the system was undertaken without the approval of eminent sanitarians;" and that "a stupendous sanitary blunder has been made." These statements, the department thinks, are calculated to "prejudice the decision of the suit." Hence its efforts to counteract their influence by the publication of a volume entitled, *Report of Streams Examination, Sanitary District of Chicago*.

Disregarding the elaborate chemical investigations set forth in the report, we find this important statement: "The facts indicate that the colon bacteria, which are present in such large numbers in Chicago sewage—undoubtedly in much larger numbers than typhoid bacilli—disappear almost completely in less than 150 miles' flow. Since all investigators are agreed that the colon bacillus is more hardy than its

relative the typhoid bacillus, and can live in water for a longer time, there is every reason for supposing that the latter microbe dies out with at least the same rapidity." We have before now commented upon examinations of the water in the channels through which the Chicago sewage passes, and we are still inclined to the opinion that its contamination is rendered innocuous before St. Louis is reached. The matter, however, is one that courts much further investigation.

AN INDEX FOR THE PHILADELPHIA MEDICAL JOURNAL.

A separate index will be prepared for the incomplete volume of the *Philadelphia Medical Journal* covering the period from January 1 to and including June 13, 1903, a copy of which will be sent free of charge to all our readers who apply for it prior to August 1, 1903. Those desiring copies are requested to notify us at once, in order that the publishers may know how many copies will be required to meet the demand.

The index to the consolidated Journal, which will appear in due course in our issue for June 27th, will include the index of the *New York Medical Journal* for the period between January 1 and June 13, 1903, inclusive, as well as that for the subsequent numbers up to the end of the volume.

MEDICINE ON THE STAGE.

The medical profession seems to occupy a large share of the Paris stage at present, according to the *Gazette médicale de Paris* for May 2nd. At the Grand-Guignol, the *System of Dr. Goudron and Professor Plume*, an adaptation by M. André de Lorde from a story by Edgar Allen Poe, is a psychological melodrama. *Tenton*, at the Palais-Royal, shows, among other things, Dr. Bricholet auscultating the chest of a demi-vierge. Dr. David Mathieu, in Anatole France's *Crainquebille*, at the Renaissance, appears to be a sympathetic picture of a physician. *Incognito*, at the Vaudeville, and *Les Surprises du Kodak*, at the Gymnase, also turn upon the medical profession. In *Doctors*, at the Théâtre Mondain, the motif is evolved from the error in diagnosis made by a young Paris surgeon, who has performed an ovariectomy in a farmhouse on a woman whose malady turned out to be a simple pregnancy! On this the *Gazette* comments caustically as follows: "The part of the countrywoman is well enough conceived, for the author doubtless knows that side of his subject thoroughly; as to the "medical" rôle, it is simply *ridiculous*. Ovari-

otomy is no longer performed in country places, even if it were possible that such errors in diagnosis could be perpetrated. The medical *mise-en-scène* is simply infantile." *Soyons optimistes*, of Zama-coës, at the Capucines, and *Dis que t'es médecin*, by MM. Louis Janot et Louis Lacroix, at the Bouffes-Parisiens, are also "medical" plays. Surely a revival of *Le médecin malgré lui* would be in order!

APPENDICULAR INFLAMMATION AND THE THREAD WORM.

Bearing upon the question of the part occasionally played by the thread worm in setting up disease of the vermiform appendix is a case reported by Bégouin (*Revue française de médecine et de chirurgie*, 1902, No. 4; *Zentralblatt für chirurgie*, May 2d). The patient was a young woman in whom the diagnosis lay between recurrent appendicular inflammation and ovarian disease. The right ovary, which was found cystic, was removed. The vermiform appendix, though of normal appearance externally, was somewhat stiff, and it, too, was removed. It was found to contain fifteen living oxyurides, partly collected into a ball, and its mucous membrane was slightly ulcerated.

ANTITHYREOIDIN.

We may readily conceive of the advantage sometimes to be derived from a therapeutic measure having the opposite effect to that of thyroid feeding. According to Moebius (*Münchener medicinische Wochenschrift*, 1903, No. 4; *Zentralblatt für Chirurgie*, April 25th), such a measure lies in the use of the serum of the thyroidectomized sheep, otherwise known as antithyroidin. The author has prescribed it in daily amounts of seventy-five grains in a number of cases of exophthalmic goitre. It never did any harm, and it was of undoubted benefit. The pulse was not much decreased in frequency, but the circumference of the neck became less, the goitre grew less tense, and the patients felt quieter and slept better.

FOURTH OF JULY TETANUS.

In the hope that it may not be too late, we exhort our readers to oppose the handing over of toy pistols to boys on the occasion of the approaching national holiday. The cartridges, as we have repeatedly been informed, contain earth, and this earth may very well be inoculated with the germ of tetanus. Something has been said by one of our contemporaries of the necessity of early and efficient treatment of the wound inflicted by these pistols, but in our way of thinking there is no safety save in renouncing them altogether.

News Items.

Society Meetings for the Coming Week:

MONDAY, June 22d.—Cambridge, Mass., Society for Medical Improvement; Baltimore Medical Association.

TUESDAY, June 23d.—Buffalo Academy of Medicine (Section in Obstetrics and Gynecology); Richmond, Va., Academy of Medicine and Surgery; New York Medical Union (private).

WEDNESDAY, June 24th.—New York Academy of Medicine (Section in Laryngology and Rhinology); New York Pathological Society; American Microscopical Society of the City of New York; Philadelphia County Medical Society; New York Dermatological Society (private); Auburn, N. Y., City Medical Association; Berkshire, Mass., District Medical Society (Pittsfield).

THURSDAY, June 25th.—New York Academy of Medicine (Section in Obstetrics and Gynecology); New York Orthopaedic Society; Brooklyn Society for Neurology; Medical Society, of Richmond, Va.; New York Celtic Medical Society.

FRIDAY, June 26th.—New York Society of German Physicians; Philadelphia Clinical Society; Philadelphia Laryngological Society.

SATURDAY, June 27th.—New York Medical and Surgical Society (private); Havana Medical Society, New York (private).

Change of Address.—Dr. Edmund P. Shelby to 116 West Seventy-fourth Street, New York. Telephone, 3125 Columbus.

Dr. William Gray Shaufler to Briarcliff Lodge, Briarcliff Manor, for the summer.

A Bequest to a Hospital Association.—By the will of Adolph Rosenbaum \$250 is left to the Jewish Hospital Association.

The Erie County Medical Society.—The eighty-second annual meeting of the society was held at Buffalo, on June 9th.

The East Side Hospital of New York has asked of the State Board of Charities in Albany for permission to incorporate.

Professor Lorenz Sails for Europe.—In response to a cablegram, Dr. Lorenz has decided to cancel all his remaining engagements in America and to return to Europe at once.

"Fourth of July Lockjaw."—During the past five weeks in Chicago there have been seven deaths from tetanus due to the use of fire-arms, toy pistols, and explosions from fireworks.

Women to Incorporate a Hospital.—The Woman's Charity Club, of Boston, held a meeting on June 4th to take action for the incorporation of the Charity Club Hospital. The Charity Club is already incorporated.

The Emergency Hospital, Washington, D. C.—According to the annual custom, the staff of the Emergency Hospital was reorganized recently, Dr. John T. Dunn, class of '01, Georgetown, the senior assistant, was appointed head resident physician; Dr. John T. Hussey, class of '03, Georgetown, as junior assistant.

Chicago Eye, Ear, Nose and Throat College.—Dr. J. Elliott Colburn has been elected professor of ophthalmology in the faculty of the Chicago Eye, Ear, Nose and Throat College.

Syracuse Academy of Medicine.—The one hundred and eighty-first regular meeting of the Syracuse Academy of Medicine was held on June 2nd, at the Dillaye Memorial Building, Dr. F. O. Donohue presiding.

Utica's Health Report.—According to the annual report of the health officer of Utica, N. Y., the mortality during the past year did not exceed 14 per 1,000, showing a decrease of 28 from the figures of the preceding year.

College of Physicians and Surgeons, Chicago.—At the recent meeting of the faculty of the college, Dr. William L. Ballenger was elected to the chair of otology, rhinology and laryngology, to fill the vacancy made by the resignation of Professor M. R. Brown.

Harlem Hospital.—President Braman, of the board of trustees of Bellevue and Allied Hospitals, has advertised for bids for the construction of the new Harlem Hospital, at Lenox Avenue and One Hundred and Thirty-sixth and One Hundred and Thirty-seventh streets.

Cows Impounded by the Sanitary Authorities in Queens County.—According to instructions from the board of health, 260 cows were impounded on June 9th, after the poundmaster had inspected four stables and found that they did not comply with the health requirement.

A Donation to Hospitals.—By the will of Charles M. Chittenden, of Washington, D. C., who died at the Presbyterian Hospital in New York, on May 17th, the sum of \$50,000 is equally divided between the Presbyterian Hospital and the Home for Incurables, at Fordham.

To Tax a Medical Society.—The tax commissioners have decided to tax King's County Medical Society and the Masonic Temple, and this in spite of the fact that by the passage of certain general laws, last winter, both of these institutions were exempted from taxation.

Municipal Civil Service Examination.—Six hundred and ten physicians, including fifty women, underwent a competitive examination for the position of medical examiner. Competitors must hold a State medical certificate, and a standing of 75 per cent is required to place a competitor on the eligible list.

Nottingham Medical Bill Signed in Michigan.—This bill, or the amendment, which is aimed at the prevention of obscene advertisements by any medical practitioner, under penalty of revocation of his license by the medical board of registration was signed in Lansing, Mich., on June 5th, by Governor Bliss.

The Seaside Hospital of St. John's Guild.—The seaside hospital of the guild opened on June 15th for the reception of patients. This is the largest children's summer hospital, and depends on voluntary contributions to carry on its good work.

Elmira Academy of Medicine.—The regular session of the Elmira Academy of Medicine was held on June 3rd, when papers were read by Dr. Ainsworth, on Plethora; Dr. Robert P. Bush, of Horseheads, on Prognosis; Dr. Seafuss, of Webb's Mills, on the Drug Habit; and Dr. C. W. M. Brown, of Elmira, on Percentage Infant Feeding.

Medico-Chirurgical Society of Central New York.—The regular meeting of the society was held in Syracuse, N. Y., on June 4th, when officers for the coming year were elected as follows: Dr. E. H. Keeler, of Syracuse, president; Dr. F. H. Doud, of Syracuse, first vice-president; Dr. A. R. Grant, of Utica, second vice-president, and Dr. M. E. Santee, of Cortland, secretary-treasurer.

Fordham Home for Incurables.—The Home for Incurables celebrated its thirty-seventh anniversary on June 11th. The doors were thrown open for inspection of the buildings, which have a frontage of 454 feet on Third Avenue, and are surrounded by beautiful lawns with flowers and shade trees. There are now 300 incurable patients in this unsectarian home. Dr. Israel C. Jones is the medical superintendent.

A Case of Plague in San Francisco.—The first case of plague since March 16th was reported by the health authorities of San Francisco on June 10th. The patient is a Chinese gambler. How he caught the infection is not known. A resolution adopted on June 9th, by the San Francisco Board of Health prohibiting Chinese from living in cellars and basements has since been enforced with great vigor.

Health of Michigan.—The reports of the State board of health show that, during the month ending May 30th, the most prevalent disease in Michigan was rheumatism, which has the highest average for ten years past. It was closely followed by neuralgia and amygdalitis, while consumption averaged little more than a third the number of cases. During last month measles, scarlet fever, intermittent fever, and influenza were more prevalent than in April, though the mortality was not large as compared with many other places.

The Medical Society of Milwaukee County, Wis.—As a sequel to the meeting of the State Medical Society of Wisconsin, held on June 4th, at Milwaukee, the Milwaukee County Medical Society, which has been the rival of the older Medical Society of Milwaukee County, decided to settle their differences by merging into the latter society, of which Dr. H. M. Brown is president. The announcement made by Dr. J. V. R. Lyman, president of the Wisconsin State Medical Society at the society's banquet elicited hearty applause. The "Medical Society war" has been going on for many months.

Health of Cleveland, Ohio.—According to health statistics, Cleveland was never in a better condition, with the exception of a few cases of typhoid fever, which disease is, however, on the wane.

Columbian University.—The medical and dental departments of Columbian University, Washington, D. C., held their annual commencement at the National Theatre, on June 1st, Dr. Needham presiding, and Dr. William W. Keen, of Philadelphia, making the address to the graduates.

Cornell Medical College.—The commencement exercises of the Cornell Medical College were held on June 3rd at Carnegie Hall. President Jacob Gould-Schurman, of Cornell, gave diplomas to fifty-eight men and two women. Professor Polk, dean of the school, distributed the prizes.

The South Dakota Board of Health.—Under the recently enacted medical practice act, the licensing of physicians was taken away from the board of health and a board of examiners established. The governor has appointed the separate board of health provided for in the new law as follows: President, Dr. A. L. Peterman (R), of Parker; superintendent and secretary, Dr. D. W. Robinson, of Pierre; and vice-president, Dr. J. W. Ellis, of Elk Point.

Knife and Fork Surgery.—This is the nickname given at the hospitals to a new method introduced by Dr. Koenig, of Berlin, viz., the use of suitably devised metal instruments when handling surgical cases, to avoid the contact of his fingers with the tissues of the patient, thus obviating all chance of sepsis, either to himself or the patient. Dr. Koenig has found that he can perform many operations, even that for appendicitis, without even touching the wound.

Harper Hospital, Detroit.—The new operating rooms at Harper Hospital, which have been two and a half years in process of construction, will be completed within the next two months. It is said to be perhaps the finest and best-equipped operating room in the United States. The great amphitheatre, seating 317 students, is the only one of its kind in the country, and the light is so arranged that from the topmost tier the student may observe the knife of the surgeon working on the patient in the centre.

Health of Chicago.—The bulletin of the Chicago health department announces that during the week ending June 6th the death rate was 21 per cent. less than during the previous week. The death rate of children under five years old is also shown to be 7.2 per cent. less during the five months of the present year than during the same period in 1902. The "murderous mortality" of the present season has been principally among those at the most valuable age and those over sixty, and was greater among the male than the female population. Consumption heads the list and is closely followed by pneumonia.

A Case of Myelitis.—A girl of sixteen is suffering from myelitis at St. Luke's Hospital. She was apparently in good health until within two weeks of her removal to the hospital, when she was seized with pains in the back, and found difficulty in walking. She grew worse and in ten days was paralyzed from her waist down, the upper part of her body being wholly unaffected.

Buffalo Marine Hospital Site Obtained by the United States Government.—The Le Couteux St. Mary's Benevolent Society for the Deaf and Dumb was granted an order in special term by Justice Childs, of Buffalo, on June 5th, which permits the society to sell a portion of its property on Main Street to the United States Government. The price demanded is \$22,000. This property will be used as a site for the new Marine Hospital of this port.

Onondaga Medical Society.—The following officers were elected at the meeting of the society on June 2nd: Dr. E. J. Wynkoop, of Syracuse, president; Dr. J. H. Burch, of Baldwinsville, vice-president; A. S. Hotaling, of Syracuse, secretary; Dr. F. H. Flaherty, of Syracuse, treasurer. Dr. Gregg, Dr. Bannan, Dr. Ayling and Dr. Marsh were elected delegates to the New York State Medical Society. Dr. John J. Buettner and Dr. W. C. McKeeby, of Syracuse, were elected to membership in the society.

Consumptive Hospital in Chicago.—St Ann's Sanitarium, at Forty-eighth Street and Division Avenue, Chicago, Ill., was dedicated on May 31st, by Bishop Muldoon. The sanitarium, which will accommodate 250 patients, is exclusively for consumptives, and will be conducted by the Poor Handmaids of Jesus Christ, a Roman Catholic sisterhood devoted entirely to the care of the sick. This is not a permanent home for incurables, but is primarily for the cure of tuberculous patients in the early stages of the disease. The sanitarium was built entirely by public subscription.

The Ohio State Medical Association.—The association met in Dayton, Ohio, on June 4th. Fully four hundred physicians were present. The annual address was made by the president, W. C. Chapman, of Toledo, and the oration by John B. Deaver, of Philadelphia. Addresses were also made by A. P. Ohlmacher, superintendent of the State Hospital for Epileptics, in Gallipolis, Ohio, on the Laboratory Movement in Ohio's State Hospitals; and by J. W. McCormack, of Bowling Green, Ky., on Medical Organization. Dr. McCormack is chairman of the committee on organization of the American Medical Association. Brooks F. Beebe, of Cincinnati, chairman of the Council of the Ohio State Medical Association, also spoke. An incidental feature was the conduct of a clinic at the eye ward of the Soldiers' Home in which three soldiers were operated on for cataract. Dr. Green, of Dayton, C. W. Tanqueman, of Cincinnati, and Dr. J. E. Brown of Columbus, Ohio, operated before an assembly of oculists. Cleveland was selected as the next place of meeting.

University of Virginia.—At the final exercises of the Medical Department of the University of Virginia twenty-five students graduated.

The Medical Society of New Jersey.—The one hundred and thirty-seventh annual meeting of the society will be held at the Coleman House, Asbury Park, on June 23d, 24th and 25th, Dr. E. L. B. Godfrey, of Camden, presiding.

Six at One Birth.—A woman in Ussher Town, on the Gold Coast in West Africa, on the 18th of May, gave birth to six living babies, five boys and one girl, none of whom survived many days. The same woman had four babies at a birth in 1895.

The Stevens Prize.—The Stevens triennial prize of Columbia University for original research has been awarded to Dr. L. Pierce Clark and Dr. Thomas P. Prout, of New York. Subject: Status Epilepticus; a Clinical and Pathological Study of Epilepsy.

The Massachusetts Medical Society.—The one hundred and twenty-second anniversary of the society, celebrated in Boston on June 9th, was largely attended by medical men throughout the State. In the section in medicine, papers were read by Dr. E. P. Joslin, of Boston; Dr. H. F. Hewes, of Boston; Dr. R. W. Swan, of Worcester; Dr. H. G. Wilbur, of Fall River, and Dr. J. C. Munro, of Boston.

In the section in surgery, papers were contributed by Dr. H. G. Stetson, of Greenfield; Dr. S. J. Mixer, of Boston; Dr. Paul Thorndike, of Boston; Dr. Homer Gage, of Worcester, and Dr. C. S. Chapin, of Great Barrington.

Omaha-Douglas County Medical Society.—At a special meeting on June 9th, at Omaha, Neb., eighty members being present, Dr. W. O. Bridges gave a resumé of the International Medical Congress at Madrid, to which he was a delegate. Dr. B. F. Crummer, president of the Nebraska State Medical Society, presented the attitude of the organized profession towards irregular and unlawful practitioners. The legal side was presented by James P. English. A committee of physicians was appointed to act in conjunction with the State Board of Health in executing the functions of that body. A committee of physicians, with City Health Commissioner J. B. Ralph as chairman, was named by the society to investigate all proposed legislation by the City Council or Board of Education bearing directly or indirectly on the health of the community and to endeavor to have every enactment conform to recognized medical standards of sanitation.

A Medical Society's Protest Against the Russian Atrocities.—The Eastern Medical Society, at its meeting held on Friday evening, June 12, 1903, unanimously adopted the following resolutions:

Whereas, The appalling atrocities committed on the Jews at Kishineff, during a recent outbreak against them, by a certain portion of the populace, have called forth profound grief and indignation throughout the civilized world, wherever the human heart throbs with the sufferings of its kind. Be it therefore

Resolved, That, as citizens of this Commonwealth and as men whose profession brings them daily into close contact with pain and sorrow, and therefore places them in a position to better comprehend the depths of suffering and distress, we join in the universal protest against such brutal persecution which has been revived of late through the neglect, and to all appearances, with the connivance of the Russian authorities; and be it

Resolved, That, as citizens of the United States, for whom Russia has repeatedly professed sentiments of good will and amity, we earnestly urge the claims of the Jewish people of Russia to a speedy relief from conditions and legal disabilities which practically place them outside the pale of justice and equity; and to secure protection against such outrages as the recent Kishineff massacre. We cannot too strongly deplore the occurrence of such a truly horrible calamity that befell not only the Jews at Kishineff, but the entire Jewish race; be it

Resolved, Therefore, that we voice the universal sentiment as expressed individually by prominent citizens, and collectively at many protest meetings; that the people of the United States should exercise through the good offices of their government, sufficient influence—justified by the friendship between the two nations—to redress the injuries inflicted upon the Jews at Kishineff, and to prevent the recurrence of outbreaks such as have amazed and shocked the civilized world;

Resolved, That these resolutions be spread on the minutes of the society and copies of same be sent to President Roosevelt and to the medical press.

•The Committee.

A. E. Isaacs, M. D.,
A. Rovinsky, M. D.,
D. Robinson, M. D.,
J. Barsky, M. D.,
Z. Sharfin, M. D.

Albert Miller, M. D.,
Secretary.

East Side Physicians Protest.—At a mass meeting of the physicians held under the auspices of the East Side Physicians' Club, June 12, 1903, Dr. Julius Solow presiding, the following resolutions were unanimously adopted:

Whereas, A number of physicians practising on the East Side of the Borough of Manhattan have been arrested on warrants in criminal proceedings instituted by the commissioner of the health department without previous notice, warning, or opportunity to present their defence of alleged charges of larceny, in accordance with the best traditions of the health department, and

Whereas, This hasty, unwarranted, and unprecedented aggressive action of the department may tend to alienate the rank and file of the profession from their natural union and cooperation with the said department, and

Whereas, The medical profession of this city as a unit have always stood ready to serve the department of health without fee or favor, be it

Resolved, That the physicians of the East Side in mass meeting assembled, deplore the circumstances and emphatically protest against the unmerited and summary procedure of the department of health, a procedure which demoralizes the community, offends the profession, and gravely injures the accused physicians and their families, by branding them as common criminals, and be it further

Resolved, That a copy of these Resolutions be forwarded to His Honor the Mayor of this city, to the commissioner of the health department, and to the press.

DR. JULIUS SOLOW,
President East Side Physicians' Club.
DR. I. WILLIAM SCHAPIRO,
Secretary.

Manhattan State Hospital, West, Ward's Island.—On Thursday, June 18th, the following operations were performed by Dr. Leroy Brown: (1) Inguinal hernia; (2) retroversion of uterus (two cases); excision of cervix; perinæorrhaphy (two cases); removal of cervical polypus.

The Elkhorn Valley Medical Society.—The regular semi-annual session of the Elkhorn Valley Medical Society will be held in Norfolk, Neb., July 7, 1903. This is a district society conducted for scientific and social purposes only, and is in no way affiliated with the county, State and national federation. Any physician residing in Nebraska and complying with the requirements for membership in his county or district society under the constitution adopted at the last State Medical Society meeting is eligible.

To Restrict the Sale of Poisons.—The Medico-legal Society, of the District of Columbia, met in Washington on June 8th. A committee was appointed, composed of Dr. J. Ramsey Nevitt, and James E. Padgett, and Alexander Weeks, attorney, to formulate bills for introduction at the next session of Congress, restricting the sale of drugs. A committee was also appointed to draft new measures providing better care for the insane of the District. The society adjourned till September.

The Michigan State Medical Society.—The thirty-eighth annual meeting of the society was held in Detroit, on June 11th and 12th. Dr. A. E. Bulson, of Jackson, Mich., presiding. Sections were held in general medicine, surgery, ophthalmology, otology, and in obstetrics and gynecology. There were general meetings, and a reception was given to the members and ladies by the Wayne County Medical Society.

Sudden Death of Dr. I. N. Love.—Just as we go to press, we learn with deep regret of the sudden death from apoplexy of Dr. Isaac N. Love, formerly of St. Louis, and recently of New York. Dr. Love had been to Paris where he accompanied a patient recently operated on for appendicitis. He returned on the Cunard liner the *Aurania*, which reached the bar at night on June 17th and left quarantine early on the 18th. At breakfast Dr. Love made one of his well-known and highly appreciated witty speeches, and at its close fell to the floor. Notwithstanding the prompt attention of the ship's surgeon, Dr. Love died within a few minutes. He leaves a wife and two children. Dr. Love has for many years had a friendly following as the editor of the *Medical Mirror*. We understand that the funeral will take place in St. Louis.

Disgraceful Hazing Incident.—As a result of a case of hazing at the Chicago County Hospital, the entire interne force may be suspended and possibly dismissed by Warden Happel. The victim of the hazing, Dr. Leon Block, was severely burned in consequence of ether being poured over his bare back by his brother internes, and fire being set to the inflammable ether by the accidental striking of a light, the joke being carried on in the dark to avoid

recognition of the perpetrators. In addition to three immense blisters on his body, Dr. Block sustained severe bruises through falling off a table to the stone floor. Dr. Block refuses to divulge the names of his persecutors.

Surgical Instrument Makers Combine.—Surgical instrument makers, importers and dealers, to the number of sixty-five, held a meeting in Detroit on June 8th, for the purpose of perfecting an organization similar to that of the dental trade. It is not the intention to make a trust, but simply to combine for mutual protection, the instrument dealers, through a clearing house, keeping one another informed of all bad accounts, and any customer being refused further credit until his account is settled. The body will be known as the American Surgical Trade Association, and any reputable manufacturer, dealer or importer may become a member.

American Congress on Tuberculosis.—The annual session of the American Congress on Tuberculosis was held June 10, 1903, at the New York Press Club. The new council provided for by the revised constitution of last year, was formally elected, and was instructed to arrange for a Congress of Tuberculosis at St. Louis, in 1904. The following honorary presidents were elected: Laymen—John Hay, Secretary of State; Justice Charles G. Garrison, supreme Court, New Jersey; Abram H. Dailey, Brooklyn; General Russell M. Alger, the Earl of Minto, Governor-General of Canada. Medical—Dr. A. N. Bell editor of the *Sanitarian*; Dr. J. G. Adami, professor McGill University, of Montreal; Prof. Charles H. Hughes, St. Louis; Dr. N. Senn, surgeon-general, State of Illinois, Chicago; Dr. Presley M. Rixie, surgeon-general U. S. N.

The following officers were elected: President, Dr. E. J. Barrick, of Toronto; first vice-president, Dr. P. H. Bryce, Toronto, Secretary Provincial Board of Health; second vice-president, ex-Chief Justice L. Bradford Prince, Santa Fé, N. Mex.; third vice-president, Dr. Charles K. Cole, Helena, Mont.; fourth vice-president, Dr. Sofus B. Nelson, State Board of Health, Pullman, Wash; fifth vice-president, Dr. A. M. Linn, State Board of Health, Des Moines, Iowa. Samuel Bell Thomas, Esq., of New York was elected secretary, and Clark Bell, Esq., who resigned as fifth vice-president, was elected treasurer. The entire list of honorary vice-presidents, consisting of governors of States and Provinces, and prominent public men of foreign countries and States, was reelected, as was the list of vice-presidents at large, and from States consisting of three physicians and two lawyers of the States of the Union and Provinces.

The council elected were as follows: Moritz Ellinger, Esq., of New York, chairman; Dr. J. Mount Bleyer, of New York; Dr. W. F. Drewry, of Petersburg, Va.; Dr. A. P. Grinnell, of Burlington, Vt.; Dr. Mihran K. Kassabian, of Philadelphia, Pa.; Dr. H. Edwin Lewis, of Burlington, Vt.; Dr. M. Markiewicz, of New York; Dr. Richard J. Nunn, of Savannah, Ga., and Dr. J. W. P. Smithwick, of La Grange, N. C.

PHILADELPHIA AND PENNSYLVANIA.

A Philadelphia Hospital Receives a Bequest.

—By the wills of James and Mary Brown, of Philadelphia, the Methodist Episcopal Hospital, of that city, will receive the sum of \$1,000, a similar sum being given to the M. E. Church.

A State Nurses' Association in Philadelphia.

—A meeting was held in the College of Physicians and Surgeons, in Philadelphia, on June 8th, for the purposes of organizing a State association of nurses. It was attended by nurses from all parts of the State.

The New Surgeon General of the State of Pennsylvania is Dr. Robert Le Conte, who has been recently appointed by Governor Pennypacker. Dr. Le Conte's appointment indicates the high esteem in which he is held by the governor. He is not a politician and, indeed, takes no part in politics; but he is one of the few surgeons who succeeds in maintaining a large practice and at the same time being in the forefront of nearly all social events.

Philadelphia County Medical Society.—A business meeting was held by the society on June 17th when the following business was transacted: Balloting for members; report of censors; appointment of the nominating committee; amendment to various articles and sections of articles. A meeting of the delegates and alternates to the Medical Society of the State of Pennsylvania was held immediately after the meeting.

The Typhoid Epidemic Continues.—The medical profession is doing all it can to combat this disease, and a proposition has been made to class it among the serious contagious diseases. Of the total number of new cases, there were 29 located in the northwestern section of the city, 16 in the twenty-eighth, three in the twenty-ninth, five in the thirty-second, and five in the thirty-eighth wards. There has been a decrease of 77 in the number of typhoid cases.

The Death Return in the city during the week ending June 13th, was 430, an increase of 3 over that of the previous week, and an increase of 18 over the corresponding week of last year. The deaths include: apoplexy, 17; Brights' disease, 9; cancer, 16; casualties, 9; cholera infantum, 12; pulmonary phthisis, 63; convulsions, 8; diphtheria, 11; heart disease, 34; scarlet fever, 2; typhoid fever, 21; pneumonia, 20; marasmus, 13; old age, 15; smallpox, 4; uræmia, 15; whooping cough, 4.

Smallpox in Philadelphia.—There has been a fresh outbreak of smallpox in this city. For the week ending June 13th there were forty-eight new cases, an increase of seventeen over the previous week. Since January 1, 1903, five hundred and seventy-two cases of smallpox have been reported to the Board of Health. These were distributed throughout the city, but have latterly been localized in the twenty-eighth ward, which is to be made the object of a vigorous crusade by the health

authorities with a view to stamp out the disease. Landlords will be compelled to thoroughly fumigate and cleanse any infected house, and when other measures are not deemed sufficient, destruction of property by fire may be resorted to. The Twenty-eighth ward in Philadelphia, which is the neighborhood principally affected by smallpox, is to be the object of a vigorous crusade by the health authorities with a view to stamping out the disease.

A Philadelphia Physician Killed in Honduras.

—Dr. Albert Ferrari, a native of Honduras, who recently graduated at Philadelphia in order to practise medicine in Honduras, was killed shortly after his return to his native land by Honduras soldiers, who as the outcome of a quarrel between their captain and Dr. Ferrari's cousin, the chief of police, opened fire on the chief and his friends, among whom was Dr. Ferrari. Dr. Ferrari having become an American citizen, the case has been laid before President Bonilla.

Contagious Diseases.—The return of contagious diseases during the week, as compared with the reports of the previous week, was as follows:

	Week Ending Previous Week.			
	June 13.			
	Cases.	Deaths.	Cases.	Deaths.
Diphtheria	62	11	66	7
Scarlet fever.....	72	2	95	2
Typhoid fever.....	238	21	315	26
Smallpox	48	4	31	4

The Condition of the Schuylkill River.—On June 16th Dr. Abbott, accompanied by Dr. A. Butcher, Dr. L. C. Wessels, Dr. Charles P. Mercer, Dr. Thomas J. Beatty, Dr. A. A. Cairns, Dr. H. L. Sidebotham, and six inspectors of nuisances, went to Reading, where they boarded a tug and then came down the Schuylkill river. This trip was made for the purpose of ascertaining at what points foul matter was emptied into the river. It is the intention to compel those who are polluting this stream to stop the nuisance, by bringing suit if necessary. Dr. Abbott is professor of hygiene at the University of Pennsylvania.

The Department of Health and Charities is now in full working order. Dr. Edward Martin, the new director of this department, assisted by Dr. A. C. Abbott, chief of the bureau of health, has been at work ever since he took hold of the city's health department to improve the organization of the health bureau. Dr. Martin is giving special attention to the milk standard. He is seeking information on this subject and recently had a long conference with the New York health authorities relative to the manner in which the metropolis looked after the milk standard. He was so pleased with what he saw then that it is said the same system is to be introduced here. Dr. Martin believes that a considerable part of the number of deaths accrues from impure milk. He is determined to sift the matter thoroughly, and not only will he have an examination made of the milk that comes to the city, but he also intends to make an inspection of the dairies that furnish the milk.

Pith of Current Literature.

BRITISH MEDICAL JOURNAL.

May 30, 1903.

1. Case of Trypanosomiasis, By PATRICK MANSON.
2. On the Possibility of the Occurrence of Trypanosomiasis in India, By W. B. LEISHMAN.
3. Three Cases of Trypanosoma in Man, in Entebbe, Uganda, By C. J. BAKER.
4. The Use of Acid Phosphate of Sodium in Alkalinity of the Urine, By ROBERT HUTCHINSON.
5. Clinical Observations on the Treatment of Inoperable Cancer by Formalin, By A. F. MEREDITH-POWELL.
6. Guaiacol in the Treatment of Small Pox, By J. J. RIDGE.
7. A Mercurial Injection for Use in the Intramuscular Treatment of Syphilis, By F. J. LAMBKIN.

1, 2, and 3. **Studies of Trypanosomiasis.**—The researches of (1) Patrick Munson and C. W. Daniels, (2) W. B. Leishman, and (3) C. J. Baker constitute a practical symposium of all that is known of this rare parasitic malady, and evidence also that it is not confined solely to African territory, as hitherto supposed. Altogether, six cases are cited, only one of which has proved fatal. The diagnosis rests solely upon the microscopical evidences.

(1) The case of Mrs. B., aged forty years, for fifteen months a resident in the Congo Free State. She suffered three brief attacks of malaria from which she apparently recovered. On return to England was admitted, October 3, 1892, to the Hospital of the London School of Tropical Medicine, where she was the subject of close and prolonged observation extending over a period of five months. At first the blood examinations were negative, except that the leucocyte count "was peculiar." She was plump with fictitiously healthy appearance; pulse quick and feeble, 108; tongue rough and raw in appearance, with sensations of soreness and dryness; appetite capricious; bowels constipated; frequent vertical headaches; temperature on admission, 102.8° F., though during the succeeding night it fell to 96.6°; marked muscular feebleness with a tendency to palpitation on exertion; spleen very much enlarged, extending to the umbilicus and crest of left ilium; area of liver dulness somewhat greater than normal. Lungs, heart, and urine, to all appearances normal. "During her stay she seemed at times to be gaining ground; at other times her condition was almost critical owing to general weakness and prostration, accompanied by palpitation and nervous depression, especially so during and after an attack of diarrhoea at the end of November and the beginning of December. About this time she suffered from pain in the left thumb (accompanied by slight swelling and likewise tenderness of the upper and outer surface of the corresponding forearm, with slight discoloration), that persisted for weeks." Parts of January and February were passed at the seaside, but she returned to the hospital on the 24th of the latter month, only to return to her home on March 27th, in much the same condition as when she first entered our wards. During the second stay she exhibited another and more alarming attack of depression, apparently as the sequel of in-

jection of horse-serum, it having been demonstrated by experiment that this was fatal to the life of trypanosoma. It may be added, *en passant*, that the injections were futile, and it was deemed wise to suspend them, since their hæmolytic action was most pronounced, the blood count dropping one-third in the course of a week. The parasites were not, apparently, affected by the serum. Later the injections were resumed, but the results were so untoward it was not deemed safe to continue the experiment further. The erythema, which was a marked feature in the case, was first observed during the primary "malarial" (?) attack while upon the Congo; at that time she suffered greatly from "prickly heat." The integument of limbs, and especially of the trunk and face, was involved, and the eruption was said to have been more marked during the initial pyrexia. Œdema, like the erythema, was most pronounced on the back and face, particularly in the vicinity of the loins and sacral region, and evidently involved the cutis as well as the subcutaneous tissue, so much so that the papillary ridges of the finger were distinctly observable, and for some time persistent after digital pressure. Ophthalmic examination in the macular region of each eye, an area of chorioidal atrophy with some pigmentary disturbance, most developed in the left organ. Outside the patch of atrophy in the right eye were small, regularly circular, discrete, whitish dots, at a deeper level than the retinal vessels. In the periphery of the fundus, in both eyes, were several disseminated small patches of a light color, apparently the result of the atrophy, some with, others without, pigmentary disturbance. Frequent examinations of the blood were made during the first three days in hospital, but no trypanosomes were found until October 27th, but they were immediately apparent when the films were subsequently examined. From this date, though few in number, the parasites were always found on prolonged examination. As to treatment, except for the employment of horse-serum, as before noted, this was confined to the administration of arsenicals and methylene blue, pushed to the limit of prudence, without apparent result, except to benefit the general health.

(2) Leishman's contribution would seem to prove that trypanosomiasis is not, as hitherto supposed, confined to the "Dark Continent," but that it is occasionally found in India, as a manifestation of the so called "Dum-dum fever (Dum-dum lies seven miles from Calcutta and is notoriously unhealthy, malaria in all its types, dysentery, and typhoid fever being especially rife). This conclusion was arrived at as the result of a post mortem. The victim, an inviolated soldier, was admitted to Netley, in April, 1900, and died there seven months later. During this period he suffered from chronic dysentery; his temperature was seldom normal. The necropsy, made thirty-eight hours after death, revealed extreme emaciation, and gross lesions in the spleen and colon—the former was greatly enlarged and weighed 2 pounds and 7 ounces; the pulp was extremely soft, friable, and presented a curious appearance, and on making smear preparations enormous numbers of small, round, oval bodies were discovered among the spleen cells and red corpuscles, which were not then identified. Subsequently.

when working with the nagana (the trypanosoma of tsetse fly disease) the same forms were discovered. While not insisting upon the striking resemblance, as affording proof positive, he yet thinks the evidence, *prima facie*, favors the theory that, in the case cited, the malady was trypanosomiasis, either primarily, or as a complication. Also, that the chronic nature of the disease in the few recorded cases, is suggestive that man possesses an immunity that renders him very resistant to maladies of this precise class, viz., trypanosomiasis, nagana, surra, dourine, *mal de caderas*, etc. It is, moreover suggested that even Kula-azar and "sleeping sickness," probably belong to this group.

(3) Baker, medical officer at Entebbe, Uganda, details the history of three very interesting cases, all being in natives. One had apparently contracted the disease through leech bites; the other two revealed no source of infection that could be identified. The diagnosis was confirmed by finding the parasites in the blood. All recovered after a few days, though what form of treatment was adopted is unfortunately not stated. Baker suggests that many obscure cases of malaria, so called, occurring in Africa, may be due to trypanosomal infection, and that when the malarial parasite can not be found it is always wise to suspect the former, and that the trypanosoma should be sought for.

4. **Acid Sodium Phosphate in Alkalinity of the Urine.**—Dr. R. Hutchinson says that acid sodium phosphate being the chief cause of the acid reaction of normal urine, it might be expected to render the urine more acid when given by mouth. The author's experiments bear out this hypothesis, acid sodium phosphate having a greater acidifying effect upon the urine than any of the other drugs experimented with. Clinical tests in cases of alkaline urine from cystitis, also show it to be of great value. It is a useful adjuvant to urotropin, which acts best in acid urine. It is very soluble in water and may be given in doses of from thirty to sixty grains every three hours. Its only unpleasant effect is that it occasionally produces diarrhœa.

5. **Formalin for Inoperable Cancer.**—Powell's method of application of formalin in cases of inoperable cancer, is as follows: Absorbent lint is soaked in 2 per cent. formalin solution (commercial formalin one part, distilled water nineteen parts) and laid on the tumor. This is covered with jaconet and cotton wool and bandaged on. The dressing should be changed every six hours. After the third or fourth dressing the discharges and fœtor ceases; the further process is an aseptic one. In from three to seven days the tumor loses its elasticity, and becomes darkened, friable, and insensitive. The further use of formalin is painless, and separation takes place, which should be aided by snipping the fibrous bands that pass into the underlying granulations. Less than a 2 per cent. strength of solution will not properly harden the tumor mass, and if that percentage is exceeded, the application is painful, the diseased mass becomes surface hardened, separation is difficult, and there is a risk of eschars. By the author's method no local or general anæsthetics are required.

6. **Guaiacol in Smallpox.**—Ridge reports 43 cases of smallpox treated by him during 1902. Of these cases, five patients were unvaccinated, and these five died—a fact that speaks for itself. The author attributes the favorable course of the recovered cases chiefly to the use of guaiacol dissolved in olive oil—one part to eighty. The whole surface was anointed with this, with a cotton swab at least every four hours. It allayed the irritation and, after a few applications, almost abolished it. It seemed also to reduce the temperature and prevent consequent delirium, to check the maturation, and to cause the pustules to dry up. The only medicine given was a hydrochloric acid mixture, the diet being simple milk and broth, and no alcohol being given. A collateral advantage was the almost entire abolition of the loathsome odor from the eruption.

7. **A Mercurial Injection for Use in the Intramuscular Treatment of Syphilis.** By Dr. F. J. Lambkin. (*British Medical Journal*, May 30th).—The author recommends the use of mercury in the intramuscular treatment of syphilis in the form of a cream consisting of mercury, lanolin, and carbolic oil. It is much less painful than all other forms of mercurial injections, and its effects on the symptoms and the ultimate cure of syphilis are much more marked. He uses a mixture of two drachms of mercury, two drachms of lanolin, and four drachms of 2 per cent. carbolic oil. From five to ten minims should be given once a week as an intramuscular injection.

THE LANCET

May 30, 1903.

1. Clinical Remarks on the Results of Operations for Strangulated Hernia. By ARTHUR E. BARKER.
2. A Clinical Lecture on Acholia. By W. B. CHEADLE.
3. The Differentiation of the Continued and Remittent Fevers of the Tropics by the Blood Changes. By LEONARD ROGERS.
4. On Cases of Uncomplicated Myocarditis in Children. By GEORGE CARPENTER.
5. Malignant Disease of the Colon; 14 Colectomies with 10 Recoveries. By H. LITTLEWOOD.
6. On Peritomy for Diffuse Corneitis and Other Affections of the Cornea. By SIMEON SNELL.
7. The Therapeutic Value of Alternating Currents Applied to the Abdominal Sympathetic Nervous System. By SAMUEL SLOAN.
8. Successful Removal of More than Three Quarters of the Stomach for Cancer, with Gastrojejunostomy. By J. LYNN THOMAS.

1. **Strangulated Hernia.**—Barker's lecture is a critical review of 406 consecutive cases of strangulated hernia, treated at the University College Hospital. Except in recent cases among very old subjects taxis is not advisable. Sloughing, perforation and peritonitis following the return into the abdomen of gut not sufficiently sound occurred in several cases submitted to operation.

2. **Acholia.**—Cheadle says that acholia is specially characterized by the absence of bile in the stools, without jaundice or signs of obstruction to the biliary outflow from the ducts. In some cases

the stools are merely pale, fawn color, or straw color, in others clay colored, or even absolutely white. The condition occurs not infrequently in adult high livers, but here it is only temporary. White stools of more persistent character and of more serious import, involving danger to nutrition, are met with in hot climates in *fluor albus*, or white diarrhoea, and in sprue. Acholic stools occur usually in children under five years of age, but by far the most often in the first two years of life. The advent of the soft, greasy, offensive, voluminous, white stools is speedily followed by marked impairment of the general health. The patient ceases to thrive, loses weight, the abdomen becomes full yet flaccid, the enfeebled abdominal wall yielding to the distended gases of the fermenting food in the intestines, and in prolonged cases the patient wastes steadily to emaciation. The causes of the disease are obscure. It is possibly a dental irritation reflex. The only other cause in addition to teething is surface chill. The indications for treatment are to ease the work of the liver, especially with regard to the digestion of fats and starches, and to assist its function. Bismuth and opium and hepatic stimulants are the medicines indicated.

3. Blood Changes in Tropical Fevers.—Rogers, after clinical pathological investigations of fevers at Calcutta, asserts that only two forms (of long duration) exist there—typhoid and malarial remittent. Most of the cases can be distinguished clinically. Of the remainder almost all can be diagnosed by the serum test and by blood count—the percentage of lymphocytes being increased in typhoid fever of the large uninuclear leucocytes in malaria. The so called “non-malarial remittent” fever in natives, as described by Crombie, is nothing but typhoid. “Simple continued fever” is very rare, comparatively, if, indeed, it exists as a separate disease. “Low fever,” characterized by a persistent pyrexia with slight afternoon rises, rarely above 101.5° F., by much depression, and by disappearance upon change of climate, shows the same blood changes that occur in malarial cachexia in the absence of active malarial fever; while it is clinically distinct it probably results from the debilitating effects of long tropical residence, includes latent malaria, and is not a new specific fever. Malta fever is exceedingly rare in Lower Bengal and Assam.

4. Uncomplicated Myocarditis.—Carpenter reports four cases in children occurring independently of endocarditis or pericarditis, with the microscopical findings in three. Presystolic and systolic mitral murmurs, and dilatation of the heart are found in these cases, but not always. Carpenter believes that murmurs existing for a time in the course of acute rheumatism and of chorea and then disappearing, are due rather to myocarditis than to endocarditis.

5. Colectomy.—Littlewood presents a table of fourteen colectomies for malignant growth, with ten recoveries, and a description of his method.

6. Peritomy.—Snell has performed Furnari's operation of excising a ring of the ocular conjunc-

tiva, but without the cauterizing, in 100 cases of diffuse keratitis, with satisfactory results, and recommends it also for certain chronic corneal ulcerations.

7. Alternating Currents.—Sloan reports sixty seven cases, representing a variety of disorders that had resisted other therapeutic measures, in which he had applied the alternating current to the abdominal sympathetic system, with 80 per cent. of cases. He concludes from his experience that this treatment is of benefit in uncomplicated neuromuscular asthenia (without psychological elements), in visceral neuroses, in cases of “persistent sickness,” some of them of reflex character, and in vasomotor cases, but that is of little help in neurasthenia, pelvic inflammations, septic endometritis, and epilepsy.

8. Gastrectomy.—Thomas reports a case of partial gastrectomy for carcinoma, and urges the importance of preoperative distention of the stomach, to determine the mobility of the growth.

BOSTON MEDICAL AND SURGICAL JOURNAL

June 11, 1903.

1. The Symptomatology and Diagnosis of Diseases of the Pancreas. By REGINALD H. FITZ.
2. Small Contributions to the Surgery of the Intestinal Tract. By JOHANN VON MIKULICZ.
3. The Surgery of the Simple Diseases of the Stomach. By B. G. A. MOYNIHAN.

2. Surgery of the Intestinal Tract.—Johann von Mikulicz deals with his subject as follows: (1) Cardiospasm and its treatment. This condition is the result of occlusion of the cardiac orifice of the stomach through muscular spasm. In advanced cases the entrance to the stomach will become so completely stenosed that the sufferer will die of starvation if unrelieved. The œsophagus undergoes a pouch-like dilatation and its wall becomes concentrically hypertrophied. Ordinary methods of treatment give only temporary relief. The author has devised the following operation which he has performed, once, with absolutely good results. The patient was operated on only three months ago, so that it is yet too soon to claim an absolute cure. The operation: The stomach was exposed by laparotomy, its anterior surface was incised, and through the wound a branched dilator was introduced and guided by the fingers of the operator's left hand into the stenosed cardiac orifice. The dilatation was effected gradually and persisted in until the blades of the instrument were about seven centimetres apart. (2) On peptic ulcer of the jejunum. Peptic ulcer of the jejunum occurs only after anterior gastroenterostomy (Woelfer's method). It usually occurs during the first week after operation, but its appearance may be delayed for several months. The symptoms it produces closely resemble those due to ordinary gastric ulcer. Its complications are perforation, either into the peritoneal cavity, or more gradually through the anterior abdominal wall. The formation of these ulcers is explained by the prolonged presence of gastric juices, undiluted and unneutralized by bile and pancreatic

secretions, within the lumen of the jejunum. From these facts the author concludes: (a) That we are no longer justified in performing anterior gastroenterostomy; at least not for benign affections of the stomach. (b) That the operation of choice is pyloroplasty with Finney's modification. If this operation is not feasible, then the choice must lie between gastroduodenostomy, as advised by Kocher, or posterior gastroenterostomy, v. Hacker's operation. (3) On operative treatment of severe forms of invagination of the intestines. The treatment outlined is proposed for those cases in which disinvagination is impossible. The ordinary operation is extremely dangerous. The author has operated on two cases by the following method. An incision 20 centimetres long was made along the left border of the left rectus abdominis. The colon was drawn into the wound, so as to expose freely a strip of its anterior wall, and it was then stitched, through its serous covering to the abdominal wall. Thus the visceral layer of peritonæum was united to the parietal layer. All gaps were tamponed. The anterior wall of the colon was now incised and the intussusception was exposed. The outer and inner layers of the intussusception were cut away, step by step, and a deep catgut suture was immediately introduced, to close the peritoneal pocket as soon as it was made. The mesentery was treated by the method of multiple ligation. The large artificial anus, left by the operation, was closed by the usual method at the end of some weeks. Both the patients treated by the author, according to the method just described, made an uneventful recovery. (4) On operation on malignant growths of the large intestine. The prevalent method of operation, excision of the tumor and immediate suture of the intestine, gives very bad results, the mortality varying from 30 to 50 per cent. The author advocates doing the operation in two steps. By this method there have been, so far, twenty-four cases placed on record with only four deaths. None of these deaths, however, was due directly to the operation. Dr. von Mikulicz has performed two such operations and he employs the following technics: The primary incision, the enucleation of the tumor, the removal of the lymph glands, etc., are performed in the same manner as in the ordinary operation. The difference is that, after the tumor is freed, it is drawn out of the wound, the loop of gut is stitched to the parietal peritonæum by sutures which only penetrate the serosa, and the abdominal wound is then closed leaving only sufficient room for the loop of gut. The tumor is now excised and an artificial anus is formed which is closed in the usual manner at the end of from two to four weeks. The permanent results of operation for malignant tumor of the large intestine are more favorable than is generally imagined. Out of twenty-four cases under observation, at the author's and Koerte's clinics, there has been no recurrence in nine cases after a lapse of more than four years.

3. **Surgery of the Stomach.**—B. G. A. Moynihan, by simple diseases of the stomach, means the non-malignant diseases. The great majority of simple diseases of the stomach, which are susceptible of successful treatment by surgical intervention, are

those due to ulceration or to its complications and results. These conditions are classified and treated by the author in the following order: (1) Perforation of gastric or duodenal ulcers; (2) hæmorrhage from gastric or duodenal ulcers; (3) chronic ulcer, its various clinical types; (4) hour-glass stomach. The author reviews carefully each one of these conditions and discusses their ætiology, pathology, symptomatology, treatment, and complications. The following is a very condensed summary of his teaching: (1) Excision of the ulcer is unnecessary in acute perforation. The ulcer should be inverted and sutured. One point demands special emphasis, *i. e.*, perforating ulcers are multiple in about 20 per cent. of all cases. The whole stomach must therefore be carefully examined. If the ulcer should be in the duodenum, and if the suturing produces stenosis, gastroenterostomy is indicated. (2) Hæmorrhage from gastric or duodenal ulcers. (a) From an acute ulcer. The surgeon's aid will rarely be invoked, as there is a decided tendency to spontaneous arrest. In some few cases operation will be necessary. In such cases "a search for a bleeding point is futile, harmful, and, in my judgment, quite unnecessary." Gastroenterostomy is the most effective means of checking hæmorrhage and preventing its recurrence. (b) From a chronic ulcer. Bleeding from a chronic ulcer demands an immediate operation. Local treatment of the ulcer is not necessary. "A gastroenterostomy will, without doubt, prevent a recurrence of the hæmorrhage and lead to a rapid healing of the ulcer from which the hæmorrhage has come." (3) Chronic ulcer, its various clinical types. The author believes that many persons who have died from supposed malignant disease of the stomach, have succumbed to nothing more serious than chronic ulceration. Dyspepsia of the intractable, constantly recurring form, is more often due to mechanical defects of the stomach than to changes in the quality and quantity of the secretions. "Inveterate dyspepsia is, in itself, an ample warrant for surgical treatment." Gastroenterostomy in chronic ulcer of the stomach, gives very brilliant results. It is not only unnecessary, but futile, in such cases to attempt excision of the ulcer. "Gastroenterostomy will relieve the symptoms completely and permanently, and will permit of the sound healing of the ulcer." (4) Hour-glass stomach. The author doubts if this condition is ever congenital. In any case there is not, so far, any satisfactory evidence that it is. It is conceivable that it may be. It is possible to diagnosticate the condition positively if proper methods are followed. The author gives nine signs by which the condition may be recognized. The differential diagnosis resolves itself into separating the condition from obstructions of the lower part of the œsophagus and from pyloric stenosis. The treatment may be beset with difficulties. In many cases no single operation can be relied upon to give relief. In all cases one must constantly bear in mind that there may be multiple constrictions both of the stomach and of the duodenum. "The following operations may be practised: (1) Gastropasty; (2) gastrogastrotomy or gastroanastomosis; (3) either of the foregoing, with gastroenterostomy from the pyloric pouch, in case of dual stenosis; (4) gastroenteros-

tomy from cardiac pouch, when the pyloric pouch is so small that it can be ignored; (5) gastroenterostomy from both pouches; (6) partial gastrectomy." The author has had the following experience in the surgery of the stomach: Perforating gastric or duodenal ulcers, 12 cases, 6 recoveries; gastroenterostomy for chronic ulcer, etc., 70 cases, 1 death; pyloroplasty, 3 cases, no deaths; hour-glass stomach, 15 cases, 3 deaths; gastroplication, 1 case, recovery; excision of ulcer for hæmatemesis, 1 case, 1 death.

MEDICAL NEWS

June 13, 1903.

1. Colchicum in the Treatment of Gout.

By CHARLES C. RANSOM.

2. Four Months' Experience with Antistreptococcic Serum in Pulmonary Tuberculosis.

By S. G. BONNEY.

3. The Origin of the Eosinophiles and their Diagnostic and Prognostic Importance.

By THOMAS R. BROWN.

4. The Morbid Anatomy and Pathology of Tabes.

By JOSEPH COLLINS.

5. Leucoplasia in Secondary Syphilis.

By DOUGLASS W. MONTGOMERY.

1. **Colchicum in Gout.**—Ransom thinks we are liable to overlook the older remedies of value on account of the vast number of products of the new chemistry. From the year 580 A. D. to 1763, colchicum seems to have dropped out of sight. At the latter date, the *Colchicum autumnale*, or meadow saffron, which is the plant in use, was introduced by Baron Storck and soon became well known. It was the principal ingredient in many quack medicines of great popular repute. Its use was objected to by Pettit, Todd, and Copeland, as diminishing the interval between attacks, inciting a "habit," and giving rise to melancholia, insanity, paralysis, and angina pectoris. Colchicine, the active principle, "depresses the cerebral convolutions and the cord" (*sic*), causing loss of sensibility and of consciousness and diminished reflex excitability; the peripheral sensory nerves being also paralyzed, while the motor nerves and the muscles remain unaffected. Death occurs by asphyxia and the heart is weakened so that the pulse becomes intermittent. In small doses, it stimulates the liver. In large doses, it is a gastrointestinal irritant poison, causing vomiting, diarrhoea, and collapse. Biddle, Lewis, Storck, Hammond, C. S. Taylor, Chilius, and MacLagan consider it an active diuretic, while Graves, Gardiner, Fawcett, and Garrod deny this. The author's conclusions from personal observation of two cited cases are that the excretion of urine is diminished under its use; that the specific gravity is increased; and that the output of urea and uric acid is markedly greater. He considers the variance of opinion among the authorities as due to faulty and imperfect methods of investigation.

Although the favorite preparation nowadays is the wine, the author prefers the alkaloid as more reliable, pleasanter to take, and with less danger of disagreeable consequences. It is not necessary to push it to the extent of producing diarrhoea, and the author considers small continued doses to be best, and denies that there is danger of producing a "habit," or of driving the gout from the toe to

the internal viscera. It is no more dangerous to a weak heart or inflamed kidneys than any other powerful drug, and in the latter case, it actually diminishes the amount of albumin excreted. We know nothing of its action in gout and use it empirically.

2. **Serumtherapy in Tuberculosis.**—The author states his failure to get satisfactory results with the serum some years ago, and says he was induced to undertake its use again at the suggestion of Dr. M. P. Ravenel, who attributed his former lack of success to improperly prepared serum or to the use of cocci of light virulence. A serum from any of the recognized types of streptococci will exercise a powerful influence over all others. In recommencing the use of the serum, only those cases were undertaken in which regimen and climate had proved of no avail. In all, the sputum was found to contain large number of streptococci, and was carefully taken in a sterilized bottle, before the partaking of food and after the throat and mouth had been carefully prepared. The report embodies 25 cases in private practice, all at the time residents of Denver, Colo. Three were practically cured; four showed very marked improvement and promise good recovery; five exhibit definite improvement, although the final outcome is as yet uncertain; eight show a degree of improvement, but hardly sufficient to modify a previously unfavorable prognosis; finally, in three cases there was no actual result. Severe urticaria followed the injections in a number of cases, and stiffness and pain in the joints were not uncommon. The author is emphatic as regards the curative effects of the injections, and considers his report amply justified.

5. **Leucoplasia and Syphilis.**—Montgomery presented a case of leucoplasia in secondary syphilis before the California Academy of Medicine, January 27, 1903, stating that the complication was not as rare as was once considered. The patient was a Scotchman, thirty-seven years of age; family history, rheumatism only; primary sore August, 1900; in October of the same year, bedridden with rheumatism of right ankle; February, 1901, universal rash and sores in mouth; in April, May, and June, sore scalp and falling out of hair, onychia on hand and foot. At the clinic, patient presented a general lenticulopapular eruption, in groups. The mouth presented the most striking and annoying affections, mucous patches, papules, etc., which caused the patient great suffering. Most remarkable was the occurrence on anterior portion of dorsum of tongue of a dense, solid, smooth, opalescent coating, which was at one time painful and is still sensitive to pepper, etc. Patient is a heavy smoker, in spite of warnings, and tobacco is well known as a cause of leucoplasia. The author differentiated mucous patches, and lichen planus. The prognosis of syphilitic leucoplasia is better than that of the disease from other causes. Smoking makes the prognosis almost hopeless. In the case presented, arthritism, lumbago, syphilis, alcohol, tobacco, ill-kept teeth, all played their part in the ætiology. The case might finally develop into epithelioma. Three out of four cases of secondary leu-

coplasia have occurred in women. In these cases, mercury must be used with caution, to avoid irritation of the mouth. Inunction may be tried, but the author favors hypodermic injections of the bichloride and the frequent swabbing of the mouth with chromic acid.

AMERICAN MEDICINE

June 13, 1903.

1. On Cysts and Other Neoplasms of the Pancreas.
By ROSWELL PARK.
2. Fourth of July Tetanus By H. GIDEON WELLS.
3. Nephrolithiasis, with Report of a Case.
By CHARLES D. LOCKWOOD.
4. Orbital Cellulitis as a Sequel of Scarlatina; The Report of Two Cases. By BURTON CHANCE.
5. Arteriovenous Aneurysm of the Femoral Vessels; Ligation of the External Iliac Artery; Failure of Collateral Circulation; Amputation; Death.
By SCHUYLER COLFAX GRAVES.
6. A Case of Postoperative Tetanus, with Special Reference to the Focus of Infection.
By LEVI J. HAMMOND.

1. **Pancreatic Tumors.**—Park briefly reviews the literature and precedes a consideration of the varieties, modes of formation, symptoms, and treatment of pancreatic tumors, with a reference to those anomalies of the organ of which the operator should have knowledge. He mentions (a) Complete absence of the pancreas, (b) abnormalities of the ducts, (c) annular pancreas—which may produce constriction of the duodenum, (d) accessory pancreas. The author adopts Robson and Moynihan's classification of cysts of the pancreas. 1. *Retention Cysts.* Impaction of calculi, and stricture of the duct are the intrinsic causes, chronic pancreatitis being the commonest cause of retention cysts by duct occlusion. Mere closure of the duct is not a sufficient cause, and the writer quotes Henricius's view that disturbed absorption of pancreatic juice is to be assumed. The extrinsic causes of retention cysts are given as pressure from without, abnormalities in shape or position of the organ, and, rarely, closure or obstruction by parasites. 2. *Proliferation Cysts.* These include cystadenomata, which usually occur near the tail of the organ. Although their contents are often bloodstained they are not, properly speaking, blood-cysts. Also in this group are cystic epitheliomata, which are essentially cystic formations with cancerous deposits in their walls. 3. *Hæmorrhagic Cysts.* Hæmorrhage into a preexisting cyst must be distinguished from a true apoplexy of the gland with cystic degeneration of the clot. 4. *Hydatid Cysts.* Rare. 5. *Con genital Cystic Degeneration.* Rare. 6. *Pseudocysts,* better named by the writer "peripancreatic cysts," usually result from injury to the pancreas, and consist of collections of fluid in the lesser peritoneal cavity difficult to distinguish from true pancreatic cysts. The rapidity of their formation, especially after traumatism, and the location of the swelling are suggestive in the diagnosis. The symptoms of pancreatic cysts are not characteristic. Vomiting varies; emaciation is marked. Fat and undigested muscle fibres in the stools, and glyco-

suria are less frequent than in other pancreatic diseases. Sahli's test (by the administration of salol) may be useful. Cysts growing beneath the stomach and above the colon are best suited for operation. Aspiration is condemned. Drainage, anteriorly, posteriorly, or in both directions, should be undertaken when extirpation cannot be performed. The resulting fistula may remain open for years, without detriment. *Solid tumors* of the pancreas are briefly discussed, and an effort is made to measure the relative importance of the various symptoms. The occurrence of voluminous fatty stools followed by jaundice and then by glycosuria, together with epigastric pain and emaciation, should arouse the suspicion of pancreatic carcinoma. Similar findings in the stools and urine, together with attacks of colic in the upper abdomen point to a diagnosis of *pancreatic lithiasis*, which, however, only a discovery of calculi can confirm. The article concludes with the statement that a well-founded suspicion of pancreatic disease, acute or neoplastic, indicates surgical exploration, and that it is best to operate when in doubt.

2. **Tetanus.**—Wells calls attention to the relative frequency of tetanus just after July 4th, and to the fact that most of the cases follow blank cartridge wounds. The cartridge wads carry the bacilli from the dirt on the skin into the wound. Every blank cartridge wound should be treated seriously—cleanse thoroughly, remove all contused tissues and foreign bodies, cauterize, pack all pockets. A prophylactic injection of 5 cubic centimetres of antitoxine is advised for all cases seen only after a lapse of a few days. For tetanus itself the intraspinal injection of antitoxine appears more rational to Wells than the intracranial. If antitoxine is not obtainable, the injection of an emulsion of rabbit's or sheep's brain (secured aseptically) is recommended, based on Wasserman's demonstration that tetanus toxine is firmly combined by nerve tissue equally whether in its normal condition in the body or as an emulsion in a test tube. Prophylaxis by restriction of the use of firearms and fireworks is urged.

3. **Nephrolithiasis.**—Lockwood reports a case at length and emphasizes the importance of a study of the renal sufficiency before operating. He determines the quantity of urea excreted by each kidney, the freezing point of the blood and of the urine (cryoscopy), and the amount of sugar excreted by each kidney after the injection of phloridzin. Following the introduction of 2 mgms. of this substance deeply into the lumbar muscles the normal kidney excretes for one or two hours at the rate of about .42 per cent. of sugar. Before operation the functional activity of the kidneys should be stimulated by diuretic measures, and urinary antiseptics should be administered.

4. **Orbital Cellulitis.**—Chance reports two fatal cases of orbital infection occurring during convalescence from *scarlatina*. Both were in boys. The onset was sudden and the course rapid, in spite of generous incisions. In neither case was there evidence that the infection was an extension from

inflammation in an adjoining sinus. Vision, ocular movements, and pupillary reactions were destroyed. Sanious fluid, but no pus, filled the orbits in each case. No cultures were made of this fluid. The author suggests the occurrence of thromboses as causative agents.

MEDICAL RECORD.

June 13, 1903.

1. On Neurofibromatosis.

By JOSEPH FRAENKEL and J. RAMSAY HUNT.

2. Organization of the Bureau of Public Health and Marine Hospital Service.

By WALTER WYMAN.

3. Diagnostic and Prognostic Data in Nervous and Mental Diseases.

By WILLIAM BROADDUS PRITCHARD.

4. Autoepidermic Skin-Grafting.

By H. F. MCCHESENEY.

5. Report of an Operation for Carcinoma of the Cæcum and One of Carcinoma of the Transverse Colon.

By C. G. DARLING and DEAN LOREE.

1. **Neurofibromatosis.**—Fraenkel and Ramsay Hunt emphasize the following points: (1) The possible diagnostic aid to be derived from the presence of skin fibromata or nævi in obscure lesions of the nervous system. (2) The choreiform muscular twitchings observed in the first case. A similar condition was noted by Virchow, and in a case recently reported by Dr. Thomas to the Johns Hopkins Medical Society (*Medical News*, January 24, 1903, p. 183). (3) The absence of characteristic root pain in a case of extra medullary compression of the cord. (4) The fact that neurofibromatosis is occasionally the cause of increased intravertebral or intracranial pressure. (5) The presence of neurofibromata without giving rise to neural symptoms. (6) The indications for surgical intervention are given not only by direct neural symptoms, but by the consideration of the fact that sometimes, although rarely, neurofibroma may assume a malignant character and undergo sarcomatous transformation. (7) That the absence of neural symptoms may be explained partly by the presence of an interfibrillary œdema and succulent myxomatous tissue within the hyperplastic fibrous tissue, thus diminishing and distributing the pressure; and partly by the absence of a tendency for this fibromatous tissue to contract, in contradistinction to inflammatory hyperplasia.

2. **The Marine Hospital Service.**—Published in full in *New York Medical Journal* for June 13th.

3. **Prognosis in Nervous Diseases.**—William Broadbuss Pritchard holds that this is better than is generally supposed; that the number of recoveries is as great as in any other disease. Certain forms are, however, hopeless; notably, general paresis. Landry's palsy, and multiple sclerosis; even the most discouraging cases of myelitis, especially if traumatic, may turn out well, and many hemiplegias, especially when syphilitic, recover. A syphilitic ætiology favorably modifies the prognosis, save in tabes, general paresis, and epilepsy; and even in these, decided benefits may be secured. The recoveries in meningitis, excluding the tuberculous variety, reach fully 50 per cent. Among the insanities all the non-organic types are recoverable, and

the majority yield excellent and prompt results. A vicious heredity always constitutes an adverse factor. In epilepsy, chorea, and the neuroses generally, the more anomalous the type, the more favorable the prognosis, is the rule. Ætiology is relatively unimportant in its bearing upon the prognosis in many of the neuroses. Removal of the cause, to be effective in promoting relief and convalescence, must be prompt—so prompt, indeed, as almost to precede diagnosis.

4. **Skin Grafting.**—McChesney reports a case of extensive burns in which the following method was used: "The area to be grafted was cleaned off with Thiersch's solution and then irrigated with normal salt solution. The granulating surface was then dried with gauze sponges. Where the granulations were firm and healthy, the graft was placed directly on them; over areas of exuberant growth they were cut down and gently compressed with dry sponges until all bleeding stopped. Some of the granulations were very soft and flabby. These were all scraped away until a firm fibrous foundation was reached. Then the thin blue line of epithelial cells that had started to creep in along the edge of the wound was dissected up, and small pieces about an eighth of an inch square were cut off and placed on the granulating surface already prepared. These were placed with the raw surface against the newly prepared surface, and covered with pieces of oiled silk protective about an inch square; other transplanted areas were protected with plain sterile gauze. The limb was then put up in a Volkman splint to prevent contractures, and also to keep the parts quiet, so that the grafts would not be displaced." This method is said to be painless and effective.

JOURNAL OF THE AMERICAN MEDICAL ASSOCIATION.

June 13, 1903.

1. The Modern Conception of Eczema. Chairman's Address before the Section on Cutaneous Medicine and Surgery. By J. A. FORDYCE.
2. Mercurial Treatment of Syphilis. A Further Contribution to the Study of Mercurial Injections. By M. L. HEIDINGSFELD.
3. Report of a Case of Fibroma Molluscum. By HENRY G. ANTHONY.
4. The Treatment of Leprosy. Discussion on the Paper read at New Orleans. By A. H. OHMANN-DUMESNIL.
5. Notes on the Treatment of Lichen Planus. By JOSEPH ZEISLER.
6. The Pathology of Summer Diarrhoeas of Children. By G. W. BOOT.
7. Every-Day Problems in Infant Feeding. By HENRY ENOS TULEY.
8. Infant Feeding. By ALEXANDER McALISTER.
9. Infant Digestive Disturbance. By A. C. COTTON.
10. Suggestions for Reducing the Prevalence of Summer Diarrhoea in Infants. By J. ROSS SNYDER.
11. Fruit Vessels, Mosquitoes and Yellow Fever. By EDMUND SOUCHON.
12. The Weight Wave of Menstruation. A Preliminary Note. By WILLIAM T. BELFIELD.

1. **Eczema.**—Fordyce regards as artificial the

distinction, in nomenclature, between those cases of superficial catarrhal inflammation of the skin in which the cause is known—dermatitis, and those in which it is not known—eczema. We have good reason for assuming that eczemas have a local cause. Still we cannot deny, since we cannot disprove, that eczema may be caused by some internal condition, such as infection from the gastrointestinal tract. The general conditions given as causes of eczema, however, act rather as contributing factors in preparing the skin for the action of microorganisms or their products. Even the symmetry of an eruption is not positive proof of the influence of the nervous system or of a constitutional cause. Variations in the type of disease are no doubt due to variations in the serotactic power of the irritant, etc., as well as to individual idiosyncrasy or constitutional fault. Fordyce admits, with Bracq and others, the existence of a skin lesion—lichen simplex, lichenification, or neurodermite—that is to be differentiated from lichen planus and from chronic eczema. It differs from the latter by its persistent dryness and freedom from vesicles, and its papules differ from those of lichen planus in absence of umbilication and of polygonal outline. Lichenification may develop about, and obscure, a patch of eczema, lichen planus, or other dermatosis. Many skin lesions formerly called idiopathic eczema are due to the local action of streptococci and staphylococci. Pemphigus vulgaris may yet be proved to be of streptococcic origin.

2. **Mercury in Syphilis.**—Heidingsfeld recommends, for routine treatment, courses of injections made deeply in the buttock, twice weekly, of an even mixture of equal parts of bidistilled (metallic) mercury and lanolin, gently heated to about 100° F. This is a modification of Lang's formula, which the author made because he regards albolene as more or less of an irritant, and believes that his semisolid mixture is less apt to produce emboli.

6. **Summer Diarrhœas.**—Boot divides the diarrhœas of children due to food infection into two main groups: (a) the result of preformed poisons; (b) the result of infection by bacteria in the food. Streptococci are only occasionally causative of diarrhœa in children. It is probable that the *Bacillus coli communis* is at times the infecting organism; but it is more probable that the bacillus of Shiga, of the same group, is the specific cause of most summer diarrhœas.

7. **Infant Feeding.**—Tuley emphasizes the importance of these problems in the supervision of breast feeding: 1. The increase of a too small supply. 2. Change in the character of the milk, (a) by decreasing the proteids (by pumping out the forepart, the infant nursing on the middle and last portions of the breast supply); (b) by increasing the fat, (c) by decreasing the fat. 3. To make and keep the nipples serviceable. 4. To supply an adjuvant food when the breast product is good but insufficient. 5. To continue nursing during a suppurative mastitis.

9. **Infant Digestion.**—Cotton holds that diarrhœas among breast fed infants are never essentially

"summer diarrhœas," and are usually fairly tractable. He pleads for a closer study of the physiology and pathology of lactation.

10. **Summer Diarrhœa.**—Snyder urges the importance of inspecting dairies and of supervising the care of cow's milk within the home, and suggests that boards of health issue to the poor printed rules for the care of infants in summer.

11. **Mosquitoes and Yellow Fever.**—Souchon shows that the *Stegomyia fasciata* is an uncommon variety of mosquito on fruit vessels from parts quarantined against yellow fever and that this insect is not infected on board these ships; further that cases of yellow fever found on fruit vessels were infected ashore and that even on infected fruit vessels there is, for several reasons, improbability of the *Stegomyia fasciata* becoming infected before the ship reaches the quarantine station (where the insects are killed by the fumigating processes).

12. **Weight and Menstruation.**—Belfield has noted that in healthy young women there is a progressive increase of weight, sometimes amounting to two and one-half to five pounds, for several days preceding menstruation, followed by a rapid, and then more gradual, return to the intermenstrual weight, beginning with or just before the appearance of the flow. The increase and decrease in weight are due respectively to decrease and increase in excretion.

BERLINER KLINISCHE WOCHENSCHRIFT.

May 25, 1903. (40 Jahrgang No. 21.)

1. Diagnostics of Ailments and Functional Efficiency of the Kidneys. By H. SENATOR.
2. The Problem of an Antimorphine Serum. By J. MORGENROTH.
3. Veronal, a New Soporific. By A. LILIENFELD.
4. Physical Exercise and Alcoholism. By BUENGE.

1. **Kidney Diagnostics: Palpation, Inspection, Analysis.**—Senator, to ascertain pathological changes in the configuration of the kidneys, their movableness, translocation and the eventual formation of tumors, proposes palpation with the patient floating in the water of a tepid bath, a posture easily effected by resting the patient upon a canvas properly affixed to the tub. With regard to some neglected and little known methods of inspection, he emphatically recommends to look out for epigastric contraction, which—more particularly so if one-sided—is almost invariably a pathological concomitant of painful diseases of the kidneys. He depreciates the value of palpation *per rectum* and *per vaginam*, except in cases of dislocation, and deduces the almost complete worthlessness of percussion from the fact, that the acoustic effect remains usually unchanged after extirpation of one kidney. In enlarging upon the subject of analysis Senator corrects the erroneous conception of many practitioners, who assume, that polyuric secretions are positive indication of granular contracting kidneys, referring to new discoveries proving polyuria to be a symptom of a certain form of amyloid degeneration. He

quotes Traube in verification of the little known fact, that the urine of a patient suffering from contraction of the kidneys may remain lucid and clear, the stronger cyanosis notwithstanding. The albumosuric secretions of many healthy individuals in the army and navy he ascribes to overexertion, which finally leads in many cases to kidney diseases of a grave character.

2. Hirschlaff's Antimorphine Serum.—In defense of his sceptical attitude regarding the value of Hirschlaff's serum discovery, Morgenroth quotes Bashford's proof against Pohl of the non-existence of an immunizing specific against solanine, and Bashford's and Besredka's failures in quest of immunization against saponine, defining the status presens of medical science as ignorant of any antitoxic bodies produced by immunization with poisons of a known chemical constitution. Hirschlaff, on the strength of numerous and very carefully conducted experiments with rabbits as recipients of increased doses of morphine claims to have found a serum sufficiently powerful to protect these animals against the poisonous effect of the alkaloids. Hirschlaff's positive results were gained by experiments with mice. After a subcutaneous injection of 0.5—1.0 c.c. of his serum, the mice survived on the day following a simple or double lethal dose of morphine (0.01-0.02 gramme). Hirschlaff's tabular statements are shown to be of no conclusive strength by Morgenroth, whose tabulated experiments with mice yield contradicting results. Morgenroth ascribes Hirschlaff's seeming success to his underrating in fixing upon a standard for a certainly effective lethal dose.

3. Fischer-Mehring's Veronal.—Veronal, Emil Fischer's and von Mehring's newly discovered soporific, seems to be predestined, according to Lilienfeld, to supply the practitioner's demand, heretofore unsupplied, for a really perfect and universally applicable soporific. After reviewing the whole sleep-adducing material of the materia medica, with its manifold shortcomings, Lilienfeld gives a recital of favorable results gained in tentative practice jointly with Goldstein. Veronal is represented as a colorless and odorless, beautifully crystallizing body of mildly acid taste, which melts at a temperature of 191° C. Lilienfeld and Goldstein began with doses of 1.0-1.5 gramme, but soon satisfied themselves of the hypnotic power of their remedy asserting itself after doses of 0.5 gramme, a quantum satis bringing about in the large majority of cases a sleep of 7 to 9 hours' duration. In sixty cases of insomnia caused by neurasthenia, hypochondria, hysterics, melancholic depression, incipient progressive paralysis, heart diseases, etc., 450 single doses of the new remedy proved it to be far superior in certainty and intensity of effect to any other known hypnotic and almost infallible in its power of universal application. Patients take kindly to veronal, when given in a cupful of hot milk or hot tea, the dose taking effect within a quarter of an hour. A dose of 0.5 gramme leaves no after-effects; 1 gramme and more, leaves the patient drowsy and somewhat tired the next day. Repeated doses establish no toleration, create no disturbances, and leave the urine free from

albumin. A female morphiniste, during and after cure, took every evening 0.5 gramme for two months, and at the end of that period slept as well as after the first dose, while 1.5 gramme of trional left her absolutely sleepless. In contradistinction to all other hypnotics, veronal is a priceless ally for the physician, combating his arch enemy in the fight against the morphine habit—obdurate sleeplessness of the patient.

MUENCHENER MEDICINISCHE WOCHENSCHRIFT

April 14, 1903.

1. Contribution to the Knowledge of the Anæsthetic Action of Yohimbin (Spiegel).
By A. LOEWY and F. MÜLLER.
2. Juvenile Tabes and Its Relations to Hereditary Syphilis.
By P. LINSE.
3. The Symptomatology and Treatment of Spastic Wry Neck (Torticollis Spastica).
By K. HASEBROEK.
4. The Treatment of Laryngeal Tuberculosis.
By KRONENBERG.
5. Gummata at the Point of Injection of Mercurial Preparations.
By F. JULIUSBERG.
6. Serum Therapy Against Bubonic Plague.
By G. POLVERINI.
7. A Case of Hysterical Fever.
By TILLMANN.
8. Abnormal Motility of the Gall Bladder Containing Stones.
By V. LIEBLEIN.
9. A Rare Case of Measles.
By B. MACHOLD.
10. The Withdrawal of Responsibility from Paranoiacs.
By K. HEILBRONNER.
11. Medical Journalism in Germany in 1853, 1875, and 1901.
By E. ROTH.

1. Yohimbin as an Anæsthetic.—Abstracted in *New York Medical Journal*, June 6th, p. 1042.

2. Juvenile Tabes and Hereditary Syphilis.—Linser reports the case of a woman, thirty-four years of age, with neuropathic heredity who had hereditary syphilis. At the age of twenty-seven years the early stages of tabes were recognized, although from the age of twenty years she had had lancinating pains in the limbs. The commonest cause of tabes occurring in young persons is unquestionably hereditary syphilis.

3. Spastic Wry Neck.—Hasebroek believes, in view of the futility of surgical operations in many cases of spastic torticollis that it cannot be regarded as merely a manifestation of accessorius disease, but that other nerves must also be involved. He mentions some cases of this condition. The first, in a man aged forty years, had a spasm of the left sternocleidomastoid. Nevertheless, if he placed the arm and hand in the position of a military salute he could move the head freely. As soon as the arm was brought to its normal position the torticollis returned. There was a tender point just over the left shoulder blade in the region of the suprascapular nerve. Massage in this region relieved the spasm. In fact, the result in this case was so certain that it seemed almost as if one were pushing an electric button to bring the head into its normal position. The same effect may be produced over the point of emergence of the occipitalis major, the

auricularis major, the occipitalis minor, and the nerves of the cervical plexus. Thermal or electric stimulation had no effect. In the second case, also that of a man, torticollis developed after a severe attack of influenza. There was great tenderness in the triangle between the trapezius and the sternocleidomastoid muscles. Prolonged rubbing and pressing in this region caused the spasm to become very severe. A third case was one in which the spasm occurred in the splenius capitis. In this patient, as in the first, bringing the arm and hand into the position of salute caused immediate improvement in the spasm. This patient was cured by carrying a peculiar form of apparatus that forcibly maintained the head in the proper position. The amount of pressure could be easily regulated and was further modified by an elastic. The fourth case was also greatly improved by this method. The object of the method is to increase the strength of the antagonistic muscles. He believes that this method really involves a form of exercise therapeutics.

4. **Laryngeal Tuberculosis.**—Abstracted in *New York Medical Journal*, June 6th, p. 1042.

6. **Serumtherapy in Plague.**—Polverini discusses the results of some experiments upon serum therapy to prevent plague. A good deal depends upon the method of infection; animals infected with cultures derived from pneumonic foci usually die very quickly, because these cultures are exceptionally virulent. The plague bacilli differ considerably according to the source from which they are obtained. Therefore, Polverini's cultures were always obtained from human beings suffering from the septicæmic form. More than 1,000 cases of plague were treated with this serum and the results were favorable. He does not believe that experiments with serum upon various animals will ever lead to results of practical value, because the serum acts so differently upon different species.

7. **Hysterical Fever.**—Tillmann reports the case of a marine who developed some of the symptoms of pleurisy with exacerbations of fever. During these exacerbations the man was not particularly sick. The patient developed some psychical manifestations and there were sensory disturbances. The maximum temperature was 45° C. (113° F.). A diagnosis of hysteria was made, and the patient recovered promptly under appropriate treatment. The thermometers were carefully tested, and the measurements were made by practised persons.

8. **Motility of Gall Bladder.**—Lieblein reports the case of a woman, forty-seven years of age, who developed an abdominal tumor. This was about the size of a child's fist, and lay to the right and above the umbilicus. It was partly hard and partly soft, freely movable, and otherwise the patient was normal. A diagnosis of carcinoma of an abnormally movable right kidney was made, and operation performed. The tumor was found to be a dilated gall bladder with a stone in the fundus. This stone was removed, resection performed, and the patient made a satisfactory recovery.

9. **Measles.**—Machold reports the case of a girl, eight years of age, who had had a typical attack of measles from which she apparently had recovered. She then developed a bluish red eruption over the whole body, the different parts being about the size of a one mark piece. There was no temperature; the spleen was slightly enlarged, and there was slight bronchitis. The eruption gradually subsided.

10. **The Responsibility of Paranoiacs.**—Heilbronner, in continuation of his article, discusses the material as well as the psychical considerations that lead to the withdrawal of social and business privileges from paranoiacs. He admits that these considerations are largely theoretical, and should be limited to cases of genuine paranoia.

LA PRESSE MEDICALE

May 30, 1903, and June 3, 1903.

1. Vesical Infections and *Bacillus Pyocyaneus*.
By H. BARTH and G. MICHAUX.
2. Salies-de-Béarn. Women's Division.
By RENÉ MATTON.
3. Diagnosis of Meningeal Hæmorrhage.
By FERNAND WIDAL.
4. A Pocket Case for Catheterization, etc.
By LÉON IMBERT.

1. **Vesical Infections.**—Barth and Michaux report a case of what they call a rare form of cystitis, seen at the Necker Hospital. January 2nd, a woman aged forty-nine years, suffering from "grippe," entered the hospital, and for eight days, was a prey to such violent headache and [spinal?] curvature as to be unable to stand erect. Temperature, 39.5° C., evenings. Catheterism necessary to draw urine. The following day urination freer, with mitigation of other symptoms. Three days later, temperature 37° C., pulse 70, no albumin. Convalescence progressed till January 14th, when symptoms of vesical irritation developed, albumin appeared in the urine, there were frequent micturition and pain after the act. Microscopically, there were numerous leucocytes and bacteria. Milk diet was ordered and 2 grammes of urotropin daily. Urine was collected antiseptically and placed in gelose and bouillon. In twenty-four hours, the latter was clouded and of a greenish, fluorescent tint, while on the surface a greyish white veil formed which thickened later on. Spread upon a glass and colored, a bacillus developed not susceptible to Gram. *No other bacillus* was present. A colony was established, partly on gelatin, which liquefied in from four to five days, partly on peptonized gelose, 2-100, and treated with glycerin 5-100, after the method of Gessard, and finally on bouillon. In this last, the addition of ammonia and chloroform separated the fluorescent, green pigment, forming the superior layer of pyocyanin coloring chloroform blue, which was extracted in a crystalline form. The diagnosis of *Bacillus pyocyaneus* was therefore certain.

On the 17th, further tests confirmed the presence of *Bacillus pyocyaneus*. On the 22nd, under the milk diet and the urotropin, every symptom of

cystitis had disappeared. On the 23rd, however, to the authors' surprise, the pyocyanus was still present, and it continued present until April 16th, although the patient had left the hospital on February 1st.

The authors consider that the *Bacillus pyocyanus* may enter the bladder from the kidney, after absorption from the general circulation in cases of septicæmia and, as it is likely to frequent the inguinal and rectal regions, is liable to be conveyed into the bladder during catheterization. This is borne out by the researches of Motz, Maxwell, Clarke and Faltin. It may exist alone or along with *Bacillus coli communis*, streptococcus, and staphylococcus aureus, Koch's bacillus and the gonococcus. Internal treatment with urotropin and salol, gives negative results. Washing out the bladder with potassium permanganate, protargol, or silver nitrate does not drive away the bacillus, but it certainly cures the cystitis and seems to render the bacillus an inert saphrophyte.

3. **Meningeal Hæmorrhage.**—Vidal states that this disease, formerly difficult to diagnosticate, can now be positively recognized by Kernig's sign; also that when the lumbar puncture shows blood, there is no longer any doubt. He cites a case of a woman aged thirty-nine years, who, some hours after a violent altercation with her son, was seized with intense headache, and next day with vomiting and obstinate constipation. Five days later, when examined by the author, she was semiconscious with a temperature between 36.2° C. and 37.2° C.; pulse 72; respiration regular with occasional deeper inspiration. The urine contained two grammes of albumin to the litre. There were photophobia, slight strabismus of the right eye with ptosis of the left; plantar reflex present. The neck was stiff and on attempting to seat the patient, the legs were strongly contracted on the thighs. This is the sign of Kernig. The author proceeds to differentiate the various forms of meningitis; tuberculous, possible in the case under discussion when examination was made on the fifth day; syphilitic, which he states is best diagnosticated by the iodides, which should always be administered; hysterical, excluded by the sign of Kernig, which also served to render the diagnosis of the present case positive as one of hæmorrhagic meningitis. The lumbar puncture, showing blood in the cerebrospinal fluid, "inscribed," as the author says, "the diagnosis in the bottom of the tube in which it was collected." Subsequently in this case, the temperature varied from 37.4° C. to 38.7° C.; the pulse from 88 to 100, rising but once to 104. On the ninth day, mental confusion was manifest. Headache and stiffness of the neck were diminished by the spinal puncture. Kernig's sign persisted till the last, and the autopsy confirmed the diagnosis of hæmorrhagic meningitis. The hæmorrhage was found under the right frontal lobe between the brain and the pia mater. It was the size of a bean pod, and came from an aneurysmal dilatation. In making the lumbar puncture, if the blood coagulates in the tube, it has come from the puncture itself; if it does not clot, it was already present in the cerebrospinal fluid.

4. **A Pocket Urinary Case.**—Imbert describes a case suited to the needs of the general practitioner. While much less complete than those of the specialist, it is easily portable, and its cost is moderate. It contains four ball pointed bougies, Nos. 12, 14, 16, and 18; two tubes for sterilizing; five or six filiform bougies, the numbers rising to four; two Nélaton rubber catheters, to overcome an enlarged prostate, Nos. 16 and 18; two olive pointed bougies; three prostatic catheters, Nos. 14, 16, and 18; two stylets; a trocar, a bottle of vaseline and a syringe, preferably Guyon's.

RIFORMA MEDICA

May 6, 1903.

1. On Hyperchloruria in Pneumonia and on the Presence of Organic Chlorine in the Tissues.
By A. SANTINI.
2. On the Anatomical Changes Produced by Lead Poisoning.
By G. FASOLI.
3. On Two Cases of Psychosis Due to Typhoid Fever.
By M. FOA.
4. A Gunshot Wound of the Vertebral Column followed by Irritative Phenomena in the Spinal Roots. Operation. Recovery.
By E. BARDELLINI.
5. On Hypertrophic Tuberculosis of the Colon.
By P. PENNATO.

2. **The Anatomical Changes in Lead Poisoning.**—Fasoli found the following lesions in experimental lead poisoning: (1) Circulatory changes, which were manifested by stasis, sometimes very marked, followed by cyanotic atrophy (in the spleen) and hæmorrhages (in the intestines). (2) Profound cellular changes, such as swelling and degeneration, cloudy swelling, fatty degeneration (especially in the kidneys and liver), and more or less advanced disintegration of the nuclei (liver). (3) Changes in the red cells, which can only be the cause of the large amount of pigment found in the spleen, resulting from a destruction of the red cells. In one case there was in addition an extensive ischæmic infarct, which was symmetrical and bilateral in one rabbit, and in another case there was complete fatty degeneration of the tunica media of the perilobular branches of the hepatic artery. These researches seem to show conclusively that lead produces profound alterations in the structure of the cells of the internal organs, either in their protoplasm, or in their nucleus, or in both, and that these alterations resemble those produced by phosphorus and arsenic, the full significance of which is as yet obscure to us. The author thinks, in conclusion, that various species of animals, although related to one another, react differently to the poisonous effects of lead. This explains why the researches heretofore published do not throw any clear light upon the characteristic alterations in the internal organs caused by lead poisoning. The different methods of introduction and other conditions of experimentations give various results, which are often contradictory.

3. **Psychosis of Typhoid Fever.**—Foa reports two cases of typhoid fever in which there were interesting psychical symptoms. The first patient was a girl, aged nine years, who had insanity in her fam-

ily history, and who entered the hospital with an attack of typhoid fever with a mild and atypical clinical course. During the entire febrile period of the attack this girl manifested the symptoms of melancholia of the anxious type. The somatic symptoms of typhoid fever were absent, excepting a febrile movement and an enlarged spleen, but the Widal reaction was positive. This reaction, the author says, was all that prevented him from sending the patient to an insane asylum, as he realized that the psychosis was due to the typhoid fever. The psychical signs disappeared gradually, with the sinking of the temperature to the normal point. In the second case the patient was a man, aged twenty-six years, whose mother was epileptic, and whose father was somewhat mentally deficient. He entered with a rather faintly marked attack of typhoid fever, but with such marked mental symptoms that he was thought a patient for the psychiatric department. In this case the psychosis took the form of typical hypochondria with suicidal mania. It happens sometimes that in such a patient the presence of typhoid is not suspected, as the signs of this disease are not looked for, and the slight fever is thought to be due to the mental state, while the Widal reaction is not tested. According to Paris, a person with mental disease exhibits the psychical symptoms of it more markedly in the presence of an intercurrent infection, and if a patient has only delirium in typhoid fever he is in all probability not an insane person, but either normal or slightly degenerate. The confinement of delirious typhoid patients in asylums is a grave error, which must be guarded against, as even the transportation to the asylum may prove fatal. The Widal test, according to the author, is of great value in cases of doubt, and its presence is sufficient to prevent the physician from recommending confinement in an asylum.

4. **Gunshot Wound of Spine.**—Bardellini reports the case of a young man, aged sixteen years, who had been shot with a revolver, calibre 9, in the mouth; the bullet having broken some teeth, furrowed along the tongue and lodged in the spinal column. The patient was brought in with the symptoms of cerebral concussion, but during the next few days he developed the following signs: He could not rotate, extend, or flex the head, on account of great pain at every such attempt. When he flexed his head he felt a paræsthesia over the whole body, as though an electric current was passing through him, especially through his lower limbs. There was a marked tenderness on pressure over the right carotid region corresponding to the upper margin of the thyroid cartilage. Skiagraphy showed that the bullet was imbedded in the space between the fourth and fifth cervical vertebræ, about a centimetre in front and to the right of the median line of the transverse processes. Twenty-three days after the injury, the symptoms not having disappeared, it was decided to remove the bullet. Accordingly, under Schleich anæsthesia, an incision was made, eight centimetres long, extending along the sternocleidomastoid, and one centimetre away from the angle of the jaw. The wall of the pharynx having been exposed, the path of the projectile upon

this structure was made out, incised, and the bullet removed with Kocher's forceps. The pharynx was sutured with catgut, and the remainder of the wound in several layers with silk. On the third day the wound discharged a foetid material, owing to the fact that the suture of the pharynx had given way and food was passing into the tissues of the neck. A similar experience is recorded by the author in a case of external œsophagotomy for a foreign body. It is best, therefore, as some surgeons advise, to tampon wounds of the pharynx after such operations. In the present case, however, the complication did not give much trouble, and the patient made a good recovery. The author accounts for the sensation of an electric shock on flexing the head in this case by assuming that the bullet lacerated the intervertebral ligaments between the fourth and fifth vertebræ, so that when the head was flexed these vertebræ were displaced and there followed a compression of the spinal nerve roots.

ROUSSKY VRATCH.

March 15, 1903. (Vol. II, No. 11.)

1. The Importance of Investigations for the Proper Use and Protection of the Mineral Waters in Russia.
By S. I. ZALESKY.
2. Clinical Observations on Amyloid Kidneys.
By A. P. FAVITZKY.
3. A Case of Trepanation of the Skull on Account of a Subdural Traumatic Hæmorrhage.
By B. K. FINKELSTEIN.
4. Ehrlich's (German) Method of Determining the Strength of Antidiphtheritic Serum, and its Theoretical Basis.
By S. V. KORSCHUN.
5. The Means of Preventing the Spread of Syphilis.
By M. I. POKROVSKAJA.

3. **Trephining for Subdural Hæmorrhage.** By B. K. Finkelstein.—Abstracted in *New York Medical Journal* for May 16th.

4. **Determination of Strength of Antidiphtheritic Serum.**—Korschun remarks that if we take into consideration the great variability and multiplicity of the products of a single organic cell, such as the alkaloids of quinine, for instance, we need not wonder at the complexity in the composition of toxins. The difficulty in standardizing the toxins and antitoxins lies in the fact that the toxins contain also toxoids which possess a strong affinity for the antitoxine and yet have no toxic properties. In Behring's method of determining the strength of antitoxine, the error occasioned by the disregard of the toxoids is introduced. Ehrlich's method is therefore much more accurate. The author then explains the theoretical foundations of this method, and describes the mode of application, concluding with the following recommendations: 1. In measuring the toxine, it is necessary to employ high dilutions so as to minimize the error. 2. The consistency of the standard serum is very thick, owing to the admixture of glycerin. It is therefore necessary to use small pipettes accurately graduated in 1 cubic centimetre. The latter, when filled, should be carefully wiped on the outside, and when the contents are discharged, washed in the diluting fluid.

3. The mixture of toxine and antitoxine should be allowed to stand at room temperature for fifteen minutes, to allow the chemical union between the two to take place. It is then poured into a hypodermic syringe, the needle of which has been previously inserted under the skin of the animal. The injection is followed by another injection of 1 cubic centimetre of salt solution to wash out the syringe.

4. For each quantity of toxine in which the quantity S is determined, at least two guinea pigs should be employed. With these precautions observed, Ehrlich's method is extremely accurate, giving an error of $\frac{1}{2}$ per cent.; it is also very simple.

ROUSSKY VRATCH.

April 19, 1903.

1. The Advances of Neurology and their Significance in Various Branches of Medical Knowledge.
By V. E. LARIONOFF.
2. Is the Nervous or Maculoanæsthetic Form of Leprosy Contagious?
By D. F. RESHETILLO.
3. On Vulvovaginitis in Children.
By V. J. DOUKELSKY.
4. The Fundamental Properties of Pancreatic Juice.
By L. B. POPELSKY.
5. The Best Methods of Preserving Anatomical Preparations.
By L. L. HEIDENREICH.

2. **Maculoanæsthetic Leprosy.**—Reshetillo reviews the experimental work recently done in the question of the infectiousness of the various forms of leprosy, and concludes that, contrary to the opinion expressed by Dr. Dehio in a recent article (*Roussky Vrach*, No. 39, 1902), the maculoanæsthetic form is infectious in character. Dehio said that the new regulations concerning the management of lepers in Russia recognize the fact that all the forms of the disease were not infectious. He added that Hansen and Looft were unable to find any lepra bacilli in the secretions of persons with the anæsthetic type and that, therefore, this type was non-infectious.

The present author cites the researches of Glück and others, who found the lepra bacillus in the nasal discharges of persons with the anæsthetic form of leprosy, and, as we do not know anything about the non-virulence of the bacilli in this form, no conclusion can be drawn as to the non-infectious character of the anæsthetic type. Extensive epidemiological observations in India, in Colombia, and other countries, show that the infectious power of the anæsthetic type is not only considerable, but is even greater than that of the tubercular type at times. In the tubercular type the infectiousness is greatest when the tubercles break down and ulcerate, but in the anæsthetic type there is just as great danger of infection when there are vesicles and pustules formed. The fact that popular belief on the Island of Esel does not include the anæsthetic type among the infectious forms of leprosy does not prove anything. It is a significant fact that in the same family some members become affected with the tubercular while others develop the anæsthetic type. The dictum of Dehio, that the anæsthetic type is not infectious, should be changed to read that not

all the types of leprosy show the same degree of infectiousness at all times.

5. **Preserving Anatomical Preparations.** By L. L. Heidenreich.—Abstracted in *New York Medical Journal*, for June 13th, page 1089.

ROUSSKY ARCHIEV PATOLOGII, KLINITCHESKOI MEDITSINY I BAKTERIOLOGII.*

December 31, 1902.

1. On Cryoscopy in the Examination of Urine in Clinical Investigations,
By S. M. BOUKINITCH and S. M. MELKIKH.
2. The Casuistics of Pathological Anatomy,
By A. I. ABRIKOSSOFF.
3. The Anatomy and Microphysiology of Brunner's Glands.
By A. A. BOGOMOLITZ.
4. The Pathology and Treatment of Asthma,
By M. SIHLE.
5. On the Pathology of Purulent Calculous Angeiocholitis,
By TH. JANOVSKY.
6. The Changes in the Blood in Articular Rheumatism,
By K. I. KOROLOVSKY.
7. The Present Status of Serum Therapy in Tuberculosis,
By O. I. BRAUNSTEIN and L. J. FRAENKEL.

1. **Cryoscopy of Urine.**—Boukinitich and Melkikh call attention to the fact that in the observations on the freezing point of the urine in diseases of the heart and kidneys which have been published heretofore, no consideration is given to the alimentation of the patients. The present authors, as the result of certain observations made in healthy persons, found that hunger, a milk diet, the administration of a large amount of sodium chloride, etc., might create conditions in which the freezing-point of the urine was materially modified. Under these circumstances the freezing-point of urine may, in fact, be identical with that observed in diseases of the heart and kidneys, as recorded by Koranyi, Claude, Balthazard, and others. The authors therefore conclude that cryoscopy alone, unaccompanied by a study of the diet of the patient, may give misleading results as regards the state of the heart and kidneys.

4. **Asthma.**—Sihle, of Odessa, adds a fourth cause to the three generally admitted as ætiologic factors of asthma (spasm of the bronchi, a specific catarrh of nervous origin, and congestion of the mucosa), namely, a general vasomotor insufficiency manifested by a subnormal pressure in the blood vessels. The three causes cited above have been for a long time regarded as the sources of the neurosis known as asthma. For some time the author had noticed a venous stasis in the livers of his asthmatic patients, in the intervals between attacks, as attested by percussion (Henschen, Buch). This stasis was not due to a weak heart, as the asthmatics were able to walk with ease and to mount stairs without effort, when not suffering from an attack of their trouble. [Cases of cardiac asthma were not included in the group observed.] The normal state of the heart and the absence of a reduplication of

* This is the last issue of the *Archiev*. Its publication has been discontinued.

the second sound of the pulmonary orifice showed that the heart muscle did not have anything to do with the lowering of pressure spoken of above. And yet, these patients showed, with Gaertner's tonometer, a marked diminution in the blood pressure, as well as hepatic stasis. These phenomena can therefore be accounted for only by a vasomotor disturbance. The pathological picture of asthma therefore is composed: Of a tendency to spasm in the bronchi (hypertonic condition of the bronchial muscles); of a vasomotor insufficiency of the bronchial vessels; of a hyperæmia of the mucosa of the respiratory tract, and of an excessive secretion of mucus therefrom. The picture presented by each case varies according to the predominance of one or another of these factors.

Inasmuch as asthma is nothing but a reflex neurosis, it is interesting to follow the path of the reflexes which constitute its symptoms. Although this path is as yet imperfectly known, its centrifugal portion is formed by the motor portion of the vagus nerve for the bronchial muscles, by the secretory portion of the vagus for the mucosa of the respiratory tract, and by the vasomotor nerves. The centripetal portion is formed of the olfactory nerves, the sensory fibres or endings of the trigeminus, the sensory fibres of the pulmonary portion of the vagus, the gastric portion of the vagus, the centripetal ramifications of the uterine nerves, etc. There is, however, another very common form of asthma—the neurasthenic. In this the psychical element plays a prominent rôle, and in the treatment of asthma the psychical side should never be neglected. Measures applied locally in the nose can be hoped to give relief only in a very limited set of cases. The general treatment should be directed toward strengthening the nervous system and should therefore include hydrotherapeutic measures. The use of digitalis combined with iodine and the less violent narcotics is very important, and these combinations give such good results that the author seldom employs morphine.

7. **Serum Therapy in Tuberculosis.**—Barunstein and Fraenkel, of Moscow, trace the historical development of specific treatment of tuberculosis since 1886, when Cantani first attempted to inject the *Bacillus thermo* as an antagonist to the tubercle bacillus, to the present day. Their conclusion, based on the consideration of a large number of reports from all parts of the world, is that serum therapy has not by any means spoken its "last word" in tuberculosis, and that the future will, in all probability, bring forth the ideal antituberculous serum. As yet, the evolution of the methods of serum and tuberculin treatment has progressed but slowly. The difficulty is, evidently, to obtain toxins of tuberculosis which would compare in virulence to those which we are able to get with comparative ease in diphtheria and tetanus. This, according to the foremost authorities (Behring, Babes, Landouzy, etc.), is the reason why our tuberculosis serums are not endowed with sufficient antitoxic properties. Even in Maragliano's method, which is, after all, the one that has been most completely worked out, the number of cures, while considerable, leaves a great deal to be desired. Whether serum therapy has its *raison*

d'être in tuberculosis, is a question which has not been solved. It is questionable whether the method of serum therapy or the expedient of active immunization is the path which will lead to the solution of the problem of the specific treatment of tuberculosis.

ANNALS OF SURGERY.

May, 1903.

1. The Surgical Treatment of Facial Paralysis by Nerve Anastomosis. By HARVEY CUSHING.
2. Intracranial Neurectomy. By HOWARD D. COLLINS.
3. Hepatic Syphilis from a Surgical Standpoint. By CHARLES G. CUMSTON.

1. **Facial Paralysis.**—Cushing points out that paralysis, whether it takes its origin from disease or injury of the facial nerve, causes distressing deformity. Experiment has shown that when a peripheral mixed nerve has been divided, its distal severed end can be transplanted to the trunk of a neighboring nerve of like nature with restoration of function. In man there has been an occasional recovery after anastomosis between a paralyzed and an intact nerve, that is, cortical impulses traveling over new paths may reach a group of muscles whose proper connections have been severed, normal coordinated motion and sensation resulting.

In 1898, Faure, in a patient paralyzed eighteen months from traumatic destruction of the facial, anastomosed the peripheral end of the facial, divided near the stylomastoid foramen, with the portion of the spinal accessory which supplies the trapezius. The result was unfavorable. In the same year, Manasse experimented with five animals, dividing the facial at its exit from the skull and uniting its distal end to the side of the spinal accessory. Two of the cases were failures, the divided portions of the nerve becoming reunited, while in the others the result was satisfactory anatomically and physiologically. Similar work on three dogs was done by Barrago-Ciarella with successful physiological result, but the work was unattended by post mortem and histological studies, and hence is inconclusive. Kennedy, in 1899, divided the paralyzed facial in a human being and united it with the spinal accessory, the result being almost complete restoration of function of the muscles controlled by both nerves. The spinal accessory in this case ultimately served as the sole path for impulses to both motor fields.

In 1902, the author operated upon a man aged thirty years, with traumatic facial paralysis, the proximal stem of the divided spinal accessory being united to the distal end of the paralyzed facial. In four months control of the muscles returned; and in six months control was nearly normal.

As to the course of the nerve impulses after an anastomosis of this character the author suggests two hypotheses.

a. The cortical centres concerned in shoulder movements (trapezius) and rotation of the head (sternocleidomastoid) may be educated by training to coordinate the impulses which have been side-tracked into the motor area of the facial nerve, so as ultimately to lead to expressional movement.

b. The cortical centres originally presiding over

movements of the face continue to play a part in the coordinate action of these muscles, possibly influencing the higher neurones of the spinal accessory through the intermediation of connecting tracts in the cortex.

2. Intracranial Neurectomy.—Collins cites the cases collected by Tiffany, in which are several instances of permanent or temporary injury from the operation itself. The author reports a case in which also injury was sustained by the operation. The patient was fifty-four years of age and had suffered with neuralgia of the second division of the right trigeminus for eight years. Medical treatment had been of little service, and when seen by the author, his paroxysms lasted twenty seconds and recurred every four minutes, with occasional intervals of rest for a few hours. The author decided to remove the right Gasserian ganglion. The middle fossa of the cranium was found to be very deep, and in exposing the foramina ovale and rotundum to reach the exit of the second and third divisions of the trigeminus the brain was crowded by the retractor toward the median line. Both nerves were divided and the operator was then compelled by hæmorrhage to drag down their stumps and with them as much of the ganglion as he could.

On the second day there was paralysis of the right upper eyelid and of the muscles supplied by the third, fourth, and sixth cranial nerves. There was also partial paralysis of the left upper extremity. When the patient got out of bed on the tenth day the left leg was also found partially paralyzed. In five weeks the paralysis of the right eyelid began to improve, and in ten weeks it had disappeared. In four months, the patient was well and free from pain, but not so strong as before the operation; his memory, also, had become defective. There was anæsthesia along the course of the nerves which had been removed. Three months later he was entirely well.

The case is narrated to show that one may look for ultimate recovery from such postoperative paralyses if one has not divided any structures except those which are intentionally divided.

3. Hepatic Syphilis.—In the first case of hepatic syphilis operated on by Cumston, the patient was forty-one years of age and had shown evidences of liver disease for three months. The diagnosis was carcinoma of the liver or gall bladder. When the liver was exposed by incision, two gummatous nodules as large as English walnuts were found on the anterior surface of the right lobe. They were incised, their cheesy contents removed, and the resulting cavities packed with gauze, which was removed in four days. Recovery followed and after two years of subsequent treatment with potassium iodide, the liver resumed its normal size.

The clinical symptoms of hepatic syphilis are reviewed by the author, but these are well known.

The enlargement of the liver and of the abdomen are points of surgical interest; palpation and percussion will usually determine the limits of the organ, and gumma may be suspected from the previous history. Gummatous lesions seldom come

until five years after the original infection, and it may be fifteen or twenty; they vary in size from a pea to a walnut.

Two additional cases are reported in which operation for syphilis of the liver was performed and small tumors removed. The author quotes Ségond as opposed to the surgical treatment of hepatic syphilis. His own preference would be to use the proper medical treatment after the diagnosis had been made, for a sufficient length of time; if this failed to relieve the hardened condition of the organ it would be probably because the gummata were so old and the tissues so changed that other treatment was indicated. In such cases the question of surgical intervention is pertinent, and it may be possible by such intervention to bring decided relief to the patient.

MISCELLANEOUS.

Absence of the Visual System in an Adult.—

W. G. Spiller (*Brain*, 1902, page 631; *Montreal Medical Journal*, April, 1903) describes the case of a helpless idiot regarded as a case of cerebral spastic paraplegia of the lower limbs with absence of the eyeballs. The palpebral fissures were very small and the orbits contained only a small amount of fibrous tissue. The optic foramina were non-existent, merely slight depressions occupying their site in the skull. There was no sign of optic nerves, chiasm, or tracts, nor was there any external geniculate body on either side. The thalamus had nothing resembling an optic tract passing from it, and the posterior part of each thalamus was rounded and larger possibly than one would expect to find in such a case of agenesis of the visual system.

The following are Spiller's conclusions: (1) The chief primary optic centre is in the external geniculate body. (2) The prelocinas is also an important primary optic centre. (3) The anterior canaliculus of the quadrigeminal body in man bears an important relation to vision. (4) The subthalamie body, the habenula, and the geniculate body are probably not part of the visual system. (5) The cortex of the calcarine fissure may contain nearly the normal number of cell bodies, even though the visual system be absent. (6) The nerves of the ocular muscles and their nuclei may be developed, even though the visual system may be absent. (7) Congenital spastic paraplegia may be the result of deficient formation as regards number or size of the neurones of the central motor system, even though such a deficiency may be difficult to detect with the microscope.

Immunization of Guinea Pigs Against Tuberculosis.—

Dr. E. Levy (*Centralblatt für Bakteriologie, Parasitenkunde und Infektionskrankheiten*, April 22d) injected subcutaneously into guinea pigs an emulsion of tubercle bacilli, followed by progressively stronger emulsions; in some of the animals the injections were made intraperitoneally. Later, injections of a still stronger emulsion were made in the axilla, which produced abscesses which healed in about four weeks. The control animals showed advanced tuberculosis of the lungs, liver and spleen, while the immunized pigs showed no trace of tuberculosis.

Proceedings of Societies.

PHILADELPHIA ACADEMY OF SURGERY.

Meeting of May 11, 1903.

The President, Dr. RICHARD H. HARTE, in the chair.

A Review of 303 Operations upon the Stomach and First Portion of the Duodenum.—Dr. WILLIAM J. MAYO, of Rochester, Minn., read a paper thus entitled. Two hundred and eighty-six of the case histories were taken from the records of St. Mary's Hospital, and seventeen from those of the Minnesota State Hospital for the Insane, at Rochester and St. Peter. The average age of the patients was forty-two years, 42 per cent. being males, and 58 per cent. females. There were twenty-six cases of duodenal ulcer, with two deaths. Lesions in the first portion of the duodenum could not be easily distinguished from lesions in the stomach which were due to the same causes. He divided lesions in the first portion of the duodenum into two groups, first, those caused by ulcer, and, second, those associated with the gall bladder disease. Of the ulcers limited to the duodenum, he reported one acute perforating, two chronic perforating, five active, and three with cicatricial contraction and obstructive symptoms. Two deaths occurred, one from pneumonia and the other from exhaustion following gastroenterostomy. Several of the cases could not be distinguished from gall stones until the operation, which was begun for that purpose, and that condition was frequently present. In three cases the gall bladder was completely separated functionally from the bile tract; in four cases there were crippling adhesions to the gall bladder, but without stone or cholecystitis, requiring dissection to loosen. The distinguishing features in these cases were good appetite, delayed pain, and general absence of vomiting, the latter only in one case, and in that on only one occasion was there hæmatemesis. The author expressed the opinion that surgical disease of the duodenum was much more frequent than had been supposed. Drainage to relieve the excessive amount of secretion and thus produce healing of the ulcer was of great importance.

There were 109 cases of cancer of the stomach, with seventeen deaths, or 15.6 per cent. Late diagnosis and cachexia made the report of this group rather discouraging. Most of the operations were of a palliative character. Early exploratory incision in suspected cases was recommended, and all the vascular and lymphatic connections with the diseased area should be removed. He then gave a full description of his method of operating. The period without recurrence after the operation had varied, one case having gone two years and an other three years and six months. He then discussed the three chief methods of improving stomach drainage, *i. e.*, pyloroplasty, gastroenterostomy, and gastroduodenostomy.

Dr. ALBERT VANDER VEER, of Albany, N. Y., referred to the difficulty of diagnosing conditions in the lower third of the stomach and the upper third

of the duodenum, referring to two cases in which he had thought that he was going to deal with a case of gastric ulcer, but an operation proved it to be duodenal ulcer. In cases where all the symptoms seemed to point very strongly to an ulcer in the stomach and none was revealed upon opening the organ, he believed it could sometimes be discovered by lifting out the organ and holding it up to the light. The difficulty of distinguishing between carcinoma and ulcer when the growth occurred in the posterior wall of the stomach was commented upon and gastroenterostomy was thought to be the preferable operation for such conditions. He felt that many of the cases were left too long solely under the treatment of the medical man, and if the clinical history and examination of the patient did not reveal clearly the conditions presented, he recommended an exploratory operation. If possible the complete operation should be done, but if the condition of the patient was such as to contraindicate this, much relief could be obtained by a gastroenterostomy. In regard to shortening of the ligaments for the treatment of gastropotosis, while he had had very little experience with this method, he felt that better results would be obtained by gastroenterostomy with the establishment of good drainage. In regard to the pyloroplastic operation, he stated that he had in some instances got very good results and in other instances the symptoms had recurred, which he thought was probably due to the fact that the operation was too high up, and attributed Dr. Finney's success with this method to the fact that he made the outlet lower down.

Mr. B. G. A. MOYNIHAN, of Leeds, England, felt that the operation of pyloroplasty could be practically abandoned. He had done the operation three times, and in only one of the three cases had it proved satisfactory. In the third case a gastroenterostomy was performed three or four months after the original operation. He did not feel that the operation was in any particular as satisfactory as the operation of gastroenterostomy, stating that he had operated in seventy-five cases by the latter method, with only one death. He stated that he had not used the Murphy button in the last sixty-five cases, as he believed the simple suture was preferable, but stated that in the employment of the Murphy button in the first of his cases he had noticed that it destroyed a considerable portion of the mucous membrane around the union, which he considered of very great importance. By the method which he had employed the section of the stomach and the section of the jejunum where the anastomosis was to be made were each grasped in a forceps and brought outside of the abdomen, and the continuous suture applied. In regard to malignant disease of the stomach, he believed that the infection took place principally through the lymphatic system, and in the operation therefor he believed that first the greater curvature and then the lesser curvature should be removed. In regard to duodenal ulcer, he believed that there were but very few cases in which this was a primary condition, feeling that in the majority of cases there had been a precedent gastric ulcer. Gastric ulcer was so frequently multiple that he did not believe excision of it to be practicable, as future trouble might result from a remaining undiscovered

ulcer, and searching for the ulcer materially complicated the operation of gastroenterostomy.

Dr. J. B. MURPHY, of Chicago, referred to the fact that the great majority of all cases of carcinoma occurred in the pyloric end of the stomach, and as the first set of glands involved were the lymphatic glands, any operation which was expected to produce permanent results must look to the removal of these glands, early operation being imperative. He further referred to the fact that about 10 per cent. of all cases of gastric carcinoma occurred in the cardiac end of the stomach and were practically unamenable to treatment. He referred to the fact that the surgeon saw the cases of gastric disease in the following numerical order: 1, Gastric carcinoma. 2, Gastric ulcer. 3, Pyloric stenosis. 4, Pyloric retention. As the gastric carcinoma was usually a sequence of the other conditions, he felt that, in order to obtain the best results by operative treatment, the order in which these cases were seen should be the reverse. He believed that in order for the operation of pyloroplasty to attain the best possible results, it was necessary that it should be done early. He referred to the fact that the cases of gastropexy were treated erroneously by the medical man by washing out the stomach and reducing the amount of food, on the theory that the condition was due to a weakening of the wall of the stomach, whereas, as had been definitely demonstrated by Dr. Mayo, it was due to a mechanical condition at the pylorus. He felt that the all-important factor in the operation was to secure permanent drainage of the most dependent portion of the stomach, and the only operation which had been used a sufficient length of time to justify the statement that it was the best, he felt, was gastroenterostomy. He felt that if pyloroplasty was going to be of benefit to the patients it must be done early, in order to avoid ulceration and changes in the gastric secretions which were to lead on to malignant disease. He also expressed the opinion that so soon as it became demonstrated to the physician that surgical operations were safe and afforded great relief, the cases would be sent to the surgeon much earlier.

Dr. J. M. T. FINNEY, of Baltimore, confined his remarks to the consideration of the question of pyloric stenosis of benign origin, and believed that the main question was that of thorough drainage, and any method that would produce this result he felt would be satisfactory. He referred to the fact that the advocates of gastroenterostomy were far in excess of those who recommended pyloroplasty at the present time, which he believed to be due largely to the fact that the operation had not been properly performed. He felt that much better results could be obtained by the conjunctive work of the physician and surgeon in these cases, not necessarily with a view to immediate operation, but for the purpose of ascertaining the exact condition present. He advocated an early exploratory operation under cocaine. He felt that pyloroplasty was preferable to gastrojejunostomy from the fact that it put the pylorus in a more normal position. The mortality in pyloroplasty he felt was too high to justify its employment except in cases of pyloric cancer. He stated that he had employed the method as described by Hartman in eight cases of pyloric cancer, in each

of which the patient had made a good recovery, and they had lived varying lengths of time. Owing to the nature of the growth, however, and the necessary involvement of the lymphatic structures, he felt that it was practically impossible to eradicate entirely the cancerous growth, and that recurrence would take place in a great many instances, for which reason he felt that the method advocated by Dr. Mayo, of direct anastomosis of the lower end of the stomach to the duodenum, would probably produce the best results. He felt that the operation of gastroenterostomy had not been followed in all cases by the results alleged for it by some of the previous speakers, among the untoward effects frequently noted being the "vicious circle" and symptoms of pyloric obstruction due to the fact that the outlet was made too high up in the stomach.

Dr. JOHANN VON MIKULICZ, of Breslau, Germany, said that in Germany they had had a much larger operative experience with cancer than seemed to be the case in this country. For cancer he preferred some form of gastrectomy in all cases where it was possible removing all of the lesser curvature and so much as possible of the gastrohepatic omentum. The relief had been great and cure sometimes resulted. For palliation he employed anterior gastroenterostomy done with the Murphy button; for benign obstruction he made use of a method of pyloroplasty in which an incision similar to Finney was employed, only he had sutured first from the mucous side. He believed that the modification of Finney was very good. For ulcer he preferred posterior gastroenterostomy with the suture.

AMERICAN GYNÆCOLOGICAL SOCIETY.

Twenty-eighth Annual Meeting, Held in Washington, D. C., May 12, 13, and 14, 1903. . . .

The President, Dr. JOSEPH E. JANVRIN, of New York, in the chair.

(Concluded from p. 1049.)

Repetition of Cæsarean Section on the Same Patient; the Experience of the Boston Lying-in Hospital.—Dr. CHARLES M. GREEN, of Boston, read a paper with this title. After a brief summary of the experience of the Boston Lying-in Hospital with repeated Cæsarean sections, the writer raised the question of whether it was justifiable, in performing Cæsarean section for either an absolute or an elective indication, to remove normal organs or to resort to other procedures with a view to preventing subsequent pregnancy and the risk of a repeated section. The writer sought to answer this question in the negative and invited discussion of his views. Reference was made to a paper read by Dr. Coe at a meeting of the society in New York in May, 1896. Of nine repeated sections, all performed on a relative indication, four were done, one each, by four other members of the staff, and five by the author. Two were done after labor had been in progress for nine hours each, and seven at an elected date before labor began. One patient had her first section without the hospital; six had

their first and second, and one her first, second, and third sections, within the hospital. In one case there were no adhesions; in seven cases there were more or less adhesions; the duration of operation was from $39\frac{1}{3}$ minutes to an hour and 24 minutes. In the case of a patient who died of shock the duration was 48 minutes. In one case the utero-abdominal adhesions were so extensive that the fetus was extracted without opening the peritoneal cavity, and the time of operation was 38 minutes. The nine infants were discharged well; of the nine mothers, one died, a maternal mortality of 11 per cent.

These results were not reported as unique or remarkable; repeated sections had resulted favorably in other clinics. But they were reported in the hope of inducing the opinion that the time had come when the society should withhold its approval of the doctrine that women should be sterilized at their first Cæsarean section, in order that they might not be subjected to the risks of a repeated section.

The President's Address.—This was delivered by Dr. JOSEPH E. JANVRIN, of New York. After paying fitting tributes to Dr. John Byrne, Dr. T. Gaillard Thomas, and Dr. Edward W. Jenks, Dr. Janvrin discussed the subject proper of his address:

The Surgical Treatment of Early Diagnosed Cancer of the Uterus, more especially by Hysterectomy.—Dr. Janvrin pointed out the conditions in which vaginal or abdominal hysterectomy held out good hopes for a radical cure, also the conditions in which the operation held out some prospect of a radical cure, and certainly a prolongation of life with a more comfortable existence than could possibly be hoped for if hysterectomy were not resorted to.

He took up the development of cancer in and from the cervix. His own observations as to the extension of epithelioma beginning in the cervix were as follows: 1. Up and into the cervical canal. 2. Up and into the uterine body. 3. To the tissues surrounding the cervix, the parametrium, especially. 4. Downward upon the vaginal mucosa, and after a certain time through the mucosa into the wall itself.

The author, after quoting freely from the statistics of other writers, both European and American, regarding cancer of the uterus, stated that his own statistics up to January 1, 1899, were as follows: Abdominal and vaginoabdominal hysterectomies: Twelve cases, two cured, more than eight years having elapsed since operation. Six recurrences. Four deaths from operation (two from shock, one from septicæmia, and one from uræmia.) Percentage of cures, 16.6. Vaginal hysterectomies: Thirty-eight cases, ten permanently cured; fifteen recurrences; four deaths from operation; ten lost sight of after a few months; percentage of cures, 26.3. Total number of cases, 50; twelve cured; general percentage of cures, 24.

He believed that vaginal hysterectomy, with removal of as much parametrium as was possible by this method, and also the removal of the upper half inch or more of the vagina, would accomplish just as much as any other method, and, at the same time, carried with it the least danger as an operation

per se, for it was extremely rare that a patient succumbed to this operation. It was by following out this rule that the statistics of his own cases up to January, 1899, had been made so favorable. During the past four years he had extended the field of operation for the purpose of removing a highly offensive local condition, and in that way making a longer lease of life more comfortable to the patient and less offensive to herself and her friends. The use of the electric cautery clamp, as improved by Dr. A. J. Downes, should give the best results in this class of cases.

The author's object in his address was to give (1) the conditions under which hysterectomy should always be done for cancer of the uterus, leaving it as a matter of choice to each individual operator as to whether he selects the vaginal or the abdominal or the combined vaginoabdominal route; and, at the same time, to fortify this position with sufficient statistics, at home and abroad, to make the position tenable, and to impress upon the profession at large the absolute necessity of recognizing the early symptoms, and then seeking the advice and assistance of some surgeon who had had a good amount of experience in these cases, so that hysterectomy could be done when it ought to be done; (2) to describe another class of cases in which any operation, no matter how radical, will in a large majority of cases fail to give permanent relief; but, at the same time, to state his entire approbation of it in the hands of experts.

Carcinoma of the Cervix Uteri.—Dr. THADDEUS A. REAMY, of Cincinnati, presented a paper on this subject. Among other things, he stated that spontaneous recovery from carcinoma did not occur. Unequivocal recovery lasting from ten to twenty-five years in two cases following removal of the diseased and adjacent tissues, proved the curability of carcinoma of the cervix and also its local origin. The author reported six cases of carcinoma of the cervix uteri.

Primary Carcinoma of the Vulva.—The author of this paper, Dr. REUBEN PETERSON, of Ann Arbor, Mich., reported four cases of primary carcinoma of the vulva. He presented a résumé of the literature of the subject and the conclusions drawn therefrom. The cases were narrated in detail. He spoke of the frequency as compared with other carcinomatous conditions of the genital tract, and discussed at length the diagnosis and symptomatology. In considering the operative treatment he spoke of the advisability of removing the inguinal glands.

If carcinoma of the vulva was seen and treated early enough, good results could be obtained. Veit had quoted Schwartz as having ten permanent recoveries out of twenty-three cases. While this might be overstating the facts, it was unquestionably true that there was much more hope of cure in cases of carcinoma of the vulva after the radical operation than after the most radical operations for carcinoma of the uterus.

Renal Decapsulation for Puerperal Eclampsia.—Dr. GEORGE M. EDEBOHLS, of New York, read a paper on this subject (to be published).

Discussion: Should the Uterus be Removed when the Ovaries and Tubes are Removed in

Cases of Double Pyosalpinx, when Operating Either Through the Abdomen or Through the Vagina?—Dr. ANDREW F. CURRIER, of New York, in a contribution on this subject, stated that if this was proposed as a matter of routine, the writer would reply emphatically, no. If it was proposed as an expedient, when the uterus itself was diseased, extensively diseased, he would say, yes. It might also be removed if it had been greatly injured in the extrication of the appendages, or if it should seem to be required as a means of controlling troublesome hæmorrhage. To remove the uterus in a young woman might possibly produce an unfavorable mental effect as a consequence, near or remote. To remove the uterus from one near, at, or past the menopause, might add an element of risk to the operation. To remove the uterus might weaken the pelvic roof, and might introduce an element of danger from enterocele. To remove the uterus unnecessarily was bad morally, for it tended to establish the impression of the unimportance of the organ, and that it might be unhesitatingly extirpated by any one who had the requisite skill. To remove the uterus on the ground that it might possibly be the seat of malignant disease in the future was assuming more than the clinical history taught in the great majority of cases, and was, moreover, a reproach to surgery, making it destructive instead of conservative.

Dr. PHILANDER A. HARRIS, of Paterson, N. J., said that when suppuration had become well established in both tubes their exsection was the only operation which could be relied upon to effect a cure. By exsection was meant, the removal of the lumen of the tube to the uterine mucosa. Less radical operations, as hemisection and disinfection of the ampullæ and larger portions of the tube, probing and washing of the tube and amputation of distal portions of pus tubes were incomplete operations, and were proportionately unsuccessful in that they left behind a diseased sinus, which not only continued to exist, but was productive of discomforts and other ill consequences to a greater or less extent. In bilateral exsection of double pyosalpinx sufficient ovarian stroma might be left to influence and continue menstruation in at least 95 per cent. of any large class of cases operated upon. The ovaries frequently participated in suppuration which they derived from pus tubes. But in them suppuration was more easily terminated and exsection was not advised excepting for extensive abscess of the ovary at the time the tubes were exsected, or a belief or knowledge that the suppuration in the ovary was tuberculous in character. Simple excision of double pyosalpinx afforded the maximum degree of relief with a minimum of mutilation and interference with the functions of the pelvic organs. The complaints arising from the existence of endometritis often ceased after simple exsection of double pyosalpinx. If the symptoms of endometritis continued, and greatly harassed the patient, the uterus might be removed by vaginal section. The price of removal of the uterus in every case of double pyosalpinx might be partly estimated by the following results: 1. Loss of menstruation in every instance. 2. Partial or complete extinction of the sexual quality in a large proportion of the cases,

together with incomplete physical capacity for sexual participation. 3. Injury to the nervous system of the patient, arising from her knowledge and appreciation that she had been prematurely and possibly unnecessarily deprived of these and other qualities which rendered her physically and, to a certain extent, morally, inferior to other women.

Dr. I. S. STONE, of Washington, D. C., stated that no organ should be removed unless it was absolutely necessary. In a large majority of cases the pus found in diseased annexa was sterile. It followed that the chief element of danger from sepsis was eliminated, and the uterus was not the seat of dangerous microbic infection. The exception to the above rule might be found in puerperal infections. When purulent annexa were removed the uterine cornua should be excised and the uterus permanently sealed, and thus made a barrier against further infection and also to permit effective treatment addressed to the uterine cavity if necessary. Hysterectomy required additional time, caused further traumatism, and necessitated changes in the anatomical relations of the vagina, bladder, etc. If necessary to drain the pelvis by way of the vagina, the usual route through the cul de sac posterior to the uterus answered every purpose. Finally, a number of women objected to panhysterectomy, and besides the question of its effect upon the mental status of the patient was *sub judice*.

Dr. MATTHEW D. MANN, of Buffalo, said (1) that the almost sole cause of pus tubes was gonorrhœa, though there might be a mixed infection. (2) The uterus was usually infected and might make trouble afterward and be the cause of spreading the infection. (3) The uterus was no longer of any use. (4) Menstruation did not always stop after the removal of the tubes and ovaries; and if it remained, it might become excessive and cause trouble. (5) It might become the seat of cancerous disease. (6) In acute infection the removal of the uterus afforded the best means of securing drainage. (7) The results by the vaginal route, where the uterus was always removed, warranted its removal by the abdominal route. (8) The woman's sexual life was unaffected by the removal of the uterus. (9) The additional time taken for its removal was more than counterbalanced by the securing of good drainage.

Dr. CHARLES P. NOBLE, of Philadelphia, said that of hysterectomy for circumscribed pus limited to the uterine appendages, that is, pyosalpinx or abscess of the ovary, he had had 58 cases, one death, a mortality of 1.7 per cent. Of hysterectomy for intraperitoneal abscess in addition to pus in the uterine appendages, he had had 6 cases, 4 deaths, a mortality of 66⅔ per cent. Of appendages removed for circumscribed pus contained in the tube or ovary, that is, pyosalpinx or abscess of the ovary, 76 cases, 7 deaths, a mortality of 9.2 per cent. Of appendages removed for circumscribed pus contained in a tube or ovary since January 1, 1895, 36 cases, 2 deaths, mortality 5.5 per cent. Of appendages removed for intraperitoneal abscess in addition to pus in ovary and tube, 22 cases, 5 deaths, mortality 22.7 per cent. Incision and drainage for pelvic suppuration, 58 cases, 1 death, mortality 1.7 per cent.

Ureterocystotomy.—Dr. J. WESLEY BOVÉE, of Washington, D. C., narrated the history of this operation, pointed out the indications, discussed the diagnosis, routes and methods of operation, complications, technique, after-treatment, detailed histories of cases, and gave the results.

Note on the Occurrence of Gall Stones in Insane Women.—Dr. WALTER P. MANTON, of Detroit, read a paper on this subject. He stated that cholelithiasis was of frequent occurrence among insane women, but that symptoms were usually wanting, so that statistics must be obtained solely from autopsy findings. From his experience at the Eastern Michigan Asylum he found that gall stones were present in rather more than 26 per cent. of the patients dying at that institution in whom the abdominal contents were examined. The paper was intended only as a small contribution to the knowledge of the subject, and as preliminary to more extensive discussion of gall stones in insane women at some future time.

Excision of the Proximal Ends of the Fallopian Tubes at their Origin in the Uterus the Operation of Choice for the Extremely Rare Cases Wherein Sterility is Desirable.—Dr. PHILANDER A. HARRIS, of Paterson, N. J., contributed a paper with this title. The object of this operation was to take the place of the Porro operation; to take the place of bilateral removal of the ovaries; to take the place of bilateral excision of healthy tubes. Menstruation would not be sacrificed. Every advantage arising from retention of the ovaries would be preserved to the individual, excepting the single item of impregnation. Tubes thus disconnected from the uterus would probably remain immune from future gonorrhœal infection of the endometrium. A patient thus sterilized could doubtless be cured of her sterility by implantation of the tubes through the uterine cornua to the uterine cavity. While there were doubtless cases which were characterized by certain conditions of the body, mind or nervous system calling for the voluntary production of sterility, there must necessarily be a very limited field for the employment of this operation. If a patient was to be surgically sterilized, it should be effected in such manner that the patient and her friends might feel that she could be restored to fertility, should the pathological factors of her case so abate or disappear as to render impregnation and pregnancy permissible. No attempt was made to present the indications for an operation which produced sterility for temporary purposes; although such instances were believed to be within the range of possibility, and if so, emphasized the advantage of doing the primary operation in the manner proposed.

Personal Experience in Operations upon Diabetic Patients.—Dr. CHARLES P. NOBLE, of Philadelphia, in discussing this topic, said that of the seven patients operated upon by himself, six had made good recoveries, and one had died of diabetic coma. In the six remaining cases the healing of the wounds and the general progress of the patients toward recovery were not different from that in patients not the subject of glycosuria. In looking up the literature of the subject he had been able

to add to his own list sixty-two cases of operations upon diabetics, upon those organs of the body which were the special field of the gynæcologist and abdominal surgeon, making a total of sixty-nine cases.

The contraindication to operation was strongest in those patients suffering markedly from the constitutional symptoms of diabetes—poor nutrition, wasting, intense thirst, and morbid appetite.

Officers for the Ensuing Year.—The following officers were elected: President, Dr. Edward Reynolds, of Boston; vice-president, Dr. J. Whitridge Williams, of Baltimore, and Dr. Edward P. Davis, of Philadelphia; secretary, Dr. J. Riddle Goffe, of New York; treasurer, Dr. J. Montgomery Baldy, of Philadelphia. Place of meeting, Boston, beginning on the fourth Tuesday in May, 1904.

Book Notices.

How to Succeed in the Practice of Medicine. By JOSEPH McDOWELL MATHEWS, M. D., LL. D., President of the American Medical Association, 1898-'99, etc. Louisville: John P. Morton & Co., 1902. Pp. xii-215.

This is not one of those books that purport to tell the young practitioner solely how he can collect his bills; it tells him, on the contrary, how he can become and remain a respected and self-respecting member of any community. Without having aimed at writing a treatise on ethics, Dr. Mathews has, nevertheless, given us in this book a delightful sketch of the ideal physician's career. It is intensely readable from cover to cover, interspersed as it is with anecdote, retrospect, and pictures of the bliss of a correct life. No physician, young or old, can fail to profit by its perusal or to be entertained by its charming style. Dr. Mathews has long had a wide acquaintance with his professional brethren, and he has invariably impressed them—and most truthfully—with his lively spirit of sympathy. To most of us it is too seldom given to look Dr. Mathews in the face; the next best thing is to gaze upon his portrait. We are glad, therefore, that the publishers have inserted it as a frontispiece.

The Treatment of Fractures. By CHARLES LOCKE SCUDDER, M. D., Assistant in Clinical and Operative Surgery, Harvard University Medical School; Surgeon to the Out-patient Department, Massachusetts General Hospital. Third Edition, thoroughly revised. With 645 Illustrations. Philadelphia and London: W. B. Saunders & Company, 1902. Pp. 485.

The general revision of this excellent work seems to have been very thorough. The most notable addition is a chapter on gunshot fractures of bone, largely based on the experience of such military surgeons as Kocher, Treves, Nancrede, Makins, Senn, Borden, and La Garde, who have particularly studied the effects of the modern small calibre bullet in recent wars. The main facts brought out by these skilled observers are well set forth by Dr. Scudder. We regard the work as indispensable to the surgeon of the present day.

Work Book in Surgery. Comprising the Principles of General Surgery and Surgical Procedure. By LUZERNE COVILLE, Lecturer on Surgery, formerly Lecturer in Anatomy, Cornell University Medical College, at Ithaca, etc. Ithaca, N. Y., privately printed, 1902. Pp. x-294.

This little book is too fragmentary to be of much service to those who are not under the author's personal teaching. It has been very carelessly written.

BOOKS, ETC., RECEIVED.

Ueber die Ursachen, das Wesen und die Behandlung des Klumpffusses. Von Dr. Julius Wolff, weil. Geh. Medicinalrath, a. o. Professor der Chirurgie und Director der Königl. Universitäts-Poliklinik für orthopädische Chirurgie zu Berlin. Herausgegeben von Professor Dr. George Joachims-thal. Mit Portrait Julius Wolff's und Textfiguren. Berlin: August Hirschwald. 1903. Pp. v-161.

Journal of the Association of Military Surgeons. James Evelyn Pitcher, Editor. Carlisle, Pa.: The Association of Military Surgeons. 1903. Pp. ii-xxxvi and 277-348. (Price, \$3.00 a Year, Thirty Cents a copy.)

Quarterly Report of the Medical Officer of Health, of Islington, London. First Quarter, 1903. London: Vail & Co., 170 Farringdon Road, E. C.

Transactions of the American Dermatological Association. At its Twenty-sixth Annual Meeting. Held in Boston, Mass., September 18th, 19th and 20th, 1902. Official Report of the Proceedings. By Frank Hugh Montgomery, M. D., Secretary. Chicago: P. F. Pettibone & Co. 1903. Pp. 9-222.

Index-Catalogue of Medical and Veterinary Zoology. Part 3. (Authors: C to Czygan.) By Ch. Wardell Stiles, Ph. D., Consulting Zoologist of Bureau of Animal Industry; Zoologist of U. S. Public Health and Marine-Hospital Service, and Albert Hassall, M. R. C. V. S. Acting Assistant Zoologist of Bureau of Animal Industry. U. S. Department of Agriculture. Bureau of Animal Industry, Bulletin No. 39. Washington: Government Printing Office. 1903. Pp. 199-324.

The Röntgen Rays in Medicine and Surgery. As an Aid in Diagnosis and as a Therapeutic Agent. Designed for the Use of Practitioners and Students. By Francis Williams, M. D. (Harv.), Graduate of the Massachusetts Institute of Technology; Visiting Physician at the Boston City Hospital; Fellow of the Massachusetts Medical Society; Member of the Association of American Physicians, etc. With Four Hundred and Twenty-eight Illustrations. Third Edition with Enlarged Appendix. New York: The Macmillan Company. London: Macmillan and Co., Ltd. 1903. Pp. v-757. (Price, \$6.00.)

How to Keep Well. An Explanation of Modern Methods of Preventing Disease. By Floyd M. Crandall, M. D. New York: Doubleday, Page & Company. 1903. Pp. v-511.

The Errors of Accommodation and Refraction of the Eye and their Treatment. A Handbook for Students. By Ernest Clarke, Fellow of the Royal College of Surgeons of England; Doctor of Medicine and Bachelor of Surgery of the University of London, etc. New York: William Wood & Company. MDCCCIII. Pp. vii-225. (Price, \$1.75.)

International Clinics. A Quarterly of Illustrated Clinical Lectures and especially-prepared Original Articles on Treatment, Medicine, Surgery, Neurology, Pædiatrics, Obstetrics, Gynæcology, Orthopædics, Pathology, Dermatology, Ophthalmology, Otology, Rhinology, Laryngology, Hygiene, and Other Topics of Interest to Students and Practitioners. By Leading Members of the Medical Profession throughout the World. Edited by A. O. J. Kelly, A. M., M. D., Philadelphia, U. S. A. With the Collaboration of Wm. Osler, M. D., Baltimore; John H. Musser, M. D., Philadelphia; Jas. Stewart, M. D., John B. Murphy, M. D., Chicago; Thomas M. Rotch, M. D., Boston; John G. Clark, M. D., Philadelphia; James J. Walsh M. D., New York; J. W. Ballantyne, M. D., Edinburgh; John Harold, M. D., London; Edmund Landolt, M. D., Paris; Richard Kretz, M. D., Vienna. With Regular Correspondents in Montreal, London, Paris, Berlin, Vienna, Leipsic, Brussels and Carlsbad. Volume I. Thirteenth Series 1903. Philadelphia. J. B. Lippincott Company. 1903. Pp. iii-306.

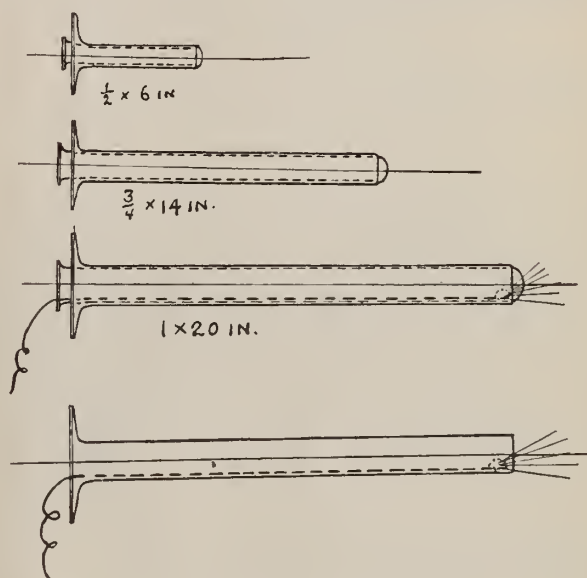
New Inventions.

A NEW PROCTOSCOPE AND SIGMOIDOSCOPE.

By F. B. MARSHALL, M. D.,
MUSKEGON, MICH.

This instrument consists to two tubes. The inner, fitting closely inside the outer and closed at the distal end, is composed of glass, and acts as entering plug. The outer, being open at both ends, allows direct application to any part of the bowel explored, when the inner tube is withdrawn and light reapplied.

When the instrument has passed the sphincters the inner tube should be withdrawn, to allow atmos-



Dr. Marshall's Proctoscope. The lowest figure shows the inner tube removed and the light reapplied.

pheric air to inflate the bowel, and should be reintroduced before attempting to pass the rectosigmoid valve.

The light in the inner glass tube affords the operator a good view of every portion of the bowel explored, and enables him to avoid pushing the instrument against ulcerated surfaces. The metal plug instruments have been pushed through deeply ulcerated portions of the bowel, as it is impossible for the operator to see each portion of the bowel before the instrument reaches it.

These instruments possess every advantage of other proctoscopes and sigmoidoscopes, are inexpensive, and can be safely used by the most inexperienced physician.

The patient should have all constriction removed from the waist and be in the knee-chest position. The operator should constantly bear in mind the normal direction of the bowel; through the distal two inches the instrument should be made to pass as though the umbilicus were the objective point, then it should be turned abruptly backward, or rather upward, in the proctoscopic posture, into the hollow of the sacrum, the concavity of which is closely followed for the succeeding four inches. The instrument readily enters the sigmoid after passing the rectosigmoid valve.

Miscellany.

Surgery of the Heart. By Benjamin Merrill Ricketts, Ph. B., M. D. (*Continued from p. 964*).

ANEURYSM. 1843-1903.

Aneurysm may involve any portion or the whole of the cardiac wall. The left ventricle and upper portion of the intraventricular septum are the most frequently involved.

Heart strain and syphilis are the most frequent causes.

There is no group of symptoms that will definitely determine their presence.

The rupture in the direction of least resistance, which may be in the pericardial or pleural cavity.

There have been one hundred and twenty-five contributions to this subject.

CARDIORRHAPHY.

There have been fifty-three cases in which gun shot and stab wounds of the heart have been sutured; in eighteen of which recovery took place.

Penetrating or non-penetrating wounds of the walls of the four chambers of the heart have been sutured with more or less success, the ages varying from childhood to old age in both man and woman. Some have been done with and some without the use of chloroform or ether. Some have been sutured with silk and some with catgut. The time of operation after injury has varied from immediately to twenty hours. Accident to the coronary artery during operation has occurred in one case.

There have been twenty-six contributions to this subject.

CARDIOLITHS AND CONCRETIONS.

are quite common, and originate from the blood, polypoid growths, clots or microorganisms. They may form in any part of the myocardium and rupture into the pericardial cavity or into any of the cardiac chambers, and may afterwards pass into other chambers of the heart, or pass out beyond the tricuspid valves. There are many such cases reported, beginning with that of Goodwin (1700).

There have been sixty contributions to this subject.

FOREIGN BODIES. 1814-1903.

Foreign bodies in the hearts of bipeds are usually found in the floor of one of the ventricles.

The heart of the quadruped is in a different position from that of the biped; it falls backward when man is upon his back; in the animal forward when he walks about or lies down.

Foreign bodies in the heart are of two types, those that form within the heart itself, and those that had been made to enter the heart from without. The latter consist of metals of various kinds and shapes, wood, glass, etc.

Ferris (1882) reports a case of a man who lived twenty days with a screw traversing his heart.

There have been twenty-five contributions to this subject.

OSSIFICATION AND CALCIFICATION. 1822-1903.

A deposit of calcium carbonate or phosphate associated with some of the salts of magnesium is sometimes found in the heart. It may be deposited in the endothelium and the intermuscular fibres. It is usually preceded by fibrosis and is due to weak circulation and chronic irritation. Gibson says the cause is absolutely unknown. It has been known to surround the substance of the heart.

There have been forty-eight contributions to this subject.

SYPHILITIC GUMMATA. 1862-1903.

Syphilis is a great factor in producing the more serious cardiac affections, such as chronic valvular disease after middle life. Many cases of changes in the heart muscle are due to it. Acute myocarditis, fibrosis, and gummata are the syphilitic affections of the heart. Gummata may be found in any part of the myocardium.

There have been seventy-six contributions to this subject.

ABSCCESS. 1833-1903.

Abscess of the heart is usually pyæmic, and is associated with disease of the bone and joints, cancer, phlebitis, myocarditis, and chronic ulcers, especially about the genitourinary tract.

Abscesses vary in size from a millet seed to a bantam's egg; as a rule they are situated at the base of the left ventricle in the papillary muscles. They may remain semisolid or may contain fluid and rupture into the pericardial space or into one or all of the chambers of the heart, and may finally enter the general circulation.

Death may fail to ensue from either character of rupture, the result depending upon the character of the fluid, its amount, and the condition of the patient at time of rupture.

One of the earliest reports of abscess at the heart is by Broussais (1832).

Such a condition was found in the heart of a horse by Parry, in 1835.

Dr. Roswell Park aspirated an abscess in the wall of the heart in 1877. It was purely accidental, as he thought he was aspirating the fluid in the pericardial cavity. The patient died several hours after, and autopsy revealed the facts. This is probably the first and only case of abscess of the heart opened surgically in any manner in the living human body. It shows what can and should be done; if necessary, opening the pericardial cavity for exploration.

There have been thirty-three contributions to this subject.

GANGRENE.
1850-1903.

Gangrene of the heart is less frequent than any disease of the heart herein mentioned. The first case reported is by Gaullay (1807).

Dr. Daniel Young, of Cincinnati (1868), reported an interesting case of gangrene of the heart. He is one of only five contributors to this subject.

TUMORS OF THE HEART: SARCOMA.
1880-1903.

Sarcoma of the heart is rare. It may be primary or secondary; slow or rapid in its development. It is composed of embryonic connective tissue, very vascular, sometimes pulsating, and intimately connected with blood vessels. It is more frequent in men than in women, and usually occurs after forty years of age.

Gross (1880) was one of the first to record a round cell sarcoma of the heart.

Leroux and Meslay (1896) and Lambert (1898) record a case of primary sarcoma of the heart.

There are eleven contributions to this subject.

CARCINOMA.
1847-1903

Carcinoma is found more frequently upon the right heart; it may be primary or secondary, usually secondary. It is more likely to produce pericarditis than sarcoma. It is most difficult to classify primary and secondary carcinoma of the heart.

There have been seventeen contributions to this subject.

FIBROMA.
1852-1903.

Fibroid tumors of the heart are not common in form, while fibroid degeneration of the heart is frequent and may involve a part or the whole of the muscular structure. It rarely, if ever, takes the form of a tumor.

Fibroid tumors may develop in any of the heart structures, preferably in the muscles. Gull, in 1852, found a fibroid tumor attached to the muscular tissue of the left ventricle of the heart of a sheep. Elliott (1856) found one in the right ventricular wall of the heart of man. In his case there was a sacculated aneurysm and dilatation as the result of its pressure.

There are eighteen contributions to this subject.

LIPOMA.
1886-1903.

Lipomata of the heart are comparatively rare. They are connected with the fat about the heart upon the external surface. They may or may not be associated with fatty degeneration of the heart. They are benign and are usually found after middle life, and more frequently in women than men.

The first to record such a case was Banti, in 1886.

There have been five contributions to this subject.

RHABDOMYOMATA

are a rare form or primary myoma, characterized by the presence of striated muscular fibres. They are

found in muscular tissues of the heart upon the endocardial or pericardial surfaces, or within the cardiac walls. They are single as a rule, but may be multiple and attain any size.

MYXOMA

is a mucous tumor composed of connective tissue, gelatinous in character, and containing intercellular substance, in which are scattered peculiarly branched or stellate cells.

It attacks the epithelium or connective tissue enveloping one or both, may be single or multiple, and may vary in size and shape, appearing in any portion of the heart.

There are three contributions to this subject.

POLYPS.
1689-1903.

Polypoid growths may develop upon part of the endocardium or at any point upon the external surface of the heart. They are benign when composed of fibrous tissue; slow in their development; and when rapid are associated with sarcoma and myxoma. They may have a broad base or may be pedunculated. They may become detached in part or as a whole, and may occlude one or more of the cardiac orifices, enter the general circulation, or both, and act as an embolism.

Pretten (1689) described polyps within the cardiac chambers.

There has been forty-seven contributions to this subject.

(To be concluded.)

The Fees of Medical Witnesses.—The question as to whether a medical man summoned as a witness in a criminal case is entitled to a fee having some relation to his professional status, or only to the statutory fee allowed to an ordinary witness, is in no little confusion, owing to diverse decisions that have been rendered. The *British Medical Journal* for May 23rd says that the practitioner has a remedy if he chooses to employ it. "He may bring an action against those who have subpœnaed him, and this although there is no express contract to the effect that he is to be paid for his services. It seems that mere attendance at the court is sufficient evidence of an agreement. A recent case in the City of London Court shows that a professional man may reasonably expect remuneration, even if there is no express agreement. It seems that a solicitor brought an action against the registrar of the Peterborough district to recover the sum of £12 1s. 6d., the balance of £12 12s. which he alleged to be due to him for attending court on a subpœna. He had allowed for four days, and claimed £3 3s. a day. It was contended on the part of the defendant that the plaintiff's proper remedy was to have stayed away from court, and that there was no right of action. Judge Rentoul, however, after reviewing decisions on the subject dating back one hundred years, and although he felt some doubt as to the law governing subpœnas, said that com-

mon sense required him to find for the plaintiff for £8 8s., that is, remuneration at the rate of £2 2s. a day."

Herrick on Surfeits.—In the *Hesperides* of Robert Herrick, number 896, the poet sings:

Bad are all surfeits; but Physitians call
That surfeit tooke by bread, the worst of all.

And again (*Hesperides*, number 952):

Physitians say Repletion springs
More from the sweet then sower things.

And *per contra* (number 1118):

Against diseases here the strongest fence
Is the defensive vertue, Abstinence.

Again (number 1050):

If wholesome Diet can re-cure a man,
What need of Physick, or Physitian?

The Banishment of Bubonic Plague from the Philippines is the subject of an article in the May number of the *National Geographic Magazine*. The following extracts are quoted from the *American Monthly Review of Reviews* for June:

"Bubonic plague was discovered at Manila on December 26, 1899, and slowly but steadily increased in its ravages up to December, 1901.

"The deaths in 1900 numbered 199, and in 1901 reached a total of 432. The disease was at its worst each year during the hot, dry months of March, April, and May, nearly or quite disappearing during September, October, November, and December. It will be noted that the number of cases in 1901 exceeded that in 1900 by 200, while the number of deaths was about two and a half times as great, and the percentage of mortality among persons attacked increased from 73.4 in 1900 to 91.7 in 1901.

"This heavy increase in plague for the year 1901 justified the apprehension that a severe epidemic would occur in 1902. Strenuous efforts were made to improve the general sanitary condition of the city, but the habits of the Chinese residents and the lower class of Filipinos were such as to render the enforcement of proper sanitary regulations well-nigh impossible.

"On account of the important part which house rats are known to play in the distribution of bubonic plague, a systematic campaign was inaugurated against these rodents in Manila. Policemen, sanitary inspectors, and specially appointed rat-catchers were furnished with traps and poison, and both traps and poison were distributed to private individuals under proper restrictions. A bounty was paid for all rats turned over to the health authorities, and stations were established at convenient points throughout the city where they could be received. Each rat was tagged with the street and number of the building or lot from which it came, was dropped into a strong antiseptic solution, and eventually sent to the Biological Laboratory, where it was subjected to a bacteriological examination for plague. During the first two weeks, 1.8 per cent. of the rats examined were found to be infected. This proportion steadily increased, reaching the alarming maximum of 2.3

per cent. in October. At this time numerous rats were found dead of plague in the infected districts, and, in view of the fact that epidemics of plague among the rats of a city in the past have been uniformly followed by epidemics among human beings, the gravest apprehension was felt, the rapid spread of the disease among the rats after the weather had become comparatively dry being a particularly unfavorable symptom.

"It was deemed necessary to prepare to deal with a severe epidemic, and a permanent detention camp, capable of accommodating fifteen hundred persons, was accordingly established on the grounds of the San Lazaro Hospital. Hoping against hope, the board of health redoubled its efforts to combat the disease. The force of sanitary inspectors was greatly increased, and under the able supervision of Dr. Meacham their work was brought to a high degree of efficiency. Frequent house to house inspections were made in all parts of the city where the disease was known to exist. The sick were removed to the hospital if practicable; otherwise they were cared for where found and the spread of infection guarded against.

"Plague houses were thoroughly disinfected, and their owners were compelled, under the direction of the assistant sanitary engineer, to make necessary alterations. Cement ground floors were laid; double walls and double ceilings, affording a refuge for rats, were removed; defects in plumbing were remedied; whitewash was liberally used, and, in general, nothing was left undone that could render buildings where plague had occurred safe for human occupancy. Buildings incapable of thorough disinfection and renovation were destroyed. Buildings in which plague rats were taken were treated exactly as were those where the disease attacked the human occupants. The bacteriological examination of rats enabled the board of health to follow the pest into its most secret haunts and fight it there, and was the most important factor in the winning of the great success which was ultimately achieved.

"With very few exceptions, there was no recurrence of plague in buildings which had been disinfected and renovated. As centre after centre of infection was found and destroyed, the percentage of diseased rats began to decrease, and in January, 1902, when, judging from the history of previous years, plague should have again begun to spread among human beings, there was not a single case. In February, one case occurred. In March, there were two cases, as against sixty-three in March of the preceding year, and before April the disease had completely disappeared.

"This result, brought about at a time when the epidemic would, if unchecked, have reached its height for the year, marked the end of a fight begun by the board of health on the day of its organization and prosecuted unremittingly under adverse conditions for seven months, with a degree of success which has not been equaled under similar conditions in the history of bubonic plague.

"During 1901, plague appeared at several points in the provinces near Manila. Agents of the board of health were promptly dispatched to the infected municipalities, and radical remedial measures were

adopted, including, in several instances, the burning of infected buildings, the result being the complete disappearance of plague in the provinces as well as in Manila.

The *Review of Reviews* adds: "The chief health inspector, Dr. Franklin R. Meacham, to whom the greatest credit is due for the success of these repressive measures, lived only to see the battle won. Exhausted by the strain of the long struggle, he died in April, 1902, but not till after it could be truly said that he had freed the Philippines of bubonic plague."

What could be done in the Philippines can surely be done in other Oriental countries under the dominion of European powers. Hongkong has always been a danger centre, through its widespread commerce, and it behooves the British authorities not to lag behind in the race in which the lead has been so well taken by the United States.

St. John's Leper Asylum, Burmah.—St. John's Leper Asylum, in Burmah, Farther India, which is now one of the most noble institutions, not only in Burmah, but in the world, had a very humble beginning, says the *London Graphic*. In 1888, shortly after the annexation of Upper Burmah to the English dominion, the late Bishop Simon addressed the authorities on the subject of lepers, and in 1891, the Rev. Father Wehinger, following the example of the immortal Father Damien, founded the St. John's Leper Asylum outside Mandalay. Inch by inch the asylum has grown through the untiring efforts of its originator, and within the last three years new wards have been added, the accommodations being entirely inadequate. At its initiation the number of lepers in Burmah was variously estimated at from 18,000 to 30,000.

Official News.

Infectious Diseases in New York:

We are indebted to the Sanitary Bureau of the Health Department for the following statement of cases and deaths reported for the two weeks ending June 13, 1903:

DISEASES.	Week end'g June 6.		Week end'g June 13.	
	Cases.	Deaths.	Cases.	Deaths.
Measles	471	18	413	17
Diphtheria and Croup.....	437	52	443	44
Scarlet fever.....	261	29	315	15
Small-pox	1	0	1	0
Chicken-pox.....	98	0	102	0
Tuberculosis	396	158	343	145
Typhoid fever	50	10	59	6
Cerebrospinal meningitis.....	0	9	0	3

Army Intelligence:

Official List of Changes in the Stations and Duties of Officers serving in the Medical Department of the United States Army, for the Week ending June 13, 1903:

CHAFFEE, JEROME S., First Lieutenant and Assistant Surgeon. The resignation of his commission as an officer in the United States Army has been accepted by the President, to take effect July 1, 1903.

DE WITT, WALLACE, First Lieutenant and Assistant Surgeon. Ordered to Fort Porter, N. Y., for duty.

Public Health and Marine Hospital Service Health Reports:

The following cases of smallpox, yellow fever, cholera and plague, have been reported to the surgeon-general, Public Health and Marine Hospital Service, during the week ending June 13, 1903:

Smallpox—United States.

Places.	Date.	Cases.	Deaths.
Alabama—Mobile	May 30-June 3 ..	3	
California—Fresno	May 1-31	13	
California—Los Angeles	May 23-30	4	
California—San Francisco	May 24-31	4	
Connecticut—Stamford	May 1-31	1	
Florida—Columbia County	May 23-30	1	
Florida—Duval County	May 23-30	4	
Florida—Escambia County, Pensa-			
cola	May 23-30	2	
Florida—Leon County	May 23-30	5	
Georgia—Atlanta	May 28-June 3 ..	2	
Illinois—Chicago	May 31-June 6 ..	12	
Illinois—Danville	May 31-June 6 ..	1	
Indiana—Indianapolis	May 31-June 6 ..	2	
Iowa—Des Moines	May 31-June 6 ..	1	
Louisiana—New Orleans	May 31-June 6 ..	4	
Maine—Bucksport	June 3	1	
Maryland—Baltimore	May 30-June 6 ..	1	
Massachusetts—Fall River	May 30-June 6 ..	9	
Michigan—Detroit	May 28-June 6 ..	17	1
Michigan—Flint	May 23-June 6 ..	2	
Michigan—Grand Rapids	May 28-June 6 ..	4	
Michigan—Port Huron	June 1-8	1	
Nebraska—Omaha	May 29-June 6 ..	3	
New Hampshire—Nashua	May 29-June 6 ..	9	
New York—New York	May 29-June 6 ..	1	
New York—Rochester	May 24-June 7 ..		3
Ohio—Cincinnati	May 28-June 5 ..	4	1
Ohio—Cleveland	May 30-June 6 ..	5	
Ohio—Hamilton	May 30-June 6 ..	1	
Ohio—Toledo	May 16-30	8	
Pennsylvania—Altoona	May 29-June 6 ..	3	
Pennsylvania—Erie	May 29-June 6 ..	1	
Pennsylvania—Johnstown	May 29-June 6 ..	1	
Pennsylvania—McKeesport	May 29-June 6 ..	2	1
Pennsylvania—Philadelphia	May 29-June 6 ..	31	4
Pennsylvania—Pittsburg	May 29-June 6 ..	9	6
South Carolina—Charleston	May 28-June 6 ..	4	
Tennessee—Memphis	May 23-June 6 ..	6	
Texas—San Antonio	May 1-31	2	
Wisconsin—Milwaukee	May 23-June 6 ..	54	

Smallpox—Insular.

Hawaii—Honolulu	May 7	1	
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Smallpox—Foreign.

Austria—Prague	May 16-23	4	
Belgium—Antwerp	May 16-23	6	
Belgium—Brussels	May 16-23		8
China—Hongkong	Apr. 11-25	*	2
China—Shanghai	Apr. 24-May 2 ..		3
Colombia—Barranquilla	May 17-21	1	
Colombia—Bocas del Toro	May 19-26	5	
France—Paris	May 16-23	1	
Great Britain—Dublin	May 16-23	12	4
Great Britain—Dundee	May 8-16	5	
Great Britain—Liverpool	May 16-23	49	6
Great Britain—London	May 16-23	19	
Great Britain—Manchester	May 16-23	14	
Great Britain—Newcastle-on-Tyne.....	May 8-16	3	
Great Britain—Sheffield	May 8-16	4	
Great Britain—South Shields	May 8-16	1	
Great Britain—West Hartlepool	May 16-23	2	
India—Calcutta	Apr. 11-18		3
Russia—Moscow	May 8-16	4	2
Russia—St. Petersburg	Apr. 25-May 16 ..	103	10
Russia—Warsaw	Apr. 18-May 2 ..		5

Yellow Fever.

Colombia—Panama	May 18-June 1 ..	10	6
Costa Rica—Limon	May 21-28	3	2
Mexico—Coatzacoalcos	May 23-30	1	1
Mexico—Pregreso	June 3	1	
Mexico—Tampico	May 23-30	8	5
Mexico—Vera Cruz	May 23-30	16	4

Cholera—Insular.

Philippines—Manila	Apr. 11-May 2 ..	52	47
Philippines—Provinces	Apr. 11-May 2 ..	1,342	729
	Not previously reported,	81	79

Cholera—Foreign.

India—Calcutta	Apr. 11-18	129	
Turkey—Damascus	Mar. 29-Apr. 18 ..	33	

Plague.

China—Hongkong	Apr. 11-25	130	119
India—Calcutta	Apr. 11-18		588
Peru—Callao	To May 12	10	4

Naval Intelligence:

Official List of Changes in the Medical Corps of the United States Navy, for the Week ending June 13, 1903:

ANDERSON, F., Medical Director. Detached from the *Alabama* and ordered to the *Brooklyn*.

BLOCK, W. H., Acting Assistant Surgeon. Detached from the Naval Recruiting Station, Chicago, Ill., and ordered to the Navy Yard, New York.

BYRNES, J. C., Surgeon. Ordered to the *Texas*.

DECKER, C. J., Surgeon. Ordered to the *Alabama*.

ELMER, M. K., Assistant Surgeon. Detached from the *Ranger* and ordered to the *Independence*.

FARENHOLT, A., Passed Assistant Surgeon. Detached from the *Boston* and ordered to the *Concord*.

GRAVATT, C. U., Medical Director. Retired on account of disability incurred in active service.

HUNTINGTON, W. H., Pharmacist. Retired from active service on account of disability incident to service.

KINDELBURGER, C. P., Passed Assistant Surgeon. Detached from the *Iowa* and ordered home to await orders.

LEACH, P., Surgeon. Detached from the *Columbia* and ordered to the *Massachusetts*.

MORGAN, D. H., Passed Assistant Surgeon. Detached from the *Boston* and ordered to the Naval Hospital, Mare Island, for treatment.

PICKRELL, G., Surgeon. Detached from the *Texas* and ordered to the *Iowa*.

SMITH, R. K., Passed Assistant Surgeon. Detached from the *Independence* and ordered to duty at the Naval and Marine Recruiting Stations, San Francisco, Cal.

SPRATLING, L. W., Surgeon. Detached from the Navy Yard, New York, and ordered to the *Columbia*.

STEELE, J. M., Surgeon. Detached from the *Massachusetts*, and granted leave for six months.

STOKES, C. F., Surgeon. Ordered to the Navy Yard, League Island, Pa.

The following doctors have been appointed Assistant Surgeons from May 25, 1903: W. H. REENIE, W. W. VERNER, O. KOHLHASE, and P. S. ROSSITER, and from June 2, 1903, W. B. SMITH and W. S. HOEN.

The following passed assistant surgeons have been commissioned Passed Assistant Surgeon with rank of Lieutenant, from March 3, 1903: ORVIS, KERR, GROW, GRUNWELL, LANGHORNE, THOMPSON, BENTON, GARTON, McCULLOUGH, FURLONG, ANGENEY, BELL, CURL, BELL, HOLCOMB, PARKER, WRIGHT, PLUMMER, ODELL and TAYLOR.

The following surgeons have been commissioned Surgeons, with rank of Lieutenant Commander, from March 3, 1903: MEANS, CORDEIRO, WIEBER, NORTON, KITE, WENTWORTH, DECKER, BERRYHILL, STONE, PICKRELL, CRANDALL, HARRIS, URIE, McCORMICK, ARNOLD, WILSON, STOKES, STITT, GATES, LOWNDES, BARBER, ROTRANGER, SMITH, LUNG, VON WEDEKIND, BOGERT, SPRATLING, KENNEDY, BLACKWOOD, BRAISTED and EVANS.

Public Health and Marine Hospital Service:

Official List of Changes of Station and Duties of Commissioned and Non-commissioned Officers of the Public Health and Marine Hospital Service, for the Seven Days ending June 11, 1903:

ALLEN, G. C., Pharmacist. Granted extension of leave of absence for twenty-three days, from June 5th.

BREADY, J. E., Acting Assistant Surgeon. Granted leave of absence for three days.

CARMICHAEL, D. A., Surgeon. Leave of absence for seventeen days, from May 19, 1903. Granted by Bureau letter of May 9th, amended so that it shall be for thirteen days only.

EAGER, J. M., Passed Assistant Surgeon. Granted leave of absence for two months, from August 1st.

GARDNER, C. H., Passed Assistant Surgeon. Granted leave of absence for seven days, from June 11th.

LLOYD, B. J., Assistant Surgeon. To report to Passed Assistant Surgeon R. Blue, Plague Laboratory, San Francisco, Cal., for temporary duty.

McCONNELL, A. P., Acting Assistant Surgeon. Granted leave of absence for two days, from June 10th.

MASON, W. C., Acting Assistant Surgeon. Granted leave of absence for seven days, from June 11th.

PARKER, H. B., Passed Assistant Surgeon. Directed to report at Washington, D. C., for temporary duty.

RODMAN, J. C., Acting Assistant Surgeon. Granted leave of absence for thirty days, from June 20th.

VOGEL, C. W., Assistant Surgeon. Granted leave of absence for one month, from June 8th.

WALKLEY, W. S., Acting Assistant Surgeon. Granted leave of absence for seven days, from June 11th.

BOARDS CONVENED.

Board convened to meet at San Francisco, Cal., June 8, 1903, for the physical re-examination of an officer of the Revenue Cutter Service. Detail for the board, Assistant Surgeon Carl Ramus, chairman. Assistant Surgeon C. W. Vogel, recorder.

Board convened to meet at Washington, D. C., June 10, 1903, to review testimony and make recommendation in case of Assistant Surgeon F. J. Thornbury. Detail for the board, Assistant Surgeon-General W. J. Pettus, chairman; Surgeon H. W. Sawtelle; Surgeon D. A. Carmichael, recorder.

Marriages and Deaths.**Married.**

ADAMS—APPOLD.—In Baltimore, Maryland, on Wednesday, June 10th, Dr. James Frederick Adams and Miss Nellie Bland Appold.

DOLAN—RUIZ.—In Brooklyn, N. Y., on Wednesday, June 10th, Dr. Edward Thomas Dolan and Miss Fayette Ruiz.

GETMAN—FOWLE.—In Newburyport, Massachusetts, on Wednesday, June 10th, Dr. J. Edgar Getman and Miss Edith Chase Fowle.

GEORGE—HALLEY.—In Ann Arbor, Michigan, on Thursday, June 11th, Dr. Conrad George, Jr., and Miss Katherine Halley.

JOHNSTON—NEWLANDS.—In Washington, D. C., on Wednesday, June 10th, Dr. William Bernard Johnston and Miss Janet Newlands.

PACKARD—CROUCHER.—In Boston, Massachusetts, on Thursday, June 11th, Dr. George Henry Packard and Miss Miranda Croucher.

PRATT—GILBERT.—In Brooklyn, N. Y., on Wednesday, June 10th, Dr. Henry Bell Pratt and Miss Ruth Hogoboom Gilbert.

ROBERTS—MARTIN.—In Washington, D. C., on Wednesday, June 10th, Dr. Ernest Edwin Roberts and Miss Grace May Martin.

TILNEY—HURLEY.—In Brooklyn, N. Y., on Monday, June 15th, Dr. Frederick Tilney and Miss Camilia Hurley.

URQUHART—DUNLOP.—In Washington, D. C., on Wednesday, June 10th, Dr. Richard A. Urquhart and Miss Helen Dunlop.

Died.

BASTIAN.—In Clinton, Massachusetts, on Sunday, June 7th, Dr. D. I. Bastian.

BRADLEY.—In New Haven, Connecticut, on Friday, June 12th, Dr. William L. Bradley, in the sixty-sixth year of his age.

CALDWELL.—In Rockville, Maryland, on Saturday, June 6th, Dr. William A. Caldwell, in the forty-first year of his age.

RUBY.—In Louisville, Kentucky, on Sunday, June 7th, Dr. F. W. Ruby, in the thirty-seventh year of his age.

WALKER.—In Philadelphia, Pennsylvania, on Tuesday, June 9th, Dr. Faye Walker, in the eighty-fifth year of his age.

New York Medical Journal AND Philadelphia Medical Journal. CONSOLIDATED.

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SATURDAY, JUNE 27, 1903.

WHOLE No. 1282.

Original Communications.

GONORRHOEA INSONTIUM, ESPECIALLY IN RELATION TO MAR- RIAGE.*

By PRINCE A. MORROW, M. D.,
NEW YORK.

I have employed the term "gonorrhœa inson-
tium" to designate a certain class of infections
which are distinguished by the conditions under
which contagion takes place. From a strictly sci-
entific standpoint, such a differentiation is, of course,
inadmissible; gonococcic infection is the same, irre-
spective of the conditions under which it originates.
The qualificative "inson-
tium" implies, therefore, an
ethical, rather than a medical, distinction. Further,
its use embodies the popular conception that the
existence of gonorrhœa carries with it a certain
stigma; that it is in some sort an opprobrium and
a reproach to the bearer and furnishes presumptive
proof, at least, of immorality. It is worthy of note
that venereal diseases are the only ones that have
this moral, or rather immoral, aspect. Without at-
tempting to explain or justify the grouping of a
particular class of diseases upon a purely ethical
basis, it may be said that as long as gonorrhœa is
classed by popular opinion as a shameful disease, we
should recognize a distinction between cases in
which the disease is contracted by voluntary ex-
posure to contagion, under conditions which so-
ciety qualifies as immoral, and cases in which con-
tagion is conveyed under conditions which are sanc-
tioned as lawful, honorable and virtuous.

The term "syphilis inson-
tium" has been long con-
secrated by usage to embrace the innocent victims of
this disease. In this category are classed not only
cases of conjugal contamination and inherited
syphilis, but a vast number of cases of extragenital
infections occurring in family life and through vari-
ous industrial occupations and professional rela-
tions. The literature of syphilis inson-
tium is large and constantly increasing, so that, at the present

day, syphilis is not regarded as necessarily a vene-
real disease.

Gonorrhœa more nearly conforms to the type of a
venereal disease, having its almost exclusive origin
in the venereal act; yet it is often innocently ac-
quired. Certainly no moral stigma should attach
to the innocent victims of this disease when con-
tracted under the sanctity, and what should be the
safeguard, of the marriage relation.

COMPARATIVE SIGNIFICANCE OF GONORRHOEA AND SYPHILIS AS SOCIAL DANGERS.

While gonorrhœa cannot claim the multiple and
varied modes of syphilitic contagion and is not sus-
ceptible of hereditary transmission, yet, owing to
its much greater frequency, its prolonged latency,
the insidious character of its infection in married
life, and its effects upon the health and conceptional
capacity of the woman, it is quite as formidable a
social plague as syphilis.

Unquestionably, the most sombre chapter of
syphilis inson-
tium is the murderous influence of the
disease upon the offspring, but the no less per-
nicious effects of gonorrhœa upon the procreative
function, its inhibitory influence upon the perpetua-
tion of the species, which is the primary and fun-
damental basis of the institution of marriage, are
by no means adequately appreciated. Syphilis de-
stroys the product of conception or blights its
growth and normal development. Gonorrhœa is
more radical and effective in its action; it renders
null and void the procreative process by mechanical
obstruction of the seminiferous tubes or oviducts or
by rendering sterile or unproductive the culture
field of the ovum. Gonorrhœa absolutely prevents
what syphilis maims or destroys.

We have long been accustomed to look upon
syphilis as a serious social peril, both from its indi-
vidual risks and from its morbid irradiations into
the family and social life; hence the relations of
syphilis with marriage have been most carefully
studied, the degree and duration of its infective
capacity have been approximately fixed, and the
conditions of admissibility of the syphilitic to mar-
riage have been rigorously formulated. On the

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ington, D. C., May 12, 1903.

other hand, we have been accustomed to look upon gonorrhœa as a local disease, trivial in character, of limited duration, and its important relations with marriage have been, until within recent times, unrecognized and, even now, are too often entirely ignored.

When syphilis is introduced into the family, the situation, though bad enough, is not without hope. All the possibilities promised by marriage are not irrevocably lost. After the first series of explosive violences are expended upon the offspring, there is still hope that under the attenuating influence of time and treatment the virulence of the diathesis will be exhausted, and the results, so far as the procreation of healthy children is concerned, may be as if the disease had never existed. But the introduction of gonorrhœa into married life entails consequences infinitely more disastrous to the health and life of the mother. She may be rendered a lifelong victim and her hope of children absolutely extinguished. When the gonorrhœal infection invades the annexial organs, determining obliterations, adhesions, deviations, etc., these changes are final and irremediable; the woman becomes irrevocably sterile, not to speak of the danger to her life which, in many instances, can only be averted by the sacrifice of her reproductive organs.

We are accustomed to look upon syphilis as the most active cause of depopulation, but gonorrhœa is the much more powerful factor. Janet, in discussion "social defence against the venereal peril," recently (1902) declared "that gonorrhœa with tuberculosis, perhaps more than tuberculosis, is the great pest of our age. If we compare from a social point of view the importance of gonorrhœa with that of syphilis, gonorrhœa is to syphilis as 100 is to 1, not only from the standpoint of the number of persons attacked, but also from the standpoint of the gravity of the lesions and their perpetuity. Gonorrhœa modifies in a manner, often permanent, the genital organs of patients, renders them infinitely dangerous for the women they approach, causes all the metritides and annexial inflammations which to-day give to surgeons three quarters of their work, and conducts finally both men and women to sterility."

The predominance of gonorrhœa as a cause of depopulation is not surprising, in view of the fact that it primarily and specifically affects the organs of generation. In the male this is so essentially true that almost every inflammatory process affecting the genitourinary organs is at once referred to gonorrhœa as the exciting cause. In the woman the whole brunt of the disease falls upon the reproductive apparatus. All modern writers

upon diseases of women recognize that gonorrhœa is the chief determining cause of the inflammatory diseases peculiar to woman. Syphilis, on the contrary, while it owes its genesis in the majority of cases to inoculative contact of the genital organs, is in no sense a genitourinary disease. "It is only genital in its approach, and not at all in its manner of expression" (Keyes). Syphilis is a disease of the general system; its most essential lesions are in organs quite remote from the genital sphere; its effects upon the generative organs are the result of the nutritive disorders which affect the general system.

We may ask, Why this disparity in the relative importance assigned to syphilis and gonorrhœa in their relations to marriage? One reason is the greater dread which syphilis has always inspired, on account of the more formidable character of its manifestations compared with the relatively mild and apparently harmless symptoms of gonorrhœa. The true explanation of this disparity must be sought for in the lack of the coordinate development of our knowledge of these diseases, or rather in the limitations of our knowledge respecting the pathogenic rôle of the gonococcus, and especially the fact that gonorrhœa in women has never been carefully and completely studied until within recent years. The attention of pathologists was almost exclusively devoted to masculine gonorrhœa; our knowledge of feminine gonorrhœa is essentially a modern acquisition. Many inflammatory affections of the female genital organs were referred to simple causes or regarded as peculiar to woman by virtue of her physical organization and the physiological functions peculiar to her sex. The modern period of our knowledge begins with the discovery of the gonococcus.

In this paper attention will be briefly directed to the three principal modes in which gonorrhœa insontium is manifest in married life: (1) The individual risks to the health and life of the woman; (2) its effect upon her conceptional capacity; (3) its effect upon the infant in the production of abortion and ophthalmia neonatorum. To these dangers may be added (4) the vulvovaginitis of young girls which often results from the introduction of gonorrhœa into the family.

RISKS TO THE HEALTH AND LIFE OF THE WOMAN.

With the discovery of the gonococcus by Neisser it became possible to trace the pathogenic influence of the germ by its identification in many local and systemic disorders which it occasioned. Even before the discovery of the gonococcus, Noeggerath, with a prescience which can be considered scarcely

less than intuitive, recognized the pathogenic influence of gonorrhœa upon the pelvic organs of women, and, reasoning from effect to cause, boldly incriminated the latent urethritis of the male as the active factor in the production of these inflammations and the oft-resulting sterility. The vagaries of Noeggerath, as they were then considered, have become, with some modifications, the accepted facts of science to-day. Indeed, subsequent investigation has rather broadened than restricted the pathogenic influence of the gonococcus in the causation of pelvic inflammations.

As it is intended to touch lightly upon the pathology of gonorrhœa, only the profound manifestations of the disease will be here considered.

In women the primary infection is more often localized in the deep parts, which is explained by the physiology of coitus, the germs being deposited in the uterine neck at the moment of ejaculation. Our knowledge of the habitual cervical localization of primary gonorrhœic infection is essentially modern. To this lack of knowledge must be attributed the fact that the frequency of gonorrhœa in women was so long overlooked, unrecognized, and unstudied. Undoubtedly it represents the most serious form of gonorrhœa in women, not only from the standpoint of its insidious infection, its failure of recognition and treatment, but from the fact that it constitutes a point of departure for infection of the fundus of the womb and the annexial organs.

Another peculiarity of gonorrhœa in women is the torpid, non-acute character of the primary process. In the majority of cases the infection is established insidiously without acute symptoms; either of a subjective or an objective character, so that, as a rule, gonorrhœa in females presents itself as a chronic affection, either from the rapid subsidence of the acute symptoms or because it may develop *d'emblée* as a chronic process.

It is asserted that the abundant seromucous secretions (the little lochia) which immediately follow the menstrual period constitute an admirable culture field for the gonococci; not only is there multiplication of gonococci, but there is a tendency to invade the body of the womb, owing to the modifications in the uterine mucosa, and perhaps, also, to the more open and patulous condition of the os internum, which opposes less resistance to the entrance of the microbes.

When a gonorrhœic woman becomes pregnant, the disease, hitherto passive, undergoes a modification more or less marked in its virulence and course. Strumbuhl and others have remarked the frequency with which the first clinical signs of gonorrhœa are coincident with conception. Gottschalk and Immerwahr report cases where, under the in-

fluence of pregnancy, there was such a multiplication of diplococci in the cervical secretions that the slide preparations gave the illusion of a pure culture.

While there is no positive means of ascertaining how far the gonorrhœal process may gain in extension during the course of pregnancy, there can be no doubt that with the termination of pregnancy, whether it be in abortion or in accouchement at full term, there is communicated a powerful pathogenic impulse to the upward ascension of the infection. In the large majority of cases pregnancy is the pivot upon which hangs the destiny of the woman, so far as the extension of the infection to the womb and its annexa is concerned. All investigators who have had occasion to examine the lochial fluids unite in attesting that, immediately after confinement, even as early as the second day, there is an extraordinary multiplication of the gonococci. The lochial fluid is an excellent culture medium, and the gonococci are found almost in pure culture. Not only are the gonococci multiplied in number and exalted in virulence, but the way is opened for ascending infection and the soil prepared by the process of parturition.

INFLUENCE OF GONORRHŒA UPON CONCEPTIONAL CAPACITY.

The influence of gonorrhœal infection in woman upon her conceptional capacity and upon the course and termination of pregnancy, is of special interest from the view point of race perpetuation. It has long been known that gonorrhœa has an inhibitory influence upon the reproductive capacity of a woman. Noeggerath has asserted that 50 per cent. of sterility in women is caused by gonorrhœa; Neisser declares more than 50 per cent. of the voluntary childless marriages and limitations of the number of children are due to gonorrhœa and its sequelæ in men and women. Lier-Ascher found that, out of 227 women, 121 were sterile because of gonorrhœa. Numerous other authorities might be quoted showing that a large percentage of sterility, as well as of abortions, are due to gonorrhœal endometritis of the cervix and body of the uterus.

In explanation of the pathogenesis of sterility much importance was formerly attached to the morbid condition of the mucosa of the uterus, which rendered it inapt for the germination of the ovum. At the present time we recognize that in almost all cases the production of sterility in the female admits of a purely mechanical explanation. It is caused by the blocking up of the channels of communication between the ovary and the uterine receptacle of the ovum, thus preventing germinative

contact with the spermatozooids. Before these profound alterations in the channels take place, the gonorrhœic woman may conserve her conceptional capacity. A woman with gonorrhœa of the cervix may readily conceive; conception may take place when the gonorrhœa is acute, with a profuse purulent discharge. Fecundation may even take place when the uterine mucosa is infected. Gonorrhœal salpingitis does not necessarily inhibit conception unless the channel of communication through the ostium uterinum is closed. Brothers reports two cases of women with pus tubes (bilateral salpingitis), the husbands at the time suffering from gonorrhœa, who gave birth to several children. Unfortunately, in the majority of cases the first pregnancy, terminating either in abortion or accouchement, opens the gates to the infection which may have long existed in the cervix or the external genital canal, and admits its ascension to the ovaries, tubes, and peritonæum and the production of the changes which constitute a mechanical obstacle to the passage of the ovum. These changes are, as a rule, permanent and irremediable. It thus happens that the aptitude of the gonorrhœic woman for conception is often extinguished by the first pregnancy, the first child representing the sum total of her productive energy. The sterility of the gonorrhœic woman is thus relative rather than absolute. It is, in the expressive German phrase, *ein kinder sterilität*—a one-child-sterility.

The influence of gonorrhœa upon the course and termination of pregnancy is of importance in this connection. Sânger contends that the abortive influence of gonorrhœa is quite as pronounced as that of syphilis. While this statement is perhaps overdrawn, yet clinical evidence shows most conclusively that there is an abnormal frequency of abortions among gonorrhœic women who have become pregnant. Noeggerath found that of 53 women who became pregnant during the course of gonorrhœa, 19 aborted. Fruhinsholtz found that of 101 pregnancies occurring in gonorrhœic women, 71 went to full term, 23 terminated in abortion, and 7 by premature accouchement. In a number of these cases the presence of the gonococci was demonstrated in the residual placental *débris*, furnishing presumptive proof that it was the direct cause of the abortion.

The frequency with which these annexial complications are caused by gonorrhœa is variously estimated by different authorities. Verchin states that in all his operations for salpingitis the cause could be attributed to a gonorrhœa, or at least to the consequences of gonorrhœa. In Pozzi's operations at the Lourine Hospital nearly all were for gonorrhœal salpingitis. In the report of the special com-

mittee of the American Medical Association, in 1901, which gave the opinion of the leading gynæcologists in this country and Europe as to the "proportion of cases of pelvic inflammation coming under your care which were attributable to gonorrhœal infection," there was found to be a wide difference of opinion as to the proportion attributable to this cause. Some operators gave their opinion that 90 per cent. were of gonorrhœic origin. Price says that, in over a thousand sections for pelvic inflammation, 95 per cent. were attributable to gonorrhœa, and that in these 95 per cent. the history was reliable and clear. Pozzi and Frederic gave a percentage of 75. A few of the estimates fall below 20, and the majority range from 23 to 95 per cent. The average of the entire statistics is 47 per cent. The exceedingly small percentage given by some of the reporters may have been due to the failure to make the bacteriological test for the gonococci, or perhaps, in some instances, to a lack of technical skill or to faulty methods in making this investigation. As Petersen says, "the more the disease is studied in women and the greater the improvement in bacteriological methods, the higher is to be found the percentage."

These statistics, be it understood, give no accurate idea of the prevalence of inflammatory diseases of the female generative organs due to gonorrhœa; the percentages are for the most part based on cases requiring operative interference. They take no cognizance of the large number of gonorrhœally infected women who, for various reasons, are not subjected to operation, and who continue under the care of the family physician, dragging out a miserable existence of semi-invalidism, subject to painful or difficult menstruation, with suppurative exacerbations, no longer able to walk freely, and condemned to pass their days of suffering in a reclining position, until, after several years, it may be, of this suffering, worn out and desperate, they apply to the surgeon for relief.

The bearing of these observations upon the question of the low fecundity of married women is obvious. In this country the question of the low birth rate has assumed the importance of a national problem which has engaged the thoughtful attention and study of some of our most distinguished educators, sociologists and statesmen. Its designation as "race suicide" would favor the assumption that the low birth rate is in all cases voluntary and independent of physical causes relating to the health or productive capacity of the married partners. There is ample reason for believing, however, that in a large proportion of cases the low birth-rate is not a result of choice but of incapacity. In this country the information derived from the Census

Bureau Reports is worthless as a basis for the appreciation of this question, as they do not give the proportion of sterile marriages to the whole number of marriages or to the general birth rate or fecundity of the population. In certain European countries, where the statistics are compiled with more accuracy and with special reference to certain economic interests which are ignored by our Census Bureau, it has been found that the proportion of sterile marriage is about one in eleven.

The Census report of 1900 has not yet furnished data as to the conjugal condition of the population. The Census of 1890 gives thirty-two million married people, which would represent sixteen million marriages; at least one out of every seven is sterile. In different parts of this country the proportion is one in four or one in five.

No one knows better than the writer of this paper that the proportion of sterile marriages due to gonorrhœa is an unknown and unknowable quantity; that it is impossible to present figures that aim even at approximate accuracy; but, from the mere statement of the fact that there is such a vast amount of sterility, and that gonorrhœa is a common and most efficient cause, we can but conclude that the proportion due to this factor must be considerable.

There are so many pathogenic causes of a local or constitutional nature assigned as the cause of sterility, so much artificial sterility in which the marriage is childless by the choice of the parties conjoined who take precautions to frustrate or defeat Nature by avoiding pregnancy, that it is impossible to determine whether the sterility is from incapacity or from choice. In looking over the statistics of the birth rate in this country, we are impressed with the large percentage of marriages in which one child represents the total fecundity. Now, this is most significant in view of the fact that this is precisely the form of sterility for which gonorrhœa is directly responsible, viz., one-child-sterility.

Abstraction made of every other possible factor of sterility and minimizing gonorrhœa as a predisposing agent to the lowest possible degree, yet there must remain a vast contingent of sterile marriages which are caused directly and solely by gonorrhœal infection. If "premeditated childlessness is a crime against society," as recently asserted by a high government authority, what shall be said of enforced childlessness, of the sterility which is not of choice but of compulsion; of the sad fate of women balked of their desire to have children by the disease of their husbands?

It is only in the confessional of the consulting room that one learns of the intense, unsatisfied craving on the part of many women for children, and of the wretchedness and disappointment they suffer

when condemned to pass their existence in a childless wedlock. The instinct and craving for maternity becomes in some women a veritable obsession. They will at any cost of time and pain and suffering submit to any treatment which promises relief—curetting, division of the cervix, and even more formidable operations upon their pelvic organs. And the satire of it all is that in many cases the husband, inflated with the sense of his own virility, is himself responsible for the sterility!

The proportion of sterility due to the husband is said by Gross to be 17 per cent. Brothers, in his investigations, found that it was 20 per cent. Engelmann is inclined to place it at one in four, or 25 per cent. And it is to be remembered that almost the entire proportion of sterility in woman is due to gonorrhœa communicated to her by her husband.

(To be concluded.)

STATE CARE OF THE FEEBLE-MINDED.*

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Before entering upon the topic assigned me, I must thank you for the pleasure of meeting this association, and also for the privilege—most highly esteemed—of uniting in a work preeminently worthy of a State, the record of which is that of a builder and defender of homes.

Of the three classes demanding care and protection from the State—the insane, the defective, and the criminal—the first and last have for obvious reasons received earliest attention, and of the second, the blind and deaf mute have appealed most powerfully to the sympathies of the humane. Mental defectives have, therefore, been the last to be considered. Very inadequate provision has been made for them in the county homes, in asylums for the insane—with whom they are too often confounded—in institutions for the blind and deaf mute, whose methods in no wise meet their needs; or, sadder still, as innocent victims of neglect, they wander at large, the tools and agents of the vicious, multiplying their kind; or perpetrators of misdeeds for which they are in no sense responsible, they have been thrust into houses of correction or share with hardened criminals our jails and penitentiaries.

The rapid increase of this class, together with the opinion that science has been able to formulate from the accumulation of data in studies of heredity and of nervous disease, have made patent the fact that this great body of defects constitutes the main

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source of supply, increasing without intermission both the insane and the criminal ranks; a great reservoir, so to speak, drawing continually from the overflowing springs of a highly nervous age, and extending perpetually its own limits and those of the streams it feeds. The necessity to public safety for cutting off supply, or at least putting some check upon this evil, has become apparent to many thoughtful minds.

In entering upon the work just at this stage of its history, after its hundred years of experimentation and research, Virginia has the advantage not only of profiting by the experience, but of avoiding the mistakes of her sister States, and also of materially aiding a new era of work.

Within a decade, on the Continent, in England and, finally, in America, there has been a general awakening to the necessity of legislative intervention, not so much for the benefit of the abnormal, as for the protection of the normal portion of society. Experience, that best of teachers, has made it clear that the one great aim of the work is not cure—that is impossible; we cannot cure that which is defect, not disease—but a threefold protection; protection of the helpless from want and suffering; of the irresponsible from ignorance, vice, and the penalty of crime; and protection of the family and the State from the evils of association and of certain increase. The work, therefore, takes a totally different trend from that of its beginning—makes a new departure, in fact. In place of gathering in from waste places or crowded alleys the defective, it consists in going into the schools; first, to separate the healthful from the defective growth, rank in all classes and hindering the progress of normal education; next, to provide for the defective that special treatment which shall arrest further deterioration and conduce to that limited development of which he is capable.

But the movement has not yet formulated its ultimate plans, and it is for those just entering into the work—you, the far South and Southwest and the southern countries of Europe—to lead in this by recognizing the importance, not only of separation and segregation, but of making this separation permanent, and of securing in the outset of your labors legislative action to that effect. If you do, I venture to prophesy you will soon be ahead of us who, in bearing the brunt of experimentation, have yet left for you to show a more excellent way.

Both Belgium and Italy, late in the field, are beginning on these lines at the instance, not so much of philanthropy, as of pedagogic science, the suggestions of superintendents of instruction receiving the countenance and support of the minis-

ters of education. In Rome already is the second step proposed of sifting out, after a sufficient period, the absolutely defective from the merely backward for special training, and of establishing there a national institution for mental defectives.

While this will be the natural drift in time with us also, the movement would undoubtedly be quickened by compulsory laws, were the public once fully awakened to its necessity through a consideration of statistics. Italy deplores that only about 1,000 of her 24,000 mental defectives are being cared for. Our very imperfect census reports gave, some ten years ago, 75,000 in the United States; unacknowledged and unrecognized, such as backward or epileptic children, then combined to swell the number easily to 100,000—and that before our recent acquisitions and annexations. Of this number not over 9,000 are gathered into schools and institutions, and they are subject to withdrawal at any time, the law not yet recognizing that this exercise of individual liberty affects the well-being and safety of many, or that a large proportion of those now dependent upon the bounty of the State are the innocent victims of a fateful heredity. Interested in this subject of causation, I have carefully studied 3,050 cases. One thousand nine hundred and seventy-eight, or 64.85 per cent. of these were due to causes acting before birth, and 835, or 27.38 per cent., showed a family history of idiocy and imbecility. Not even the much discussed causes of intemperance and consanguinity approached this, the former being only 136, or 4.46 per cent., and the latter but 41, or 1.34 per cent.

Surely this should be a forcible argument for forbidding the return of the imbecile to the world and for assuring, by segregation and sequestration, that permanent good to society which best justifies the expenditure of public funds.

In thus approaching the subject from the standpoint of public utility, not only do you engage the attention of every good citizen by making it a matter distinctly his own, but, being forced to consider the greatest good to the greatest number, you avoid the mistake and danger of drifting into sentimentality so often attendant upon the viewing of one phase of an evil, thus cramping or dwarfing your own efforts. To explain: Legislatures have been in the past quite ready to vote public moneys for the housing of the comparatively harmless idiot whose helplessness appealed to their sympathies, while they were not so ready to provide for training and placing under guardianship the brighter imbecile who, destitute of will-power or the moral sense, was quite capable of murder, burglary and arson.

The result of such misconception has been the

passing of a "managed" bill, setting afloat a mingled project of unmixable materials, a training school hampered with untrainables, an asylum run on needlessly expensive lines, the untrainable inmates crowding out those who, capable of improvement and of becoming useful members of community life, thus excluded from the benefits of the training school, remain a burden in the homes or a festering sore in society. This assuredly is not securing the greatest good to the greatest number. No, to attain this, society has to weigh its own right of self-preservation, its protection from contamination, and the rights of the mental defective to claim at our hands opportunity for the development of his feeble powers and that limited degree of happiness which he is capable of enjoying. Norway and Saxony are the two countries of Europe in which this is recognized—the law of compulsory education there applying also to the imbecile, a certain amount of oversight being given after training.

Of the three classes with which we deal in this connection, the untrainable idiot, the trainable imbecile, and the cunning and treacherous moral imbecile, the idiot is the least harmful and the one most easily disposed of. Insensible of the pleasures of the homes they burden, an asylum in which they may find care and kindly mothering is the solution of the problem for them. Absolutely untrainable, unimproveable often, even in habits of self help, they, whether apathetic or excitable, are equally indifferent to the ties of home or of kindred, and require but little besides attention to physical needs. A sufficient corps of capable attendants under experienced direction, and the daily inspection of a physician would meet these requirements. As there would be no necessity for teachers or school equipment, such an establishment could be run very comfortably on a comparatively moderate income. Idio-imbeciles and low grade imbeciles may be made useful in such asylums, as aids in household service and in the care of the helpless; and here, too, the adult imbecile, past the age for training, could find a peaceful life home.

Very different from this monotonous routine is the atmosphere of a training school for imbeciles and backward children. Work and amusement and rest have a part to accomplish in the arousing of sluggish natures to new life. Here are five grades of human beings as distinct in characteristics as though they represented so many nationalities; and yet these differences often shade off and so commingle that only the eye of an expert may sort out and distribute them in such manner that each may go to his own place and receive that training which shall determine his life's work.

Thus, for example, experience has proved that the mental limit of a low grade imbecile is a preparation for the simplest menial occupations of house, farm, and garden. The middle grade may attain to a greater degree of efficiency in industrial service and in the manual work of the shops.

The high grade, approaching the normal and capable of the intermediate course of the public schools, may be fitted for yet more responsible occupations through the medium of the arts and crafts, and may be trained for musicians, cabinet makers, printers, carpenters, painters, typewriters, tailors, and seamstresses. These duties they enter upon as apprentices after development by means of special and varied occupations for years in the schools. Do not misunderstand me that our schools are trade schools. No. Rather do they partake of the industrial and manual training given in ante bellum days on the plantations, which were, in fact—as the world is fast coming to acknowledge—training schools for a backward race, many of whom were feeble minded. You cannot take a mental defective and put him to one thing or part of a thing without defeating your object and deadening instead of awakening his faculties. You can only fix the wandering gaze and chain attention by exciting interest, and that you cannot hold for long periods.

We must never lose sight of the fact that we are dealing with children, of whatever age; be it six or sixty years, they are still children, and the brain once wearied will not respond. Variety, however slight, effects the object, but there must be variety. Thus, the child comes from modelling in clay to modelling in wood, still studying form, but rested and refreshed by the change. So also in knitting, weaving, or blackboard exercises; he is doing number work all through, but unconsciously and unweariedly, because diverted. This whole scheme, gradually evolved through practice and then modified to meet new demands, may perhaps be made clearer to you by a tabulated form:

EDUCATIONAL CLASSIFICATION OF THE FEEBLE-MINDED.

			IDIOT.		
Asylum Care.	{	Profound	{ Apathetic Excitable	} Unimprovable.	
		Superficial	{ Apathetic Excitable		} Improvable in self-help only.
				IDIO-IMBECILE.	
				Improvable in self-help and helpfulness.	
			Trainable in very limited degree to assist others.		
			MORAL IMBECILE.		
Custodial Life and Perpetual Guardianship.	{	Mentally and morally deficient.			
		Low Grade—Trainable in industrial occupations; temperament bestial.			
		Middle Grade—Trainable in industrial and manual occupations; a plotter of mischief.			
		High Grade—Trainable in manual and intellectual arts, with a genius for evil.			

Long Apprenticeship and Colony Life Under Protection. {

IMBECILE.

Mentally deficient.
Low Grade—Trainable in industrial and the simplest manual occupations.
Middle Grade—Trainable in manual arts and the simplest mental acquirements.
High Grade—Trainable in manual and intellectual arts.

Trained for a Place in the World. {

BACKWARD OR MENTALLY FEEBLE.

Mental processes normal, but slow and requiring special training and environment to prevent deterioration; defect imminent under the slightest provocation, such as excitement, overstimulation, or illness.

Now all this demands a great variety in the teaching staff—in reality a number of schools, and also good physique and originality in the teachers, variety of school material, room and ample space; in a word, a plant, and that is, of course, expensive. Now let us see if results justify expenditure.

A typical training school started with proper appliances, unencumbered by dead wood—adults, idiots, or even epileptics—and consisting of, let us say, 500 trainable imbeciles with a fair average of grades, ought, in from eight to ten years, to have its own force of laborers and artisans—working under supervision, of course—and thereby reducing expenses. This once attained, it could then supply asylums with aids or draft of members for independent colonies, if this arrangement could be made permanent by law; for just here comes the loose screw which makes the whole work truly “*imbecillis*”—tottering. We are working, first, to withdraw from society a pernicious element and to prevent its increase; secondly, to awaken deadened senses, to transfuse new desires into brutish instincts, and to give an aim to aimless lives. To accomplish this requires an atmosphere, first, of comfortable living in accordance with hygienic laws; next, as I have shown, variety of occupation—work, rest, and amusement constantly alternating. Many thus trained enjoy the library, the theatre, gymnasium, or find their best recreation in the practice of drawing, modelling, or music, and, in association with refined people, have attained somewhat to a life of culture. Now all these things are proved necessities in our scheme of development, fitting the children for community life and making the talent of each contribute to the comfort or the pleasure of the whole, and sustaining and upholding it in so doing; compared with normal labor in the world, their work would not be of the same value. But friends come, and, dazzled by this bit of work or that accomplishment—unconscious of all that is lacking, unwilling to believe that it requires for the training of an abnormal child a period and labor four times greater than that for a normal one, or that they are incapable of withstanding fatigue or discouragement—they withdraw them.

Then the training which was a benefit to community life proves a menace to society. The almost certain result is marriage and increase; for imbecility is there, imperceptible to the public eye it may be, but unmistakable and transmissible and sure to reappear. The pains we have taken to train for useful community life have but intensified the danger to society and defeated our entire scheme—our work is nullified and increase goes on.

This is not all, for the same lack of legalized separation leaves another open door through which the criminal, rendered more expert by training, returns to the world.

I have told you of idiocy, of idio-imbecility and of three grades of imbecility, but I have not yet spoken at any length of that very peculiar type, the moral imbecile, found in all three, but chiefly in the higher grades, rendered tenfold more dangerous by his wit, his duplicity, and his close approximation, mentally and physically, to the normal, while lacking entirely in the moral sense. One is reminded by him of the house swept and garnished; for often into an attractive, almost a perfect, human mold—a fatal inheritance—one is willing to believe seven devils have entered, so varied are his gifts for evil doing.

In order properly to handle this type, found in most institutions for the feeble minded, custodial buildings are necessary. These should be fitted with every appliance for comfort, for exercise, and for free life within carefully guarded enclosures. Workshops and gymnasias should provide constant employment and vent for nervous energy, and amusements compensate for life separation from the world to whose peace he is a constant foe.

It is useless to preach reform—there is nothing to appeal to. The moral imbecile is as completely lacking in moral intelligence as the idiot is in mental. He simply loves darkness rather than light, because his eye is evil. In other words, he is “moral blind,” just as people are “color blind.”

Accomplished liars, adroit burglars and thieves, they steal, not from acquisitiveness, but for the excitement of successful thieving. This accomplished, the article, valueless to them, will be destroyed or thrown aside, often passing through half a dozen hands before it is traced and recovered. These are the characters who live double lives, such as one finally secured by the police this winter in one of our large cities. A partner in a reputable business firm, at his desk regularly by day—at night a successful burglar; he had for years been successful in eluding punishment. Much the same temperament and, I might say, genius, is evidenced in many of my boys; in one in particular, whose progress in school and persistent effort

under difficulties led his teachers to trust him above others in his class, indeed in the care of school material he often proved in a quiet way an excellent detective. Suddenly an unforeseen accident brought about an investigation of his pockets, in which were found several bolts of ribbon. When questioned as to why he wanted to take such, to a well-grown boy of eighteen apparently useless, articles, he replied, coolly: "Oh, just to give 'em 'round." This was untrue, for it was proved that for months he had been stealing and scattering his pilferings through the woods or burying them out of sight. He had picked the lock of an attendant's room, broken into a strong box, stolen a clock and buried it. All this must have been accomplished very rapidly, for no boy can be absent long from his club without being subject to search and recall. Further investigation showed his influence over weaker boys to be so pernicious that, notwithstanding his capacity for training—he would in time have made an excellent carpenter—I was reluctantly forced to remove him to a custodial building. Here he exhibited the same ability to ingratiate himself with the people in charge, and he then immediately proceeded to steal from them. His next escapade was successfully to plan an elopement in company with two other boys while they were exercising in charge of an attendant. Wandering on the streets of Philadelphia they were overheard discussing the possibility of a successful raid on a shop window, when a friendly policeman on the lookout for them made a counter raid and returned them to our care.

Here is a character ever on the alert for evil. If the opportunity is not presented, he creates it. He says that he would "set buildings on fire just to see 'em burn," and he would kill somebody "just to see the blood," and he is perfectly capable of planning successfully a conflagration or a brutal murder. Fortunately, he has been recognized as an irresponsible before society had to suffer in proving him such. Relatives may yet appear to claim him. And then what? He is a waif and stray with no mother's heart to break, as far as we know; but he is a fine-looking fellow with rather an attractive personality, quite sufficient to break other hearts; and there is no law of protection for either—no way or device except what the penitentiary would inevitably afford.

In the Pennsylvania penitentiary at the present time is a boy who, had he been recognized and early placed with us, would now be happy with comrades in a free life in the open, and his victim, the baby boy whom he first tenderly carried on his shoulder into the wood and then murdered, would be living to-day, the joy of his home circle.

I was called to examine him and to testify at the trial as to his mental condition, and have never known a case that appealed more to my sympathies. In this lad of fifteen were to be found all the stigmata of that degeneracy which both congenital and accidental causes had combined to foster. A family history of idiocy and insanity: the father an imbecile; the mother, the burden bearer of the family, had received a sudden shock at the time of his birth, and he himself had known all the diseases of childhood.

On entering his cell one day I found him crying bitterly over the torn dress of a paper doll. To his love for children and for animals the neighbors testified, and he told me of a squirrel that his sister wanted him to kill and how it looked at him with its bright eyes, and "Oh, I couldn't, I couldn't," he said. "But you killed Percy?" "Oh, yes," he replied, "that was different." Then he went on to tell of how they were playing "Wild West," and he held the knife open while Percy ran down the hill against it. Then how he stabbed him again and again until "he just stretched," and then getting scared he dragged him to the creek, piled large stones on him, and ran home, and, as evidence afterward proved, made the fire and got supper.

These are not exaggerations but typical examples of a class unrecognized or misunderstood. In two of these, society has paid a heavy penalty for ignorance and nonintervention; in the other, early sequestration has secured alike to the individual and to society immunity from ill. And clearly such lives must be protected from the world, and the world from them, their only true freedom lying in legalized detention and prevention.

The transference of the backward child from the schools to special classes must lead, after satisfactory testing, to a second and final sifting out from these classes, of those there adjudged defective by competent teachers and physicians. All such children should then be assigned to such institutions, public or private, as may meet special needs. *Received there under conditions dictated by science and already proved by experience as best insuring at once safety to society and greater freedom, and consequently greater happiness, to community life,* they should become the life wards of that or of any other institution to which, after training, they might be transferred.

What to do with the trained imbecile is already a question, and with increase of training schools reduplication of numbers will soon press home upon those in charge. The natural solution will be colonies which will relieve congested conditions and gratify the natural longings for change. Laborers

and artisans, coming trained from the various schools, might be able to supply many of the needs of such colonies, and under a wise paternalism and supervision fill out their brief period of life work and life happiness and leave no remnant of ill behind.

Such a life the community of Shakers once enjoyed in the beautiful Genesee Valley; being celibates, they have passed and their settlement at Sonyea is now a colony for epileptics under State control. In the far West or on the Atlantic seaboard, in the mountains of your own State or the Carolinas, such a colony might be advantageously placed, and the national government, which is caring for the deaf-mute, the Indian, and the negro, might in this way provide for this race, more to be pitied, because more helpless than those upon whom so much has already been expended.

INTERSTITIAL OR TUBOUTERINE GESTATION COMPLICATING UTERINE PREGNANCY. ABORTION OF BOTH FŒTUSES THREE WEEKS APART.*

By J. B. MORRISON, M. D.,
NEWARK, N. J.

CASE.—Mrs. —, aged thirty-three years, married; one child, eleven years of age. History of four abortions since birth of this child. Patient called at my office on September 4, 1902, and reported having a miscarriage the day before. The ruptured ovum and some clots were brought for examination, the patient remarking that because these were so small, she feared "everything had not come away." The specimen appeared to have reached a development of about eight weeks, measuring an inch and a quarter over the curve of the back.

Physical examination revealed a uterus normally situated, large, about the size of an orange. On the right side an ovoid mass was felt. It was about one half the size of the uterus and was directly continuous with it. There was no sulcus into which the examining fingers could slip. This mass was thought to be a mural fibroid, or an old inflammatory trouble, probably a pyosalpinx which had resulted in adhesions between the tube and the uterus. The cervix was soft and admitted the tip of the index finger readily.

Contrary to advice the patient went away to the country the next day. She returned in fifteen days with a history of a chill, fever for two or three days, and the presence of a scant, foul smelling discharge.

Cleaning out the uterus was advised, and the next morning, under anæsthesia, curetting was performed. Some clots and shreds of decidua were removed, and a hot solution of potassium permanganate was used for irrigation.

Two hours later the nurse reported that the patient had had a severe chill, and the temperature rose to 105° F. Pulse, 100. In the afternoon a second chill ushered in a rise of temperature from 102° to 105.5° F. Intense, agonizing pain now developed on the right side of the pelvis, localized over the site of the tube and ovary. This pain was so intense that the patient had to be restrained from throwing herself out of bed before my arrival.

Against my better judgment I was compelled to resort to the hypodermic use of codeine, and later on, of morphine.

An ice bag had been kept over the site of the uterus following the curetting, and this was exchanged for an ice water coil after the chills ceased. The temperature fell during the night to 101° F., and the pulse rate to 88. In the morning, however, eighteen hours after the curetting, the temperature rose again to 105°, and the pulse to 100. The pain, which now for the first time was paroxysmal in character, became as intense as ever. Examination was difficult, almost impossible, on account of the extreme abdominal and vaginal tenderness, and no information could be elicited from this source. There was no hæmorrhage and practically no discharge.

I feared very much that I had either perforated the septic uterus with my curette, or that we were dealing with an acute exacerbation of an old pyosalpinx, which had been aggravated by the abortion and subsequent curetting.

The successive chills, the remissions of fever, the coated tongue, the flushed face, the dry skin, the rigidity of the abdominal walls, the tenderness on pressure, both abdominal and vaginal, and the patient's condition, bordering on delirium, all pointed to a rapidly extending septic peritonitis.

On the other hand, the facial aspect, between the paroxysms of pain, was good. There was a complete absence of that usual anxious, worried look, that drawn expression about the mouth, the short respirations through the partially retracted lips, the play of the nares. There was no trace of beginning icterus. Although the temperature was high, the pulse ranged between 88 and 100, and had never been any more rapid. Its character was excellent. There was no meteorism. Neither nausea nor vomiting was present. The bowels moved without medication, and the urine, though it had to be removed by catheter, was not scanty, and did not contain albumin.

The absence of a history of slight hæmorrhages, the previous freedom from pain, the fact that the mass felt in the pelvis was directly continuous with the uterus, the knowledge of the recent abortion, the presence of fever and the other symptoms simulating a septic state, led me to exclude an extra-uterine gestation.

So, while at a loss to account for the state of affairs, unless the old pyosalpinx theory would hold, I concluded we were not dealing with a septic peritonitis resulting from a perforation of the uterine wall, and as a clear indication for abdominal section did not yet exist, the conclusion was reached that the wisest course to pursue was to keep on the ice coil and wait.

For two days the temperature ranged between

* Reported before the Newark Medical Society, October 14, 1902.

102° and 104°, and was not affected by quinine. The pain still had to be controlled by morphine; but the character and frequency of the pulse did not vary. The patient took nourishment well, demanding it at times, and did not appear to be losing ground. While prepared to make a ventral section, it was decided to wait until these more acute symptoms had subsided.

On the morning of the fourth day I was hastily summoned by telephone. The patient had had a profuse uterine hæmorrhage and was bathed in perspiration. The rigidity of the abdominal walls had disappeared. There seemed to be a complete muscular relaxation. Examination showed that the mass on the right side of the uterus was greatly diminished in size, being probably only half as large as when first observed. During the manipulation of the mass and uterus, a second foetus was expelled into the vagina.

This could not have been a twin pregnancy, or the uterus would have emptied itself long before, and no foetus remained in that uterus after the curetting. The foetus showed a development of about ten or twelve weeks. A portion of umbilical cord, about two inches long, remained attached to it. Two hours after the delivery of the foetus no placenta appeared, and as a slight but persistent hæmorrhage was continuing, it was decided to explore the uterine cavity.

Anæsthesia was again administered and the cervix more thoroughly dilated. A few clots and shreds of tissue were washed out. Digital examination showed the walls of the uterine cavity everywhere smooth, but on the right side the examining finger passed readily into a cavity, about the edges of which pieces of tissue appeared to be adherent.

This cavity was a little larger than an egg. Two of the diameters could be made out, but not its depth, as the examining finger could not be introduced beyond the second point. On the floor of this cavity the finger slipped over a smooth, rounded mass like the yolk of a poached egg, the edge of which appeared to be uneven and granular. This was the placenta *in situ*. By bimanual manipulation as much of this as could be safely removed was taken away, and the cavity, was irrigated with a normal salt solution at a temperature of 100° F., and flowing under a low pressure. This irrigation was repeated daily for five days, several pieces of placental tissue coming away. A serosanguineous discharge persisted for ten days longer.

The temperature fell to 100.5° the first day. It remained between 100° and 99° for five days more, reaching normal on the ninth day.

The pain ceased entirely after the expulsion of the foetus into the uterine cavity. This pain was one of the most characteristic features of the case. It was evidently due to the contractions, the attempts at expulsion into the uterus, and to the stretching of the muscular film of tissue that had so long resisted rupture.

We had here been dealing with an interstitial gestation complicating a normal pregnancy. There was a difference of about four weeks in the stages of development reached by the foetuses. It seems

very probable that the impregnations took place about the same time, and that development in the interstitial foetation continued three or four weeks after the development of the normal uterine gestation ceased.

Beckman divides these cases of interstitial gestation into two groups:

(1) Tubouterine, where the communication with the uterine cavity persists, resulting in an early abortion into the uterus.

(2) True interstitial gestation, in which the ectopic foetation is separated from the uterine cavity by a muscular sæptum of varying thickness. Natural termination is here impossible, and the pregnancy is interrupted prematurely by rupture, either into the uterus or into the peritoneal cavity, along the line of least resistance.

The case here reported was evidently one of Beckman's latter classification—a pure interstitial gestation. It seems that an internal wall, quite thin, it is true, but still intact, separated this foetation from the cavity of the uterus. This was apparent by the shreds of muscular tissue about the edges of the orifice. This wall could not have been disturbed at the time of the first abortion, or severe hæmorrhage, and an early expulsion of the second foetus into the uterine cavity would have taken place.

It was probably perforated or considerably weakened during the curetting, sixteen days after the first abortion, and, partly from internal pressure as development progressed, partly from the contraction of the uterus following the curetting and hot irrigation, was at last ruptured. There had been no hæmorrhages after the first abortion, no severe pain at the time, or any other evidence of rupture. These did not appear until four days after the curetting, or twenty days after the first abortion, and it was during these four days that the patient suffered all the pain referred to above. Had the uterine gestation not been disturbed, or, in other words, had the internal support afforded to this sæptum by the structures of the normal pregnancy not been removed, this interstitial foetation, in all probability would have ruptured into the peritoneal cavity or beneath the broad ligament.

In discussing these cases of interstitial gestation, Garrigues makes the nice distinction that, while they are properly termed ectopic, inasmuch as the sac is found in an anomalous situation, they are not extrauterine, because the products of foetation are surrounded by uterine tissue.

A few cases of ectopic gestation in some of its forms complicating uterine pregnancy, have been reported in recent years, but fortunately they are extremely rare. I have under observation a patient

who will have to submit to an abdominal section for the removal of an old ruptured tube, and the breaking up of the subsequent adhesions, the result of a ruptured ectopic three years ago. While visiting friends in Norwich, Conn., the patient developed all the classical symptoms of a ruptured ectopic gestation. The condition was not recognized there, and while in this state of partial collapse from concealed hæmorrhage, she was brought by train to her home in Paterson, N. J. Her physician met the party at the depot, and, realizing her condition, hurried her to a hospital. Operation was performed by the vaginal route. A large hæmatocele was incised, the clots evacuated, and among them was found a two and a half months' foetus. As the hæmorrhage had ceased and the woman was in such a precarious condition, nothing further was done. Four weeks later, while still in the hospital, she aborted, a three months' foetus being found in the bed after a severe hæmorrhage. Its presence in the uterus had never been suspected.

Walther reported a case where cœliotomy was performed for an abdominal tumor, which was thought to be an extrauterine pregnancy. Upon opening the abdomen a uterus bicornis was found. The right cornu contained a foetus. Introduction of a sound into the uterus and other manipulations led to the expulsion of the foetus. The left tube, owing to a recently ruptured tubal pregnancy, was changed into a hæmatocele.

Miller has reported a case of coincident intra-uterine and extrauterine pregnancy. A three and a half months' foetus was found in the bed and the secundines were expressed. Four hours later the patient was seized with intense abdominal pain, went into collapse, pulse 160, respirations shallow, abdomen rigid, tender, and dull. The patient died. Autopsy revealed a ruptured ectopic in the left tube, and among the clots a second foetus, three and a half inches in length, was found.

In my own case the most puzzling points were the severe pain lasting over a period of four days before rupture, the recent abortion, and above all the chills, fever and other symptoms so closely resembling sepsis, and the absence of hæmorrhages or discharge. Under the existing conditions I did not reproach myself very severely for having failed to make a correct diagnosis.

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THE IGNITION OF ETHER VAPOR IN PRESENCE OF A CLOSED ELECTRIC LIGHT.*

By DWIGHT H. MURRAY, M. D.,

SYRACUSE, N. Y.

I feel that any unusual circumstance connected with an operation or anything bearing directly upon it is worthy the attention of the profession. It is on this account that I report the following occurrence:

On the 19th of January, while engaged in a tedious and difficult operation at one of the hospitals in the city, my attention was taken from my work by a sudden flash of light and some quick movements on the part of the anæsthetist, and I found that the ether vapor had ignited, scorching the hair and eyebrows of the patient, and had burned the skin on his forehead sufficiently to cause quite a marked redness. The anæsthetist reported that, the patient being on the face, he was unable to see the pupil properly, and he had turned on the electric light in order that he might more readily note the reaction of the pupil. The blaze had resulted coincidentally with the turning on of the light. There was no exposed fire or blaze in any part of the operating room, and the only conclusion that we could arrive at was that the vapor of ether had ignited from the spark in the electric light burner made when contact took place in the turning on of the light. I have never seen reported or heard of any such accident taking place during the administration of ether, but the fact that it did occur shows that it can and may occur again. This being the case it is well for any surgeon or anæsthetist not to turn electric lights on or off near the vapor of ether, particularly when the room is small and there is a large amount of the vapor of ether in the room, as one can easily see what serious damage might result.

I would also state that it is not so easy to produce a blaze by the turning on of an electric light in the presence of ether when we try it for that purpose. Since this occurrence, I have tried the experiment several different times in different ways, with the same burner and others, and have been unable to produce a blaze with ether vapor; so

* Read before the Syracuse Academy of Medicine.

that, while it is possible that this experience may be unique, and is certainly of rare occurrence if not unique, yet every surgeon and anæsthetist should bear in mind the fact that it has occurred. Fortunately, in this case the anæsthetist was prompt in his actions, and no damage was done, but very serious consequences might easily have resulted if the anæsthetist had lost his head.

PERTUSSIS WITH UNUSUAL CEREBRAL SYMPTOMS.

By EDWIN E. GRAHAM, M. D.,
PHILADELPHIA.

The chart appended hereto, showing graphically the peculiar range of temperature in Dr. Graham's case of pertussis, reported in our issue for June 20th, p. 1108, was unavoidably omitted from that issue.

THE APPLICATION OF HOSPITAL METHODS FOR THE PREVENTION AND TREATMENT OF PUERPERAL SEPSIS TO PRIVATE PRACTICE.*

By WILLIAM S. STONE, M. D.,

CHIEF OF CLINIC AND INSTRUCTOR IN GYNÆCOLOGY, COLUMBIA UNIVERSITY; ASSISTANT ATTENDING GYNÆCOLOGIST; GENERAL MEMORIAL HOSPITAL; ASSISTANT ATTENDING SURGEON, SOCIETY NEW YORK LYING-IN HOSPITAL.

Obstetrical work, although requiring the same technical preparations as abdominal surgery, will always be done at the patient's home to a larger extent than the latter; and all physicians, too, do more or less of this work at the beginning of their professional life. It may be pertinent, then, to consider if the results that are obtained at home differ essentially from those that are obtained in the hos-

* Read before the New York County Medical Society, March 23, 1903.

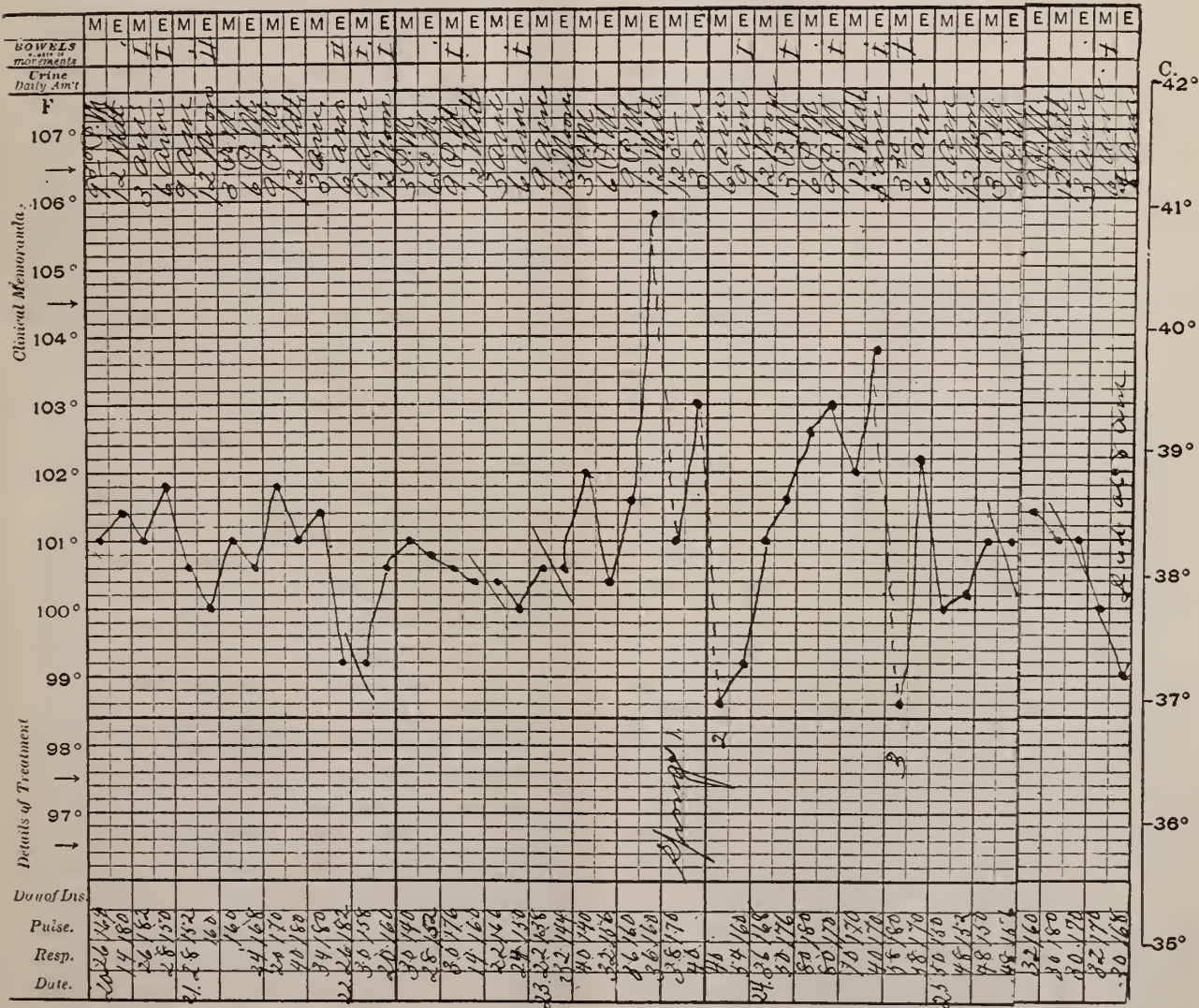


Chart in connection with Dr. Graham's article on Pertussis, published in our issue for June 20th, p. 1108.

pital; and, if hospital results are better, to consider their methods and the extent of their application to private practice.

Through the courtesy of Dr. Guilfoy, of the Bureau of Vital Statistics, I have been able to obtain the statistics of the New York Department of Health for the last five years, but those of the last two years are more completely tabulated, and will answer our present purpose sufficiently well. One thousand two hundred and ninety women are reported to have died in New York during these two years from some of the complications of childbirth; of these, 494 from some form of puerperal infection. There were reported during this period 178,139 births, making the mortality of the city in general from puerperal infection about .27 per cent., or 1 in 360. Many of the cases, in which death was reported to have occurred from other puerperal diseases, were certainly complicated by sepsis, and naturally many others are not reported as such at all.

It is manifestly unfair to compare such figures with those of a hospital, as, for example, with those of the Lying-in, to the service of which women already septic are admitted, or upon a large number of whom previous attempts at delivery have been made by attendants prior to their admission.

An out-door service, however, which treats a larger proportion of its cases from the beginning of their labors may fairly serve as a comparison. We find from the report of the out-door service of the Lying-in Hospital, published in 1897, that among 10,234 births the mortality from puerperal infection was about .14 per cent. Women, in other words, living in the dirtiest tenements, and in one of the most densely populated districts of the world, attended by nurses, students, and young physicians, if under the supervision of a rigid hospital discipline, run considerably less danger of death from puerperal sepsis, than do women of New York in general, in most instances under more favorable surroundings.

A consideration of the morbidity, estimating that of the city in general to have the same relative increase over the hospital percentage as does the mortality, will show, using that of the above mentioned service (3.22 per cent.) as a basis, that 10,688 women in New York during the past two years must have suffered from some form of puerperal sepsis.

In any consideration of hospital methods our attention is naturally directed to the elaborate equipment, which has so recently and rapidly developed to meet the demands of perfect technique. The marbled walls and the glass topped tables may be considered essential so far as they enable a hos-

pital to treat more comfortably and efficiently a large number of patients within a short space of time; but this elaborateness of detail offers some disadvantages in carrying out a more important function of a hospital, *i. e.*, teaching principles and the simplicity of their application to students, who are often led to believe that without such equipment it is impossible, and hence useless, to attempt hospital methods in their private work.

The chief purpose of this paper is to show that the essential part of obstetrical technique is based upon a few observations, furnished to us in part by the bacteriologist, and a few methods of procedure, which are as completely applicable at the patient's home as in the best equipped hospital.

The bacteriological conclusions of Döderlein, Krönig, Menge, Williams, and others, although at variance in a few points because of technical difficulties, practically agree upon the following general facts: The interior of the uterus above the internal os is sterile. The cervical canal and vagina, with the exception of the gonococcus and possibly some anaerobic bacteria, do not contain pyogenic cocci. The normal vaginal secretion, especially during pregnancy, has bactericidal powers, so that pathogenic bacteria, if introduced before labor, may quickly disappear.

Asepsis, then, instead of antisepsis, is the principle of obstetrical as well as of surgical technique, the application of which is accomplished by: 1, The use of no antepartum douches, except there is present, for example, a purulent discharge, in order to protect the baby's eyes from gonorrhœal infection; not, however, as curative, because the seat of the infection is in the cervical mucosa; 2, The sterilization of the patient's external genitals and the attendant's hands; 3, the use of no postpartum douches, unless there is some special indication.

The following extracts from the instructions given to students who attend cases in the out-door service of the Lying-in Hospital, may serve to illustrate the general applicability of such principles at the patient's home: 1, Arrange the bed and bedding; put wash-board or ironing-board beneath the mattress; arrange patient in a position convenient for examination; place Kelly pad beneath the buttocks; arrange instruments and dressings upon a tray near the bed; prepare solution for the douche. 2, Sterilize hands and forearms by scrubbing with green soap and water for five minutes by the watch; then by scrubbing in 1 to 2000 bichloride solution for three minutes (if the students' watches are not found out upon the table they are reprimanded). 3, Wash off patient's thighs, lower abdomen, and external genitals with green soap and water, taking special care of the anal region, and

also holding labia together to prevent the water from running into the vagina; rinse off with a 1 to 2000 bichloride solution; make the abdominal examination. 4, Resterilize the hands and forearms; make the vaginal examination and send in report to the hospital. 5, Conduct of labor: Make as few examinations as possible, preceding each examination by a sterilization of hands and forearms according to the above method, and by wiping off external genitals with cotton soaked in a 1 to 2000 bichloride solution; deliver on the side; wait one half hour for the placenta; give vaginal douche of 1 to 8000 bichloride, using the last part to rinse off the external genitals; apply sterile pad.

The instruments are sterilized at the hospital and wrapped in sterile towels so folded that they may be unfolded and spread out without contact before using. The dressings, also sterilized at the hospital, are in copper cylinders and are only removed as needed.

The patients are anesthetized for all operations and placed in the lithotomy position upon a table and the external genitals resterilized by a sterile assistant.

In considering the final application of these methods to our own work we may find some difficulties, some omissions, some things perhaps undesirable.

Instruments and dressings, furnished and sterilized by a hospital, offer advantages which we must overcome by our own expense and labor. Sterile towels are particularly difficult to obtain, but freshly laundered towels that have been immersed in a bichloride solution may be wrung out dry, as needed, and answer sufficiently well. Such towels may be also used for a vulva pad until more suitable pads are obtained.

The Kelly pad is a disagreeable and often dirty affair, in place of which a freshly laundered draw sheet and bichloride towels may be substituted.

The question of shaving the vulvar hair presents an ugly problem; and while all of us believe, I think, that it is just as important as in the preparation for other vaginal operations, few of us, I fear, have the courage of our convictions.

The use of antiseptics in the sterilization of the external genitals is comparable to their use in the preparation of the skin for operations in other portions of the body. The writer does not think they are necessary, as he can hardly see how in the short time of contact they can fulfil their theoretical use. As a means, however, of securing sterile water (for which purpose bichloride is used in the out-door service of the Lying-in Hospital), they may represent a practical need.

The separation and eversion of the labia before

the examining fingers are introduced is another detail of considerable practical importance.

A most neglected part of obstetrical technique is in regard to the postpartum care of the external genitals as performed by the nurse. A few words, explanatory of the necessity for frequent washing with hands sterilized as for an operation, will add immeasurably to the comfort and safety of the patient.

Total abstinence from postpartum douches, except immediately after labor to wash away clots, to promote the comfort of the patient, to prevent hæmorrhage or after pains in multiparæ, or for special indications, is an essential part of good technique.

After all has been said, done, or undone, the sterilization of the attendant's hands represents the most important feature of obstetrical technique in preventing puerperal infection. The general surgeon, with few exceptions, has adopted the use of rubber gloves as the last step, it would seem, in the perfection of this technique, but the obstetrician has not yet availed himself of this part of aseptic technique to the same extent.

The advisability of their general use in obstetrics would appear to depend upon the answer to the following questions: Are they necessary? Are the conditions the same as in general surgery? Are they practicable? Are better results obtained with their use?

The necessity of some method of perfecting our technique must be acknowledged as cases of puerperal sepsis still occur in the practice of the best obstetricians. The conditions in obstetrics, too, are such that any imperfection in the technique may be more often followed by disastrous results than in general surgery. There are often several wounds, all of which are always under the most favorable conditions for the entrance of bacterial agents.

An illustration of their general practicability and of results from their use may be furnished by the writer's experience of two months in one of the wards of the Lying-in Hospital. No antiseptics of any kind were used, except bichloride as an immersion fluid for the hands before the gloves were applied. No douches were given before, during, or after labor, unless special indications seemed to demand their use—and then only of sterile salt solution. No vaginal examinations were permitted without gloves. Sixty-seven women were delivered during this period—seventeen by some form of obstetrical operation. Fever occurred in only one patient, who was admitted so far advanced in labor that delivery occurred before the external genitals could be cleansed in the routine method. The fever in this case, which lasted only a few days,

was due to an infected wound of the perinæum. There were two changes of house staff during this time.

Their general practicability was also demonstrated, as the house staff had had only three months' previous experience in obstetrics, and errors of diagnosis were not more than ordinarily common. Two versions were readily performed by one of the men—one for placenta prævia.

The writer has used gloves in his private practice for two years with the greatest satisfaction. Results from their use seem to be specially demonstrated by the normal course of the temperature in cases of retained portions of gestation products, the only symptom of which is the persistence of a bloody discharge.

They would appear to be specially necessary for those who are engaged in general work, and the writer believes that, by their general use, the morbidity from puerperal infection can be reduced at least one half.

THE TREATMENT OF PUERPERAL INFECTION.

Hospital methods of treating puerperal sepsis are also such that they may be readily applied at the patient's home, except occasionally on account of the expense which is naturally attendant upon efficient nursing.

A knowledge, however, of certain general facts relating to the clinical course is essential for the adoption of rational methods of treatment.

A keen appreciation, for example, of the fact that puerperal women are liable to the same diseases as other women, must not obscure the actual fact that fever during the puerperium is in the overwhelming majority of instances the direct result, either of the absorption of poison generated by saprophytic organisms, or of infection of the tissues with pathogenic bacteria from some wound of the genital tract—even in the absence of marked local signs, such as pain, tenderness, swelling, and discharge. A foul discharge, on the contrary, may exist from the decomposition of blood clots in an intact vagina without the presence of fever.

The frequent disappearance of fever after brisk catharsis may even be due in some instances to better drainage, previously prevented by a trivial uterine displacement from a distended rectum.

The majority of cases of so called sepsis, especially those first presenting fever near the end of the first week or even later, are examples of septic intoxication, due to the retention of discharges or decomposition of blood clots and retained gestation products, and recovery practically always occurs. Exceptions are the fatal cases of pyæmia, which

often do not begin until the end of the first week.

Another large class of cases, examples of real infection with pathogenic bacteria, and often presenting alarming constitutional symptoms, is chiefly characterized by local disturbances, either in the original wound, or in the adjacent pelvic organs. Such cases, even in the presence of abscess formation, almost always recover.

Finally, from 70 to 80 per cent., even of those comparatively rare examples of true septicæmia, recover. The earlier the symptoms begin, the worse is the prognosis—the most fatal of all being those in which symptoms appear within a few hours after labor.

One or two other clinical facts must be considered. An initial chill is in no way indicative of a severe type of the disease—a chill often occurring after the most careful local treatment without subsequent manifestations. The fever is no such index of the condition of the patient as is the pulse. Recovery after very high temperatures is not rare.

Accepting these general statements to be true, our search for the essential principle that characterizes hospital methods of treatment will show it to be accuracy of diagnosis, which is obtained by a more careful examination of the pelvic organs at the initial period of the disease than is generally made at the patient's home.

The writer will also add, as a desirable feature of the treatment, the principle of asepsis, although not assuming his own application of it to be a general method of hospital practice. Dr. Charles McBurney, in a paper entitled *Remarks Concerning the Practice of Aseptic Surgery*, recommends the application of aseptic, rather than of antiseptic principles, in the treatment of septic wounds. The reasonableness of his conclusions and the simplicity of their execution prompted the writer to adopt such principles in the treatment of puerperal sepsis.

Accuracy of diagnosis and the immediate application of aseptic treatment may be obtained in some such way as the following: So soon as fever appears, excluding the breasts and constipation as ætiological factors, the patient must be transferred to a table and placed in the lithotomy position, with or without anæsthesia, according to circumstances. After the sterilization of the attendant's hands and the patient's external genitals is completed, a systematic examination, beginning with the perinæum, is made. Until the writer adopted this method, he was totally unaware of the frequency with which infected wounds below the placental site were the cause of the trouble. A very common error in the treatment of a patient who is presumably septic is to give an intrauterine douche without a previous examination of the perinæum, vagina, and cervix,

so that in many instances a transference of the infection to the placental site, resulting possibly in a fatal termination, is caused by our initial efforts at treatment. After the perinæum has been examined, discharges in the lower vagina are sponged away and a retractor is introduced. The vaginal vault and cervix are then inspected, and it may be often unnecessary to go farther, as sufficient cause for the fever may be already found. Aseptic treatment of these wounds by irrigation with sterile salt solution is sufficient in most instances to promote healing and the disappearance of the general symptoms.

If the interior of the uterus is presumably the cause, either with or without previous dilatation of the cervix, one or two fingers are introduced and an examination of its interior is made. This internal palpation is only satisfactorily accomplished by means of firm counter pressure exerted over the fundus by the abdominal band.

A satisfactory prognosis and scientific accuracy, especially in judging of the value of any particular form of treatment, demand a bacteriological examination of the interior of the uterus. It is necessary for this purpose, in order to avoid contamination, that some tube, such as Menge's or Williams's, should be used. The bacterial relations of the interior of the uterus are, in general, a better guide in diagnosis than the examination of the blood, as the bacteria are present in the general circulation at irregular and often transitory intervals.

Retained discharges, either from premature cervical contraction or from uterine displacement, may be found to be the cause. If there are putrid remains of gestation products, they may be removed with the fingers supplemented by the use of some dull instrument, as, for example, the ordinary sponge forceps. A common error in judging of the uterine interior is to consider the normally roughened placental site as retained gestation products.

The uterine cavity is then washed out with hot saline solution, after which it is rarely necessary to apply subsequent intrauterine treatment. A septic endometritis causing necrosis and a purulent discharge, is, in the writer's experience, comparatively rare, especially in the cases of true septicæmia with rapid invasion of the general circulation. The writer, would, then, especially offer his protest against the use of antiseptic douches, either continuously, or at frequent and regular intervals in this class of cases. A bacteriologist recently told me he preferred to make his cultures immediately after the use of an antiseptic douche, as they were less likely to be contaminated with non-pathogenic bacteria. Ergot administered at rather frequent in-

tervals is a much more certain aid in maintaining uterine contraction.

If other pelvic lesions, such as cellulitis or peritonitis, are present, an ice bag is applied to the abdomen, followed later by prolonged and hot vaginal douches, to aid in the absorption of the exudate. If an abscess is present, it is opened in the most accessible region.

More radical procedures, such as hysterectomy, are indicated in a very few instances. Two cases which I followed clinically, presented such post-mortem lesions that a complete extirpation of the internal genital organs would appear to have been indicated. From a necrotic focus at the placental site pus could be seen in the veins and lymphatics running out to the ovaries and ends of the tubes, the lumen of one of which contained pus at its outer end. Pus was also present in the uterine wall running across the fundus close to the peritoneal surface, from which a rapidly spreading peritonitis had developed. No other organs were involved. It may be that in judging of the cases that are suitable for radical procedures a spreading peritonitis offers the best index, especially in the presence of vomiting and a rapidly increasing pulse. Signs of local pelvic disturbance are not indications for such measures.

In conclusion, it must be recognized that no evidence has so far been produced to show that any form of specific treatment is of the least value in those severe types of the disease designated as septicæmia or pyæmia.

1730 BROADWAY.

Chronic Enlargement of the Liver in Tropical Countries.—M. Tourtoulis (*Lyon médical*, April 28th and May 3d) formulates a plan of living for those obliged to reside in tropical countries, in order to avoid hepatic troubles generally, and chronic enlargement of this organ particularly. He advises moderate eating to avoid gastrointestinal disorders and the avoidance of large quantities of easily putrescible food, relying mainly on fruits and vegetables. Gastrointestinal disorders should be attended to at once, and constipation must be watched against. Alcoholic liquors should be taken not at all or very well diluted; their abuse leads to hepatic irritation and gastritis. Open-air exercise is recommended as an hepatic and respiratory stimulant. Profuse sweating should be avoided, by drinking only enough fluids as are necessary for the organism. Idiopathic disease of the liver does not exist in tropical countries, and hepatic disorders can be avoided by attention to the regimen. If the liver becomes enlarged, even though the patients feels well, he should take a long sojourn in a cooler climate, and adopt a suitable mode of life until the organ again reaches its normal size and performs its normal function.

PROPHYLACTIC INJECTIONS OF TETANUS ANTITOXINE IN CASES OF WOUNDS FROM TOY PISTOLS.

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STREET HOSPITAL.

It is difficult to establish the value of prophylactic injections of the antitoxine of tetanus in man. Tetanus is a relatively rare disease in human beings, when the great number of wounds contaminated with the refuse from stables, the dust of the streets, and the like, is taken into consideration. From the fact that but very few cases have developed among those injected with prophylactic doses we cannot properly conclude anything, even though tetanus was epidemic in the locality at the time, unless a very large number of cases have been so treated.

My interest was first aroused by the remarkable results obtained by Nocard in animals from 1895 to 1897. These I have fully transcribed in a former paper.¹ As tetanus was to a certain extent epidemic in New York city in 1899, particularly in boys who had received wounds from the wads of toy pistols, I looked into the subject to find out whether the occurrence of this disease could be prevented. I think that I have been in a measure successful, as I have had but one case of tetanus develop out of 129 cases of wounds from the wads of toy pistols occurring in the out patient department of the Hudson Street Hospital in the last three years. Of course it may be argued that tetanus was of more frequent occurrence during 1899 than during the subsequent years. I will grant that, but the daily papers have by no means been free from accounts of death from tetanus due to toy pistols in the past three years. It has even been urged by more than one writer that the sale of these toys should be forbidden, and legislative action has been seriously considered.

In looking up the literature of this subject, in 1899, my attention was attracted to a paper by Bazy.² From April, 1894, to May, 1895, he had four cases develop in his wards. Three followed severe traumatism, one was a case of so called spontaneous or idiopathic tetanus. From that period he applied preventive treatment to all cases of wounds which were admitted to his service. He made twenty-one preventive inoculations of 10 cubic centimetres each. None of these patients developed tetanus, although, he says, their wounds belonged to that category which causes most cases of the disease. The num-

ber of his cases was entirely too small to lead to any conclusion in regard to the value of this remedy when used prophylactically, still it appeared to me to be well worth a trial in a class of wounds particularly liable to produce the disease, *viz.*, wounds from the wads of toy pistols.

In my former paper I reported that I had used prophylactic injections of from 4 cubic centimetres to 10 cubic centimetres each in fourteen cases of such wounds occurring in my service at the Hudson Street Hospital during the summer of 1900, and that I had not used them in thirteen such cases. One of the latter patients developed fatal tetanus. I stated in my paper that I did not think that the local treatment of the wound in that case was so thorough as it should have been. The same observation may likewise possibly apply to some of those that received prophylactic injections. Since the summer of 1900 I have continued to use such injections in the majority of these wounds. During 1901, doses of 10 c. c. each of tetanus antitoxine were administered to thirty-four patients with toy pistol wounds. During 1902, twenty-two such patients received prophylactic injections, the usual dose being 10 cubic centimetres, while forty were not injected. So far this year (April 23, 1903) two have received prophylactic injections, while four have not received them.

Counting the cases previously reported, there are then seventy-two patients who got prophylactic injections, while fifty-seven did not get them. So far as we have been able to learn, there was only the one case of tetanus, previously reported by me,³ among the entire one hundred and twenty-nine.

Whether any one of the seventy-two patients who received injections would have developed tetanus otherwise cannot be said. How much success, if success is granted, was due to thorough local treatment, and how much to prophylactic injections, I do not know. Suffice it to say that we seem to have got rid of tetanus in this class of wounds at the Hudson Street Hospital.

While I do not think that anything definite can be said regarding the value of prophylactic injections from such a small number of cases, I shall use them in all cases in which the wound has not been thoroughly opened and cleansed within a short time after its infliction. I have caused all such wounds to be freely and deeply incised and curetted, and then to be swabbed out with pure carbolic, its action being limited with alcohol when deemed advisable.

Nocard used two injections of 10 cubic centimetres each at an interval of ten days in animals. In human beings it has been advised to repeat

¹ Some Remarks on Tetanus, *New York Medical Journal*, July 20, 1901.

² Bazy, De la sérothérapie dans le tétanos, *Bulletins et mémoires de la Société de chirurgie de Paris*, 1896, N. S., xxii, 186, 191.

³ *Loc. cit.*

the injection once or twice at an interval of three or four days; particularly if the wound does not become healthy, as Vaillard and Rouget⁴ have shown that symbiosis is essential to the elaboration of tetanus toxine.

The same pains in the joints and rashes that sometimes follow the exhibition of the antitoxine of diphtheria may occur after the use of tetanus antitoxine; they are transitory and usually cause but slight inconvenience.

This subject received considerable attention at a recent meeting of the French Congress of Surgery, October 20 to 25, 1902.⁵ M. Villas (Lyon) said that preventive serumtherapy in tetanus possessed certainty of action, and that if it were systematically applied to all wounds, tetanus would disappear from human pathology just as smallpox in the presence of vaccination. He considers that the preventive treatment is indicated when one encounters a suspicious wound, that is, a contused, irregular wound, soiled with earth or foreign matter. Neglect of such treatment he considers very wrong, and thinks that efforts should be made to cause the danger of tetanus in such wounds to be more thoroughly recognized. These views received the most enthusiastic endorsement of those who spoke on the subject.

Lectures and Addresses.

THE SURGERY OF THE PROSTATE FROM THE STANDPOINT OF PERSONAL EX- PERIENCE. BEING THE ORATION IN SURGERY.*

By GRANVILLE MACGOWAN, M. D.,
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(Concluded from p. 1114.)

PERILS AND ACCIDENTS OF THE OPERATION AND UNSATISFACTORY RESULTS SOMETIMES FOLLOWING IT.

When one who has had no experience in these operations reads statements reporting a long list of cases operated on without deaths and all resulting in perfect cure, which, of course, I take to mean the ability to empty the bladder entirely and with convenience, it would seem that the procedure is always so easy of execution that there are no dangers, and there need never be any anxiety about the outcome as to life and the ultimate perfect restoration of the power of voluntary urination. Do not be

deceived by such reports. Some people die in the hands of every operator, and misrepresentation with regard to the dangers, difficulties, and annoyances will not help to popularize these operations with the medical profession.

In the suprapubic operation, one has to deal always with the possible dangers of urinary infiltration, and at times, with profuse hæmorrhages. Where there is great removal of tissue, it may be followed by the formation of very irregular cicatrices about the base of the bladder, with sometimes such deformity of the bladder neck that continuous leakage occurs, necessitating the use of a rubber urinal. Where the tumors removed are fibroid, or so dense and adherent that it is necessary to bite them off piece by piece by rongeurs or serrated scissors, the pressure of the knuckles of the hand used for enucleation or of the handles of the rongeurs often destroys the vitality of the fatty tissues of the abdomen about the cut or of the cellular tissue in front of the bladder, and sometimes of the bladder wall itself, producing necrosis and subsequent sloughing, and the wound is slow to heal or sometimes leaves a fistula which requires one or more subsequent plastic operations to close.

The leakage from a suprapubic wound is always very disagreeable and annoying to the patient. Even after the voluntary power of urination is restored the fistula may remain open for days or weeks, and occasionally a portion of the urine will escape from it when the bladder is distended. I have seen men much more troubled about this, and much more miserable over it, than they were when they could not urinate at all, and were suffering intensely every minute of the day from obstruction.

The difficulties of the perineal operation are not usually great. Its perils consist in:

1. The making of an irregular tear in the bulbous urethra by the assistant who holds the staff thrusting it awkwardly and violently through the bulb. This gives rise to very prolonged healing of the urethral wound, and sometimes to the formation of a fistula difficult to repair.

2. When the prostatic capsule is entered and an attempt made to enucleate its contents, no line of cleavage can be found, and persistence in an effort to excochleate may lead to a tearing away of the organ from the pelvic tissues making room for urinary infiltration and subsequent infection.

3. If such fibroid growths are removed piecemeal with scissors and rongeur, it leaves a very irregular channel, which subsequently tends to contract, making resistance to the entrance of any instrument, and interfering in part, or in whole, with the expulsion of urine, so that the individual is no better off than before. In one case a Bottini had to be done sub-

⁴ Vaillard and Rouget, *Annales de l'Institut Pasteur*, June, 1892, p. 384.

⁵ *Revue de chirurgie*, 1902, xxvi, p. 632.

* Delivered before the Medical Association of the State of California at Santa Barbara, April 21, 1903.

sequently before the power of urination was restored.

CASE I.—I. C. S., aged sixty-eight years; farmer. Patient of Dr. Beckett. Has led catheter life for three years, and had urinary frequency with difficulty in urinating for a year previously. Urethra passable frequently only to a stiff catheter loaded with a mandrin. Frequency about ninety minutes.

Operation: Perineal prostatectomy. It was believed that the prostate would excochleate readily, but it was so irregular and dense intraurethrally that it was suspected to be cancerous; no line of cleavage could be found.

Attempts to enucleate on either side resulted in opening the tissues of the pelvis outside of the capsule. Being without the Bottini, a suprapubic incision was made, and as much of the rubber ball-like substance removed by rongeurs as was necessary to provide a channel sufficient to admit two fingers.

Drained both ways by metallic perineal tube and DePezzer's suprapubic. Tubes removed on fourth day. Perineal wound healed on eighth day. Suprapubic wound closed on the eighteenth day, but as no urine was passing, it was reopened and a small DePezzer perineal drainage tube reinserted. On April 2nd, a Bottini was done under nirvanin-cocaine anæsthesia.

Three incisions, each 3 centimetres long, were made on the floor and each side of the commencement of the urethra.

April 17th: Voluntary urination: good full stream, which empties the viscus. Much slough has passed away in the bladder washings.

Cure practically finished April 18th; suprapubic tube removed April 20th. All urine passing by natural passage in a full stream.

The perineal operation may appear to be perfect and the real obstruction be intravesical requiring a suprapubic operation, as in the following case:

CASE II.—S. D. C., November 16, 1899. Aged sixty-nine years. Sent by Dr. E. C. Buell. Occupation, mercantile agent. Diagnosis, prostatism. History: Attack of retention in 1895. For four or five years previously, increased frequency and difficulty in passing urine. Between 1895 and the present time he has had a number of attacks of retention with symptoms of uræmia, and was once confined to bed for six months. Has led continuous catheter life for about a year.

Examination: External organs healthy. Prostate greatly enlarged. Seminal vesicles healthy. Bladder capacity 300 cubic centimetres. Residual urine 180 cubic centimetres.

January 4, 1899. Being very weak and unwilling to be cut, the patient submitted to a Bottini operation under local anæsthesia, 60 cubic centimetres of a 5 per cent. nirvanin solution for the bladder, and a few drops of 10 per cent. cocaine solution for the posterior urethra. One posterior incision $3\frac{1}{2}$ centimetres. Time, three minutes. Current, 50 amperes. Very slight hæmorrhage. Recovery with-

out incident. On January 30th he was able to pass four ounces of urine with each effort. March 22nd, passing urine easily at intervals of two or three hours. Uses catheter once at night relieving himself of four ounces.

He continued in this condition until June, 1902, and became strong, able to work, and enjoy himself. Then, there being increasing difficulty in the passage of the catheter and an increased residual, he consented to a perineal prostatectomy. This was done with some difficulty, the growth being very dense and difficult to excochleate. The portions that were easiest to remove were those about the scar of the Bottini burn. The bladder had a very deep *bas fond* back of the ureteral pillars. Weight of prostatic tissue removed 6 grammes; calculus removed at same time weighed 4 grammes. This operation was done by Murphy's method. It left a very hard scar, which, by its contraction, obstructed the urethra and was very painful. At the time of operation, my finger entered the bladder, and was swept well around the lower part of its neck, and could not detect any further obstruction, with the exception of a very small teat to the left and below the urethral orifice. It was not believed that this would lead to any difficulty, and it was let alone. The operation did not give the patient any relief. In September he was really worse off than he had been in June. I succeeded in cystoscopying him, and found that there were two obstructive elements. One was the contraction of the perineal scar, and the other a moderate sized tumor springing from the upper right hand segment of the vesical neck, very irregular and connected with the prostate. A perineal incision was made and the hardened cicatrix removed where it pressed upon the urethra. The bladder was opened suprapubically and the prostatic growth removed with great difficulty by rongeurs. Recovery was uneventful. Perineal wound healed in ten days. The healing of the suprapubic wound was delayed by reason of the violence done to the tissues by using the rongeur. He was passing water naturally, and his wounds were closed at the end of three weeks. He empties his bladder completely, has not to rise more than once at night, has become strong and vigorous and is able to attend to his business continuously.

4. There is also danger of tearing into the rectum—an accident which happened to me once in a cancerous prostate, and which is liable to happen to any one operating in a very dense or fibroid prostate.

Through the perineal wound small, or even large, pieces of the prostate tissue may escape into the bladder in the process of enucleation. This to a certain extent may be overcome with the larger nodules by catching each one with a well-curved tenaculum and drawing it down into the external wound before it is finally loosened from the capsule, but the very small ones are liable to get lost, and if allowed to remain in the bladder would form nuclei for stones. On three occasions, I have had such pieces escape into the bladder, but I have always been fortunate

enough to know it and to recover them without making the suprapubic cut. Much time was lost, and the operation was greatly prolonged by reason of this accident.

CASE III.—June 29, 1899. J. B., aged seventy years. Merchant. Complains of burning in the bladder and increased urinary frequency. Urine very acid. No albumin, sugar, pus, or casts. External genital organs normal. Prostate slightly enlarged on right side. No residual urine.

July 26th. After massage of prostate, urine passed was centrifuged and examined microscopically. Uric acid sand, and calcium oxalate crystals, surrounded by clumps of pus.

August 5th. Has taken cold and prostate is œdematous and prominent. This attack was accompanied by right-sided epididymo-orchitis. Later, he became very comfortable and remained so until 1902, when, in May, after seeing a relative operated on for prostatic obstruction by me, he bethought himself of his former attack and had a surgeon in a neighboring city examine him. He found he was carrying more than a pint of residual urine. The surgeon gave him a catheter to use, with which he very promptly infected himself. His prostate had grown to a very large size. After suffering a few weeks, he decided on operation. The enlarged glands were enucleated without difficulty, but one piece slipped away and got into the bladder. It required a long time to recover it. His external wound healed in ten days. The urine passed by the urethra naturally when he was lying in bed after twelve days, but he could not retain it when walking about for nearly six weeks. This was due to the undue stretching of the bladder neck by the tumor having grown into it directly from both sides of the urethra, which interfered very greatly with the restoration of its tonicity. Within three months he retained his urine perfectly and his bladder empties itself to the last drop. He sleeps all night and only urinates four or five times during the twenty-four hours.

This case illustrates very nicely commencing prostatic obstruction, its development and cure.

5. When the tissues of the bladder have been greatly bruised by sharp stones before the operation, or where the urine is hopelessly alkaline, with all that condition implies, all wounded surfaces within the bladder, and sometimes within the prostate, become covered with phosphatic incrustations. These are subsequently cast off, or may have to be loosened by curetting somewhere between the third week and the third month. In one case I had to reopen the suprapubic wound on this account, and took out a whole handful of sloughs covered with such deposits. In another case, very recently, such sloughs came away through the perineal wound, which reopened apparently from this cause, and subsequently closed itself. Another patient in the hands of a colleague, I am informed, discharged such sloughs for many weeks.

6. Dangerous hæmorrhage is not common by the perineal route, unless the case is complicated by a tight stricture in the perineal urethra, requiring the severing of the bulb in the course of the operation, or unless the bulb is carelessly cut in making the necessary opening in the urethra; but secondary hæmorrhage does occur. I have seen it now in two cases during the past year, each following an attack of tenesmus, that, as near as I could discover, arose from an organized clot which had formed on one side of the bladder neck, and when the packing was removed and the perineal wound practically closed upon the restoration of the power of urination, this clot was swept into the urethra and, being firmly attached, remained there, causing tenesmus. The forcible contraction of the bladder neck upon the clot loosened it from its vessel and a hæmorrhage then took place into the bladder filling it to distention in less than two hours.

In the first case I was able to remove these clots and stop the hæmorrhage by breaking them up with a lithotrite in a 15 per cent. solution of hydrogen dioxide in normal salt solution and subsequently pumping them out with a Chismore evacuator. In the second case, the bleeding could not be controlled, and I had to do a suprapubic cystotomy under the most unfavorable conditions, and pack the urethra from within and without the bladder, with gauze steeped in solution of adrenalin chloride. This packing had to be so tightly placed, that it was followed by a slight slough in the rectal wall which has been very difficult to repair.

7. There is another danger which I have discovered in these perineal operations. Where one or more small nodules are imbedded directly in the tissues around the internal urethral mouth, or where there are nodules buried beneath the mucous membrane directly inside the urethral neck, and their removal is absolutely necessary, it may be followed by the tearing out of the whole posterior urethra. This is a very disagreeable accident, but its occurrence is not necessarily destructive of the ability of the bladder to functionate properly.

CASE V.—April 3, 1898. Patient of Dr. Cannon. W. S., sixty-nine years old. Has led a painful continuous catheter life for four years, which for a few months past has been almost unbearable. Prostate greatly enlarged. Bladder base tense. Sounded for stone—result negative. Cystoscoped, and three large calculi were found in a diverticulum. Left ureter dilated and pumping purulent urine. April 5th. Litholopaxy. Weight of stones 45 grammes. Confined to bed for twenty-four hours. In a week he was able to pass some urine and catheterize himself at reasonable intervals without pain.

February 12, 1902. I removed the prostate by median perineal route at his request. There has been great pain recently and catheterization is no

longer possible. The lateral enlargement came away quite easily, but set about the bladder neck just under the mucous membrane were a lot of small nodules like pearls in a ring. After much patience I succeeded in removing five or six of these. There were two of considerable size beneath the tissues of the bladder in front of each ureteral opening. Suppuration had taken place in these and I opened them through the floor of the bladder with my long capsule knife and enucleated them, but they were very adherent, and, using too great traction upon one with a volsella, I turned the bladder neck inside out, removing it with the tumors surrounding it and part of the sphincter muscle attached before I recognized it. To say I was astounded and dismayed would not express my feelings. I placed a No. 40 F. soft rubber drainage tube in the opening and, as the wound closed, reduced the calibre until a No. 16 F. was used. The perineal wound was kept open until the bladder made reservoir for 240 cubic centimetres of urine while the patient was prone. He leaked a while after getting out of bed, but in seven weeks he was urinating clear urine, 250 cubic centimetres at a time, and had full control of his bladder at all times and a full-sized sound could be passed to his bladder.

At the time of the operation I removed about sixteen stones, and the left ureter was so dilated that I could easily introduce the end of my index finger into it.

I have seen him this very day and he is well and states that he has no difficulty in holding his urine for four hours, does not have to rise at night, and can project the stream fully three feet from his body.

8. In making the perineal incision, in very large stout men with deep perinæums, great care should be exercised to keep well away from the rectum with the skin cut. I was very much embarrassed once, where I had closely approached the sphincters but had not severed them at all, to see subsequently the anterior fold of the anus drawn an inch and a half well up into the perineal wound by the action of the levator ani muscles, and every time there was a passage from the bowels, the wound became filled with faecal matter, though there was no cut in the rectum itself.

BENEFITS OF THE OPERATION.

It has been a striking fact that sexual power, if present, has usually remained after operation, and if absent has been often restored. This is directly contrary to the teachings of the Necker school, and of Murphy, but has also been the experience of Bryson and Goodfellow.

In the great majority of the 49 prostatectomies and 29 Bottini operations which have been performed by me the results have been ultimately good. In a few, they have been almost perfect. None have been positive failures. In all, the general conditions of the individual have been improved. All of my

operations have been done on persons who had been leading a catheter life at the time of the operation. It seems to me unreasonable, when one considers the general and local conditions existing in such people, that the surgeon should be expected to make them over again. A few have dribbled for a time, but not any permanently. All, eventually came to hold a reasonable amount of urine, and I do not know of any who ultimately had a residual of more than 50 cubic centimetres. I have never yet seen one of these cases put in a condition, where it was not necessary to urinate at least four or five times during the twenty-four hours, and I do not look for this. I think that when one takes an old man who cannot urinate at all, whose urine is foul, whose bladder is distorted, its walls thickened and undergoing fatty degeneration and perhaps containing one or more sharp irritating stones, whose ureters are dilated and whose kidneys are filled with pus, who is weak and sallow and uræmic, and who cannot sleep because he has to pass a catheter every fifteen or twenty minutes, and this catheter is inserted with great muscular effort causing much pain and frequently bleeding, obtaining only a few teaspoonfuls or, perhaps, tablespoonfuls, of urine at each urination, and one operates on him, clearing the membranous and prostatic urethra and the bladder neck from the tumors pressing upon them, giving a chance for the urine to find its way out of the bladder in a natural manner, and afterward that man can hold from 120 to 150 cubic centimetres of urine at a time and expel it at intervals of three or even two hours, and has not to exceed 30 to 45 cubic centimetres of residual urine; if his dyspeptic symptoms disappear, his appetite returns, his cheeks take on the color of life, his eyes become bright again, his mental faculties become lucid and his kidneys secrete a fair amount of urea, I think a very excellent surgical operation has been performed, the results of which are sufficiently gratifying to justify the risks of failure which were taken in attempting it—results which do not require apology to the patient, his friends, or the medical profession by the operator.

This, gentlemen, is the history of 65 of my cases that have received the above benefit from the operation of prostatectomy or prostatotomy. Of the operation of prostatotomy by the Bottini method, I have not the time to tell you what I believe to be its full value; I only repeat what I have already intimated to you several times in this paper, that it possesses a very real surgical value. There are certain cases of prostatic obstruction in which it is to be preferred and will give better results than any cutting operation. In any case where the sufferer keenly dreads the knife, as so many millions of our fellow-men do, he should, if he will accept the responsibility, always

be given the benefit of the Bottini operation where he will not submit to a prostatectomy. The surgeon who pretends to special skill in diseased conditions at the bladder outlet shows no wisdom by sneering at this operation and refusing to acquire skill in its application. I know on this ground I am supported by the two genitourinary surgeons who, I think, have at their disposal and directly under their control a greater amount of urogenital material than any others in America, I mean Dr. Orville Horwitz, of the Jefferson Medical College, and Dr. Hugh M. Young, of the Johns Hopkins University, both of whom are practical men with excellent faculties for observation.

540 DOUGLAS BLOCK.

Our Subscribers' Discussions.

A SERIES OF PRIZE ESSAYS.

[Questions for discussion in this department are announced at regular intervals. So far as they have been decided upon, the further questions are as follows:

XXIV.—How do you treat delirium tremens? (Under adjudication.)

XXV.—How do you treat the summer diarrhœa of children? (Under adjudication.)

XXVI.—How do you treat "habitual abortion"? (Answers due not later than July 10, 1903.)

XXVII.—How do you treat paraphimosis? (Answers due not later than September 10, 1903.)

Whoever among our subscribers (with the limitations mentioned below) answers one of these questions in the manner most satisfactory to the editor and his advisers will receive a prize of \$25. No importance whatever will be attached to literary style, but the award will be based solely on the value of the substance of the answer. It is requested (but NOT REQUIRED) that the answers be short, if practicable, no one answer to contain more than six hundred words.

Only subscribers to the NEW YORK MEDICAL JOURNAL AND PHILADELPHIA MEDICAL JOURNAL (including regular and volunteer officers of the Medical corps of the United States Army, Navy, and Marine Hospital Service, commissioned or under contract) will be entitled to compete, and all persons known to be engaged in medical journalism are disqualified. This prize will not be awarded to any one person more than once within one year. Every answer must be accompanied by the writer's full name and address, both of which we must be at liberty to publish.]

The prize of \$25 for the best essay submitted in answer to question XXIII has been awarded to Dr. Clarence A. McWilliams, of New York, whose paper appears on p. 1115.

PRIZE QUESTION NO. XXIII.

THE TREATMENT OF INGROWING TOENAIL.

(Concluded from p. 1118.)

Dr. May Farinholt-Jones, of Columbus, Miss., writes:

Ingrowing toe nail is a condition that would rarely come to a physician's attention if men and

women did not so frequently wear ill fitting and uncomfortable shoes. It is a condition practically unknown among the barefoot tribes and nations. Shoes with French heels and pointed toes are directly responsible for many of the ills to which flesh is heir. Of a truth, vanity and civilization frequently go hand in hand, and this abnormality is a part of the price we pay.

Ingrowing toe nail is due to two conditions: Lateral hypertrophy of the nail, or the encroachment of the soft parts upon its margin. The latter condition is brought about chiefly by the pressure of an ill fitting or narrow shoe, causing the toes to override each other. This abnormality causes the nail to press into the tissue, giving great pain and discomfort.

The simplest method of treating this condition, where no suppuration or granulations have formed, is to lift the nail at its margin and gently pack a small strip of gauze under it. Of course the treatment must be persisted in for several weeks. After a few times the patient can pack the gauze under the nail for himself.

In the majority of cases to which a physician's attention is called, suppuration and painful granulations have already formed to a greater or less extent; the entire toe is inflamed and tender, and the slightest pressure or manipulation causes excruciating pain.

For such cases the foot should be bathed fifteen or twenty minutes in warm water, in which a handful of sodium chloride or an ounce or two of sodium bicarbonate has been dissolved. The affected toe should be thoroughly washed with green soap and carefully dried. The granulations should be removed with a pair of sharp scissors, or they may be burned with nitrate of silver or pure crystals of carbolic acid. If the granulations are very painful, it may be necessary to use a local anæsthetic. If pus has formed, the part should be sprayed with peroxide of hydrogen, and the inflamed member then carefully dried and dusted with boric acid powder, which, to a certain extent, alleviates the pain and acts as an antiseptic. A thin strip of gauze is then gently but firmly packed beneath the margin of the nail. Small strips of gauze should also be packed between the hypertrophied tissue and the nail. A bistoury is the best instrument to use in thus packing, the thin blade getting under the nail without giving much pain.

This process is repeated each day until the nail is gradually lifted to its normal position above the tissue, which, in the meantime, has regained a healthy condition. The toe should be neatly bandaged in one or two layers of thin gauze.

This method is less painful than splitting the nail

and removing it, and the result obtained is more satisfactory and more permanent. The patient should be urged to wear well fitting and comfortable shoes as an important aid to the permanency of the cure. I have used this method of treatment in my practice for the past six years, and in no case has it been necessary to remove a nail where it was patiently and persistently followed.

Dr. J. G. Dodge, of Hodges, Texas, writes:

In the treatment of ingrowing toe nail we have first to consider the cause and its removal as far as possible, and if the reader finds anything in this paper on the ætiology of ingrowing toe nail of a novel nature, let him consider, think, and observe before he condemns it as erroneous as well as novel.

First, we may consider the fact that those who do not wear shoes have no ingrowing toe nails, which brings us to consider that pressure of the shoe upon the toe and toe nail is the primary cause or factor in its production; and by this pressure and the effects produced by it must ingrowing toe nail be explained.

Now we may consider, if you please, the toe nail divided anteroposteriorly into three or four approximately equal portions or strips. Those nails having a conformation known as the broad "flat" nail we may divide into four parts and designate them as lateral fourths, and right and left middle fourths or probably, and indeed more conveniently, may divide the nail into a middle half and two lateral fourths. The toe nail conforming to a type that might be called the narrow, long, sharply curved nail, we may divide into thirds and designate as middle third and lateral thirds.

And now we have to consider the changes which pressure and its auxiliaries produce in the relations of these thirds, or half and fourths, to each other, and to the toe itself.

The pressure exerted by the shoe on the toe and toe nail is both a lateral and a vertical pressure—the lateral pressure is produced by the shoe on one side and the adjacent toe on the other side; and the top or vertical pressure is produced by the upper of the shoe on top and the sole beneath. (Of course if we should consider a case of one of the middle toes we should say the lateral pressure was caused by the adjacent toe on either side; but as we might say it is universally the nail of the great toe that is ingrowing, we may consider that one alone.)

Now the shoe is put on in the morning and after a greater or less length of time the nail becomes moist, soft, and pliable through the perspiration of the toe and the foot generally, and the moisture-laden air resulting therefrom. This is most likely to occur in warm weather, and it is especially in

summer that ingrowing toe nail manifests itself, or increases in severity.

And now the lateral and top pressures cooperating, results in an increased curvature or a folding, as it were, of the toe nail at (or approximating) the line of union of the lateral third or fourth with the middle third or half, and the tendency to form along that line (and most especially anteriorly where the pressure is most effective in altering the normal even curvature of the nail) a corner or ridge, so to speak.

The toe itself has its normal structural relations altered also by the pressure.

Now the shoe and stocking are removed and the toe nail in this altered shape at once begins to lose its moisture, and in a few minutes is dry, hard, horny, and unyielding. True, it has partially regained its normal shape or condition, but not wholly so before becoming quite dry, and the tendency that the toe itself continues for a longer time to resume its normal structural relations or shape is opposed by the nail in this altered unnatural form and hard, unyielding condition, and this is especially felt at the free portion of the lateral edge, and irritation more or less is produced, even in the first twenty-four hours. At first this is not noticed; but days, weeks and months pass, the causes daily at work, and the effects increasing—the curvature or folding along the line spoken of above increasing, and each daily increase is being strengthened by a condition that is obtaining underneath the nail, for here, underlying this line of increased curvature or folding, the papillæ of the matrix and the layers of epidermic (nail producing) cells are crowded together and result along this line in a hypertrophy and thickening of the nail, and this results in a strengthening of the nail at this place, which more and more prevents its return to normal curvature.

The increase of curvature or folding along this line may progress until there is a very prominent ridge or corner, as it were, and until the lateral third or fourth joins the middle third or half, approximately, and sometimes indeed quite at, a right angle. The pressure on top is now forcing the lateral free edge of the nail almost straight down, if indeed it is not perfectly straight down, into the lateral fold, and sooner or later this pressure is followed by irritation, inflammation, and a lesion of greater or less extent and severity results.

The principal factor in this condition of ingrowing toe nail is the altered curvature of the nail along this line and the attendant hypertrophy or thickening (or we might rather say it is the changed direction given the free lateral edge of the nail in consequence of this altered condition), which brings us to the consideration of the most important feature in the early treatment, viz., to remove this thickened

condition and thereby allow the increased curvature to pass away. This is done by paring or scraping the nail along this line and also for a short distance to either side of it, down to as near the matrix as possible without producing pain to the patient—or to use an expression of the laity, “almost down to the quick.” This should be done thoroughly from the beginning of the exposed portion of the nail to its anterior free edge.

Next trim away all of the lateral edge of the nail that is free, and allow no footwear to be worn that will produce the least amount of pressure on either the toe or nail.

Should there have been produced an ulcer or granulations by the long-continued and severe pressure of the imbedding lateral free edge of the nail, the foregoing must be supplemented by a thorough surgical cleansing of the lesion.

This may be best accomplished by means of an ordinary hypodermic syringe which has had the sharp point of the needle removed. By the use of this the blunt small end of the needle will carry a 1 to 40 solution of carbolic acid (or other antiseptic) to remote portions of the lesion not accessible by other means—especially if considerable force is used in expelling the contents of the syringe.

The placing of a small bit of cotton under the lateral free edge of the nail, which is employed by many surgeons, is to be condemned, as it tends to increase the pressure that the lateral free edge is exerting on the subjacent tissues—thereby increasing irritation, and causing pain and discomfort to the patient. Trim away this free edge as much as possible and let it alone.

Here, as elsewhere, lesions are repaired quickly or slowly according to the general tone of the patient's health. If your patient is physiologically below par, attend to the betterment of his general condition.

In those aggravated forms where the health has been feeble and the inflammation has spread extensively to the matrix, constituting the condition known as onychia maligna, removal of the nail is usually required (under anæsthesia), followed by destruction of the matrix by caustics. Such cases also call imperatively for alteratives, constructives, and hæmotherapy.

Dr. M. Manley Waterhouse, contract surgeon, U. S. Army, writes:

In considering the treatment of ingrowing toe nail it is necessary to consider its ætiology and pathology. It is the best guide to the treatment, both curative and preventive. Some of the literature on the subject states that some cases are hereditary or have an hereditary tendency. Now the nail grows straight out from the matrix, and the

term ingrowing toe nail is misleading; there is no such thing as ingrowing toe nail. The sole cause of the mischief is due to the nail being cut too short at the corner. If we have a nail so cut, together with a pressure acting in such a way as to cause an overlapping of the skin, the train of symptoms called ingrowing toe nail will result.

This guides us in the treatment by pointing out the conditions to be overcome; that is, to relieve the symptoms until the nail has time to grow out and be properly trimmed. The treatment is preventive and curative. This condition can certainly be prevented by trimming the nails so the corners will be no shorter than in the middle, or, better still, cutting the free edge of the nail concave. This will leave the corners projecting slightly beyond the skin and prevent overlapping.

Curative Treatment.—When suppuration has taken place the toe must be thoroughly cleansed, preferably with green soap, followed by thorough irrigation with 1-2,000 bichloride of mercury, hydrogen dioxide, or any antiseptic. Our next aim is to prevent direct contact between nail and skin. We can do this by carefully working a small piece of cotton between the corner of the nail and skin, with the aid of the flat end of a probe. The overlapping skin can often be drawn away by attaching adhesive plaster to it and drawing the other end down over the plantar surface of the toe. Both can and should be used at the same time. In suppurating cases a wet carbolic (1-40) dressing should also be applied, as the moisture and anæsthetic effect of the acid render the parts less sensitive. If no pus is present, and the part is not too sensitive, the patient can usually be made comfortable by inserting cotton and the use of adhesive plaster, and be able to be about.

The usual history of a case is that as soon as pain was experienced the patient trimmed the nail still more; this gave temporary relief by changing the point of contact to a less sensitive one, but was prolonging and aggravating the condition. The very opposite must be done, the nail should be allowed to grow out to a point where the skin cannot overlap it.

The practice of removing the nail for this condition should be condemned as wholly unnecessary and often unsuccessful. An operation for removal means the taking of a general anæsthetic and cauterizing of the matrix; the latter is too often not thoroughly done and speedily the nail grows out to give rise to the same condition which existed before. Splitting and scraping the nail are inefficient and unnecessary.

To sum up, our aim should be to make the patient as comfortable as we can by any means we can devise until the nail has grown out, and then trim properly.

Therapeutical Notes.

Methylene Blue in Tuberculous Ulcerative Enteritis.—M. L. Rénon (*Presse médicale*, May 30th) states that in 80 per cent. of this class of cases, he has favorable results with the following:

℞ Methylene blue.....15 centigrammes (2¼ grains);
Lactose.....60 centigrammes (9 grains),

M.

One such powder is given daily. The lactose divides the methylene blue and renders it more acceptable to the stomach. Rénon cannot explain the extraordinary controlling action of the blue for, although the diarrhoea decreases at once, the post mortem appearance of the bowel is not materially altered.

For Baldness.—In *Progrès médical* for May 16th, Lyon and Loiseau advise the following, one a lotion, the other an ointment:

℞ Eau de cologne.....200 grammes (6¾ ounces);
Glycerine.....25 grammes (6¼ drachms);
Tincture of cantharides..10 grammes (150 minims);
Acetic acid.....1 to 2 grammes (15 to 30 minims).
Pilocarpine hydrochloride. ½ gramme (7½ grains);

M. For a lotion.

℞ Quinine sulphate.....1 gramme (15 grains);
Cacao butter } of each 15 grammes (3¾ drachms);
Castor oil... }
Essence of violets.....q. s.

M. For an ointment.

Trachoma.—*Médecine orientale* for May 25th gives Schiele's treatment, as follows: He begins with instillations of iodic acid, 1 to 100. In later stages, the palpebral conjunctiva is swabbed with this solution:

℞ Potassium iodide.....6 grammes (90 grains);
Iodic acid.....5 grammes (75 grains);
Water.....100 grammes (3½ ounces).

M.

The granulations are touched with a compressed stick of the iodic acid. Massage of the affected membrane is also practised, after it has been powdered with the following:

℞ Iodic acid.....1 gramme (15 grains);
Sodium iodate.....5 grammes (75 grains);
Boric acid.....100 grammes (3½ ounces).

M.

Internally, Schiele gives potassium iodide in the usual doses, but where there are phlyctenulæ and infiltrations, he prefers hypodermic injections of a solution of sodium iodate, 10 to 100. The sclero-corneal complications quickly disappear.

A Sedative.—*Presse médicale* for June 3rd gives the following as an excellent sedative:

℞ Extract of cannabis indica } of each 0.10 grammes
Extract of hyoscyamus... } (1½ grains);
Potassium bromide } of each 10 grammes (150 grains);
Chloral hydrate... }
Distilled water...to make 200 grammes (6¾ ounces),

M. F. Mist. A dessertspoonful at bedtime.

An Aperient for Pregnant Women.—*Nouveaux Remèdes* for May 24th ascribes the following to Lutaud:

℞ Castor oil.....30 grammes (1 ounce);
Syrup of rhubarb.....20 grammes (5 drachms);
Alcohol.....15 grammes (½ an ounce);
Essence of peppermint.....2 drops.

M. To be taken at one dose.

Chlorosis Complicated with Phlebitis.—Carrière of Lille (*Rèvue française de médecine et de chirurgie*, June 8th), to prevent embolism, puts the child to bed and immobilizes the affected limb after wrapping it in cotton, for thirty days. Along the course of the inflamed vein he applies:

℞ Oil of hyoscyamus..
Chloroform.....ãã 10 grammes (2½ drachms).
Rousseau's laudanum.

M.

For the chlorosis he prescribes a rich diet and his original prescription:

℞ Ferrous oxybate.....15 centigrammes (2¼ grains);
Magnesium carbonate. } 25 centigrammes (4 grains);
Powdered gentian... }
Powdered rhubarb.....20 centigrammes (3 grains).

M. For one capsule; give twice daily before eating.

To assist the absorption of the iron, he gives:

℞ Acid hydrochloric... } 3 grammes (45 grains);
official... }
Distilled water.....300 grammes (9¼ ounces).

M. Tablespoonful after each meal.

For Whooping Cough.—G. Macridès (*Journal de médecine interne* for June 1st, quoting *Rèvue médico-pharmaceutique de Constantinople*) has successfully used the following formula in giving bromoform in whooping cough:

℞ Bromoform.....50 drops;
Sodium benzoate... }
Powdered gum arabic } ãã.....q. s.;
Syrup of belladonna...25 grammes (6¼ drachms);
Distilled water.....100 grammes (3½ ounces).

M. Teaspoonful, 3 or 4 times daily for a child over 6 years of age.

Potassium Iodide Hypodermically in Syphilitic Gumma.—Labadie, La Grave and Rollin (*Journal de médecine interne*, June 1st) have cured a syphilitic gumma without internal medication by the local hypodermic injection of potassium iodide, 2 cubic centimetres daily. The gumma disappeared after the seventh injection. The treatment is extremely painful.

To Administer Quinine to Children.—A French pharmacist states that a good way to administer quinine to children is to mix 1 gramme (15 grains) of the sulphate in a mortar with 8 grammes (2 drachms) of olive oil. Twenty drops of this mixture will contain 5 centigrammes (¾ grain) of quinine. The mixture is poured into a tablespoonful of sugared milk, and will be easily swallowed.

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NEW YORK, SATURDAY, JUNE 27, 1903.

THE LATE DR. ISAAC NEWTON LOVE.

The death of a unique character in the medical profession, such as Dr. Love was recognized to be by all who knew him, calls for more than the formality of an obituary. In our last issue we could do no more than briefly chronicle the news, so late was it received. We doubt if even now the profession realizes that one of its great leaders has passed away, so difficult is it to conceive of the versatile and animated Love as swept from the face of the earth.

By far the greater portion of Dr. Love's career was enacted in St. Louis, where he had been virtually reared by the late Dr. John T. Hodgen. Some four years ago he essayed the hazardous experiment of moving the scene of his activity to New York, in which he was successful beyond the most hopeful expectation. But it would be wrong to think of him either as Love of St. Louis, or as Love of New York; he was Love of the whole United States, for never did there live a member of the American medical profession more widely known or more generally admired.

Dr. Love's personality was fascinating. Alike with his professional brethren and with men of all walks of life, he exerted a magnetism rarely approached and never surpassed. The greater number of the men who had come in contact with him may have supposed that this influence was exerted mainly if not wholly in society debates or in after dinner speeches; but such a supposition would be

wholly incorrect, for in personal encounters he was a power to carry point upon point. Moreover, at the bedside, where, after all, he chiefly shone, he was always the dominant spirit.

Dr. Love owned and edited the *Medical Mirror* be ignored. The *Mirror* brought its editor into late years. To one who knew Love there has constantly beamed in its pages an earnestness not to be ignored. The *Mirror* brought its editor into close and genial touch with a host of readers; by its instrumentality those who had not had the good fortune to know Dr. Love personally were made to discern his astuteness and his greatness of heart.

Dr. Love had his foibles, as which of us has not? But of Abou Ben Adhem it has not been more truly written "that he loved his fellow men." The world of medicine is the better for his having lived in it. Let us hope that a new Love will arise in our profession.

THE SUBSTITUTES FOR DIGITALIS.

Convenient as it is to use this term, it is important to bear in mind that probably not one of the so-called substitutes for digitalis can be looked upon as in every respect capable of taking the place of that drug. Each of the various cardiac roborants seems to have peculiar qualities of its own, and when we use a reputed substitute for digitalis we are really resorting to a line of medication different from what we could carry out with that remedy. This is properly insisted upon in an article published in the *Journal des praticiens* for May 23rd, by Thomas, of Geneva, although, curiously enough, he seems to have overlooked adonidin, which probably comes nearest to being a real substitute for digitalis.

We presume that few observers will dissent from M. Thomas's statement that digitalis is *facile princeps* among the drugs employed to sustain the strength and regularity of the heart's action, exerting its effects upon the heart, the vessels, and the pneumogastric nerve. Properly timed and prescribed on well defined indications, he remarks, it does its work perfectly; if in any instance it does not, he regards the case as not very hopeful. He admits, however, that the so-called substitutes are useful, since digitalis acts rather slowly, accumu-

lates in the organism, and does not readily lend itself to subcutaneous use.

Caffeine is the first of the substitutes considered by M. Thomas. The best account of the therapeutic action of this alkaloid, he thinks, has been given by Bock, of Copenhagen. That author experimented upon the isolated heart of mammals, and showed that caffeine diminished the muscular elasticity of the organ, causing it to become more rigid and to relax with less facility. In consequence, the volume of the pulse, that is to say, the amount of blood leaving the heart at each contraction, is diminished; in spite of heightened frequency of the pulsations as a result of excitation of the accelerator ganglia, the blood pressure tends to become lowered. In this respect caffeine exerts an action the direct opposite of that of strophanthine. Aside from its diuretic action, caffeine is useful in such sudden cardiac insufficiency as is shown in the course of infectious diseases; a salutary vasoconstriction is excited, and the acceleration of the heart beats makes amends for those incomplete contractions which account for the slow and intermittent pulse. When such an infectious disease as influenza occurs in a person with chronic heart disease, caffeine is urgently indicated, but the condition of the cardiac muscle must not be neglected; if with caffeine we excite a more or less senile or degenerated heart, and in addition produce intense vasoconstriction, we are running the risk of accidents. Moreover, M. Thomas questions the utility of large doses.

The author regards sparteine as of incontestable value in the cardiac weakness and irregularity of typhoid fever. Regulating the action of the heart and slowing it while augmenting the energy of its contractions, it gives the organ the strength indispensable for the struggle. As it does not excite the central nervous system and acts less intensely than caffeine on the vasomotors, it may safely be given to excitable persons and to those whose cardiac muscular tissue has undergone anatomical change. It is of value as a diuretic also, though less energetic than theobromine. Strophanthus is variable in its action, and this is probably due to the lack of a preparation that is always the same; sudden syncope is not rare under its use, and it irritates the kidneys. The remainder of M. Thomas's article

deals with such of the lesser cardiac roborants as camphor, hydrastis, and ergotine.

A DISTINCTIVE BADGE FOR MEDICAL MEN.

A correspondent in the *Lancet* for May 23rd suggests the wearing by medical men of some distinctive badge which will enable them to be easily recognized in a crowd or in public places in cases of accident. He relates, in support of his suggestion, a case where a surgeon of eminence, witnessing an accident, went to the assistance of the injured man, but, "on seeing a well dressed gentleman in a frock coat and silk hat rush up and take charge of the injured man," retired without making himself known, leaving the case, as he supposed, in the hands of a brother medico. In the event, it turned out that the "well dressed gentleman" was not a medical man at all, but a commercial traveler, who had been actuated merely by instincts of humanity, and who afterwards confessed that he had suffered great uneasiness as to the possible results of his amateur treatment. The correspondent submits to the *Lancet* some designs, "drawn on the heraldic model, for badges to be worn presumably on the watch chain." The devices are described by that journal as "ingenious," for they are said to give a clue as to which of the forty or fifty varieties of medical diploma open to the British physician, the wearer may hold. We are afraid that American physicians in general would find themselves as much at sea in deciphering the symbols of all these various diplomas as they are in grasping the distinctions in the diplomas themselves. The correspondent's idea is not a bad one; and we ourselves have advocated something of the sort; but, if adopted at all, would it not be better to have an international badge, on the order of the Geneva cross, something that would be recognizable in all countries alike? However particular we may be in the choice of a physician in moments "of election," we are not likely, under the circumstances in which such a distinguishing mark would be apt to be a boon to humanity, to stop to consider the nationality, much less the varying schools of that nationality or the various grades of those schools, to which the profferer of "emergency" aid belongs. On the whole, though, the suggestion seems to us to be worthy of consideration.

THE INDEX FOR THE NEW YORK MEDICAL JOURNAL AND PHILADELPHIA MEDICAL JOURNAL.

It has been found necessary, owing to the stress entailed by the consolidation of the *New York Medical Journal* and the *Philadelphia Medical Journal*, to delay the publication of the index for the consolidated journal until the July 4th issue. As it will be entirely separate from the *Journal* for July 4th, it will be available, as usual, for binding with this volume.

The separate index to the uncompleted *Philadelphia Medical Journal*, vol. xi, will not be published until later, as stated in our last issue. Those desiring copies thereof are requested to notify us at once, in order that the publishers may know how many copies will be required to meet the demand.

PAROTIDITIS WITH METASTASIS TO THE OVARIES.

While the so called metastasis of parotiditis to the testicle of the male is by no means very uncommon, an analogous transference in the female is decidedly rare, so far as published cases go. Dr. George McNaughton reports such a case in the *Brooklyn Medical Journal* for March. After a full review of the recorded cases, he concludes that it is probably rather to the comparative inaccessibility of the internal genitalia in the female, than to any actual rarity of the condition that the absence of such recognition is due. It seems to us likely that there is much truth in this contention. It must be remembered that mumps occurs chiefly in young people, and more frequently in males than females, and that the natural tendency of young girls is to conceal any "internal derangements" from which they may suffer. Probably a more systematic search by family physicians and others under whose care such cases are likely to come would reveal a much greater frequency of such metastases than has hitherto been recognized.

AGAIN THE DOCTOR IN GENERAL LITERATURE.

We have often expressed our satisfaction at the essays of doctors in general literature. The latest example that has come to our notice is an excellent story by Dr. William W. Pennell, of Fredericktown, Ohio.¹ It is that of a well equipped young physician, who, having settled in an Ohio town of small size, meets with almost unheard of difficulties brought about by the machinations of certain ignorant old practitioners and their lay accomplices. He finally triumphs over them, and scien-

tific medicine dominates quackery in the village. The story, which is remarkably well told, is, of course, particularly interesting to physicians, but it can hardly fail to interest well informed people in general.

ELBOW ROOM NEEDED FOR SURGERY.

Annette Burke Richmond, in an article on the new St. Elizabeth's Hospital, Shanghai, published in the June number of the *Spirit of Missions*, gives interesting expression to the desire for elbow room in surgery when she says: "We think of the old 'women's wards,' with dark passages and unexpected steps up and down, with a few inconvenient foreign rooms here and a few rough Chinese rooms there, with a drug room only equalled for lack of size by the office behind it, with an operating room of which it was once said that when doctor, assistant, patient, and instruments were all there, the windows had to be opened to give room for the doctor's elbows."

GELATIN INTERNALLY IN HÆMOPHILIA.

If the result was not a mere coincidence in a case reported by Hesse (*Therapie der Gegenward*, September, 1902; *Zentralblatt für innere Medizin*, April 25th), it must be admitted that the prolonged internal administration of gelatin holds out a prospect of cure in this disease. The patient, a child eight years old, was an hereditary "bleeder." He had often had profuse hæmorrhages, and he could not walk for more than half or three quarters of an hour without effusion of blood taking place into the joints. Various forms of treatment had been tried without benefit, when he was ordered to take daily six ounces of a 10 per cent. solution of gelatin. In a year there were signs of improvement, and the final result was a virtually perfect cure. The gelatin solution was flavored with lemon juice or the juice of some other fruit. Probably almost any one of the household jellies would have done as well.

FREYER'S ENUCLEATION OF THE PROSTATE.

So far as we are aware, no account has hitherto been published of Freyer's suprapubic enucleation of the prostate as having been performed in America. On June 12th Dr. R. Stansbury Sutton, of Pittsburgh, enucleated the entire gland through a suprapubic incision, using, after the incision, the fingers only. The gland was as large as a turkey's egg. The patient was in the care of Dr. Joseph Dickson and Dr. N. Shillito. Dr. Dickson opened the bladder and supported the prostate from the rectal side during the operation. The patient was seventy-four years old.

¹ *The Buckeye Doctor. A Tale for Physicians and for Physicians' Patients.* By William W. Pennell, M. D. New York: the Grafton Press

News Items.

Society Meetings for the Coming Week:

TUESDAY, June 30th.—Rome, N. Y., Medical Society.

WEDNESDAY, July 1st.—New York Academy of Medicine (Section in Public Health); Medical Society of the County of Richmond, N. Y. (New Brighton); Harlem Medical Association of the City of New York; New York Genitourinary Society; Bridgeport, Conn., Medical Association.

THURSDAY, July 2d.—Brooklyn Surgical Society; Society of Physicians of the Village of Canandaigua, N. Y.; Atlanta Society of Medicine.

FRIDAY, July 3d.—Clinical Society of the New York Post-graduate Medical School and Hospital; Manhattan Clinical Society.

NEW YORK, CITY AND STATE.

Change of Address.—Dr. Jerome Morley Lynch to 42 West Fiftieth Street, for the summer.

Erratum.—In Dr. Kilmer's article on the Treatment of Whooping Cough, in our issue for June 20th, the descriptions of the cuts were unfortunately transposed. The second illustration should read "Elastic abdominal band," and the third "Elastic abdominal and chest bands."

Saint Elizabeth's Hospital Condemned.—Among the buildings to be razed to allow the erection of the new tunnel station of the Pennsylvania Railroad is Saint Elizabeth's Hospital, on Thirty-first Street.

Gratuitous Antitoxine Treatment.—Justice Truax in the Supreme Court, has decided that no charge may be made by physicians for the injection of antitoxine when it has been obtained from the city free of cost.

A Bequest to the Brooklyn Eastern District Hospital.—By the will of George A. Brown, a builder, the sum of \$1,000, through the death of a legatee, reverts to the Brooklyn Eastern District Hospital and Dispensary.

Dr. Lorenz's Departure.—In spite of reports to the contrary, we are assured that Professor Lorenz does not sail for Europe till July 7th. He is at present staying at the Murray Hill Hotel, New York.

Apnoea in One of Dr. Lorenz's Cases.—While operating in the City Hospital, Rochester, on a child eight years of age, Dr. Lorenz was obliged to resort to artificial respiration. The child had a congenitally weak heart. Before continuing the operation, Dr. Lorenz stated he had lost two cases in one thousand from failure of respiration.

Trachoma in Buffalo.—According to a statement of an official of the United States Marine Hospital, more than one hundred cases of "pink-eye" or trachoma, have been found among the employees of the Lackawanna Steel and Iron Company, in Buffalo, N. Y. It is supposed that the disease was brought here by immigrants coming by way of Canada.

A New Hospital on Randall's Island.—A two-story brick and marble hospital will be erected in the central portion of Randall's Island, opposite One Hundred and Twenty-first Street, at a cost of \$30,000. The city will be the owner.

Nurses Graduated.—On June 16th, the following men and women received diplomas as trained nurses from the Buffalo State Hospital: Miss E. Bertha Fischer, Miss Harriette Green, Miss Laura Klute, Miss Emma Williams, Miss Marie McEachren, Miss Christeen Middleton, Miss A. Mae Little, Miss Evelyn M. Haines, Miss M. Margaret Ryan, Mrs. Edith G. Densitt, Mrs. Nora M. Potter, George H. Toulson and Charles P. Harding.

Funeral of Dr. Love.—The funeral services for Dr. Isaac Newton Love, who died on the steamship *Aurania*, were held on Monday afternoon, June 22nd, at St. Paul's Methodist Episcopal Church, at Eighty-sixth Street and West End Avenue. Many prominent physicians and his fellow members of clubs were present. The pall bearers were Dr. Edward Wallace Lee, Dr. John H. Girdner, Charles Marchand, Paul Hafnee, Hector H. Hume, B. T. Whitmore, and Dr. Walter Wyman, surgeon-general of the Marine Service at Washington, D. C. Floral offerings were sent by the Lotos and Colonial Clubs, the American Medical Association, and the American Medical Association of Editors. The body, temporarily placed in a vault in Woodlawn Cemetery, will be removed to St. Louis.

Manhattan Maternity Hospital.—The new Maternity Hospital to be built in East Sixtieth Street, near First Avenue, will, it is expected, be ready for occupancy about Thanksgiving Day. It will be an educational institution as well as a thoroughly equipped hospital for critical cases of surgery and obstetrics. The scope of the work as planned by the board of governors and Dr. Russell Bellamy will comprise a training school for nurses, students, and physicians who wish to study the varied and complicated cases to be found in tenement house districts. The hospital is the gift of a patient of Dr. Bellamy, whose one stipulation was that his or her name should not be revealed. The board of governors are: President, Moses Taylor; Colonel Daniel S. Lamont, H. S. Thompson, Cornelius Vanderbilt, Henry Taylor, William Sloane, Frank L. Polk, and Percy R. Pyne.

College of Physicians and Surgeons, Columbia University.—Dean McLane, assisted by Professors Cragin, Huntington and Starr, has been re-arranging the medical curriculum. Hereafter all matriculants must have completed a three years' scientific course in some college or pass the Columbia entrance examinations. A new department of therapeutics and pharmacology is to be established under Professor Christian A. Herter. The resignations of Dean McLane and Professors Tuttle, Peabody, and Weir have been announced, but Professor Weir will continue to lecture on clinical surgery. Dr. Cragin has been appointed professor of gynecology, Dr. Holt, of diseases of children, and Dr. James, of medicine. President Butler urges

strongly the establishment of a hospital that will be under the control of the faculty, that the students may not have to depend solely on the various city hospitals for clinical instruction.

New York State Medical Association.—The fourth district branch of the association met in Buffalo on June 16th, about one hundred physicians being present at the opening exercises. The counties represented by the different delegates included Allegany, Cattaraugus, Chautauqua, Erie, Genesee, Monroe, Orleans, Steuben, Wayne, and Wyoming. The following officers were elected: President, J. W. Morris, of Jamestown; vice-president, Bernard Cohen, of Buffalo; secretary, William Irving Thornton, of Buffalo; treasurer, H. A. Eastman, of Jamestown. With the exception of Dr. Eastman, all the officers had served on the previous board. The delegates to the State convention to be held in New York city in October also elected were Dr. A. A. Hubbell, of this city, and Dr. George L. Preston, of Canisteo. The first paper was read by Dr. Samuel M. Brickner, of New York city, the subject being *The Obstetric Significance of Retroversion and Retroflexion of the Uterus*. A strong argument was made by Dr. Brickner against the retention of the dorsal decubitus after childbirth, especially for the length of time insisted on by many physicians. Dr. Brickner's argument was endorsed by Dr. Frederick, of Buffalo, who said he permitted his patient to assume the most comfortable position from the outset. The paper was a surprise to many physicians present, as it overturned long established custom. Other papers were read by Dr. Phelps, of Buffalo, on *Intestinal Obstruction*; Dr. Allen A. Jones, of Buffalo, on *Spurious Gastric Symptoms*; Dr. Arthur B. Duel, of New York, on *Chronic Suppurative Otitis*; Dr. Parker Syme, of New York, on *Prostatectomy*; Dr. Charles B. Phillips, of Hornellsville, on *Pseudo-Myelitis*; Dr. William A. Macpherson, of Leroy, on *Smallpox*, and Dr. F. Park Lewis, of Buffalo, on *Ocular Incoordination and Cerebral Reflexes*. These papers were all followed by discussions.

State Commission in Lunacy, New York.—At the recent meeting of the State Commission in Lunacy, the following subjects were discussed: Recent progress in matters pertaining to the care of the insane in the State of New York. Some of the measures of improvement in the case of the insane of the State of New York that have been carried through within the past few months are as follows: 1. The Pathological Institute has been reorganized and more than sixty of the medical men connected with the staffs of the fourteen State hospitals have during the past winter attended the Institute on Ward's Island for the study of psychiatry along clinical, pathological, and psychological lines. The legislative appropriation for the Institute is now \$25,000 annually. 2. The hospitals have been opened to medical internes in the same manner as general hospitals. Last year sixteen clinical assistants entered the service as internes and this year about thirty. 3. The legislature recently passed the Lunacy Commission's bill for the appointment of a medical inspector to

ensure a more thorough inspection of the thirty-nine institutions under its charge, viz., twenty-three private retreats, two criminal asylums, and fourteen State's hospitals for the insane. The inspection has, hitherto, been inadequate. 4. To remedy overcrowding the lunacy commission proposes constructing a new hospital in the territory north of Albany and Troy, on the colony system, similar to the Craig colony for epileptics. The site will be selected and plans made this year, and the colony will, it is estimated, contain from 1,500 to 2,000 patients within the next three years. 5. Three tuberculosis hospitals, each with a hundred beds, will be constructed this summer at a cost of \$90,000, at Middletown, Utica, and Binghamton, on the grounds of the State hospitals in those cities. The plans made by Dr. Peterson and the State architect embody the main features of such hospitals as described in the King Edward Prize Essays. In the meantime tent-life for the tuberculous insane has been tried at the Manhattan State Hospital, East, under Dr. MacDonald for the past two years, and for a shorter period at Binghamton and other hospitals in the State. 6. The country colony for a few of the working classes of the insane, as an offshoot of the Utica State Hospital, has been enlarged. A similar colony has been established at the Willard State Hospital, and two are in existence at the State hospitals at Binghamton and Poughkeepsie. 7. A summer camp has been created this year for from forty to sixty insane patients on the lake shore about fifteen miles from Rochester State Hospital and is now in operation. 8. Two additional nurses' homes will be put up this summer, as they have been found to be a valuable addition to some of the hospitals. One of these will be at King's Park State Hospital, for 500 nurses, and one at the Gowanda State Hospital to accommodate 100 nurses. 9. Residences for superintendents and separate houses for the medical staffs will be built this season at six or seven of the State hospitals, and the space previously occupied by them utilized for patients. 10. A bill providing for emergency commitments, recommended by the lunacy commission, was passed by the legislature at the last session. Copies of this law have been sent to all the examiners in lunacy of the State. It is believed that this will mean great good to the insane and prevent the only too frequent incarceration of urgent cases in jails and station houses. 11. The improvement in the food supply brought about during the past six months, while entailing an additional cost to the State of \$100,000 per year has been of untold benefit to the patients and added greatly to the satisfaction of the medical officials and visiting boards. 12. A strong effort is being made by the lunacy commission to increase the deportation of alien insane, and through their efforts a law has been passed by the Federal Government by which an immigrant becoming insane within three years of landing in the United States may be returned to his own country. 13. The movement for the establishment of reception hospitals for acute curable cases in the larger cities has gained ground. Although the bill to provide for a psychopathic hospital in New York city failed to pass, it is believed that it will pass the legislature next year.

PHILADELPHIA AND PENNSYLVANIA.

Change of Address.—Dr. Justus Sinexon to 114 South Eighteenth Street, Philadelphia.

Operation for Collateral Circulation.—Dr. Edmund Holmes, at the Samaritan Hospital, in a case of aneurysm of the transverse arch of the aorta, ligated the common carotid and the third portion of the subclavian. He was assisted by Dr. Charles O'Reilly. The patient, who is thirty-five years of age, and of rheumatic diathesis, is expected to make a good recovery.

A Campaign against Germs.—Dr. A. C. Abbott, of the Bureau of Health, has determined to send out cards to every household in the city, recommending them to boil all water used for domestic purposes, if they would safeguard against typhoid, with the additional suggestion that all milk vessels, bottles, etc., should be washed in boiling water.

Bryn Mawr Hospital Association Meets.—The annual meeting resulted in the election of the following trustees: A. J. Cassatt; C. A. Griscom; T. Wistar Brown; J. Randal Williams, Dr. George S. Gerhard; James Rawle, Joseph R. Townsend, Jr., Frank W. Paul, Rudolph Ellis, B. Frank Clyde, Frank T. Patterson, T. De Witt Cuyler, Effingham B. Morris, George W. Childs Drexel, and C. Hartman Kuhn.

The Philadelphia County Medical Society.—A stated meeting of the society was held in Philadelphia, on June 24th. The following paper was read by Dr. Charles F. Nassau, Ligation of Subclavian Artery for Aneurysm of Second and Third Portions, with exhibition of patient. The regular meeting of the South Branch was held at Odd Fellows Hall, Philadelphia, on June 26th, Dr. Alfred Stengel presenting a paper on Rheumatism, its Diagnosis, Complications and Treatment.

Philadelphia Smallpox Chart.—Dr. A. C. Abbott, chief of the health bureau, Philadelphia, has prepared a chart to show the smallpox area. It is noticeable that in wards where vaccination has been rigorously practised, there are no cases, while in the twenty-eighth ward, where the inhabitants refuse to submit, the disease is most prevalent. In the twenty-eighth ward, there have been since June 1st, 33 cases; in the twenty-ninth, 5; thirty-second, 9; thirty-eighth, 12; thirty-seventh, 3; thirty-third, 6; nineteenth, 5; twentieth, 4; twenty-second, 3; second, 3; fifteenth, 3; sixteenth, 2; thirty-sixth, 2; thirteenth, seventeenth, tenth, nine, seventh, and first, 1 case each.

The University of Pennsylvania is made the Residuary Legatee by the Will of Dr. Spencer Morris, of Mount Morris, Greene County, Pa.—Dr. Morris was a graduate of the medical department of the University of Pennsylvania of the class of 1871. The interest of the amount received by the University of Pennsylvania is to be given, at the annual commencement, to that medical student

of each year's class who shall pass the best examination for the degree of doctor of medicine, the prize to be known as "The Dr. Spencer Morris Prize." It is estimated that the annual value of this prize will approximate \$400. The trustees of the university expect to make the first award upon commencement day, 1905.

The College of Physicians.—With the end of this month the meetings in the College of Physicians will be suspended until October. During June, July, August, and September the Section in Medicine will have no meetings. The monthly meeting of the College of Physicians will be suspended in July and August. There will be no more meetings of the Section in Otology until October. The Sections in Ophthalmology and Gynæcology will not convene until October. The County Medical Society will resume its meetings in September; the Academy of Surgery in October; the Pathological Society in September; the Neurological Society in October; the Obstetrical Society in September; and the Pædiatric Society in October.

The Late Dr. Thomas G. Morton.—The following minute has been adopted by the faculty of the Philadelphia Polyclinic and College for Graduates in Medicine: The faculty of the Philadelphia Polyclinic and College for Graduates in Medicine desires to place on record its sense of deep loss in the death of Dr. Thomas George Morton, one of the founders of the institution, and throughout the period of its existence successively professor and emeritus professor of orthopædic surgery. Dr. Morton was an original and a progressive surgeon, a bold yet conservative operator, and he possessed and exercised the qualities of the highest type of physician. Refined and gentle in manner, courteous and considerate in bearing, positive and forceful in act, he was esteemed by colleagues, respected by pupils and beloved by patients.

Charity Hospital.—At the annual meeting on June 18th, the following officers and trustees were chosen: President, Isaac S. Sharp; vice-president, Alexander H. Morgan; secretary and treasurer, William L. Thompson; medical director, Dr. Joseph H. Lopez; trustees, Isaac S. Sharp, Alexander H. Morgan, Dr. Joseph H. Lopez, George H. Colket, Francis F. Milne, H. J. Verner, Dr. H. St. C. Ash, George Lee, William L. Supplee, Clarence L. Harper, Antoine Bournonville, Dr. H. Y. Evans, Elihu C. Irvin, Henry C. Terry, William Super, Jr., and William B. Thompson. The institution has never received State aid, and its trustees hope that its widespread benefactions will commend it to the attention of the charitably inclined. Ten thousand two hundred and fifty-nine patients have been treated during the fiscal year, and 9,682 prescriptions dispensed gratuitously.

The Condition of the Schuylkill River.—In our issue for June 20th, we referred to Dr. Abbott's tour of inspection. This tour was finished on the 17th, and disclosed the fact that the greatest source of danger lay at the doors of the city.

The pollutions of the stream beyond Flat Rock dam are said to be, though serious enough in themselves, of minor importance to those arising within a mile of the intake of the Queen Lane pumping station. Dr. Wessels intends to ask for a sufficient number of men to investigate the condition of the section that includes the Manayunk Canal and the Philadelphia bank of the Schuylkill below Flat Rock. One specific instance of pollution was found in a Chinese laundry building, which had a defective closet in the basement from which matter passes directly into the canal. Waste pipes and overhanging water closets were also found discharging over the canal; and pig styes, dump heaps, and other sources of pollution in close proximity.

New Philadelphia Graduates in Medicine.—The following had the degree of Doctor of Medicine conferred upon them by the University of Penna., on June 17th:

James Franklin Allen, Gurdon Spicer Allyn, Louis Maxson Allyn, Walter Haskell Andrus, Will Henry Anthony, George Mason Astley, Benjamin Franklin Baer, Jr., Howard Spaulding Ballard, Theodore C. Baumbauer, Ralph Bernstein, Edwin Emil Bisbort, James Douglas Blackwood, Jr., William Augustus Boyd, Alexander John Carroll, Rafael Santiago Ramon Carulla, David Clark Cather, James Irving Chapin, William Lawrence Clark, Eugene Calixte Cloutier, Charles Percy Colby, Julius Hiram Comroe, Karl C. Corley, Henry Molyneux Cullinan, Lyn Walter Deichler, Charles Jacob Dietrich, Charles McClure Doland, Henry Cuttino Dozier, Charles Warren D. Duval, Henry C. Earnshaw, John Thomas Eckert, Jr., George Martin Edwards, Francis Ashley Faught, Harry Spaulding Fish, John W. Gordon, Herlwyn Ruggles Green, Daniel Chester Groves, John Jay Harington, Thomas George Harris, Fred Abram Hartung, John Greenleaf Webb Havens, William Stager Helman, Frederic N. Henderson, Howard Kennedy Hill, Daniel Edgar Hottenstein, Tasker Howard, Jorge Lara Iraeta, Ralph Ross Jordan, Joseph Jeremiah Kane, Howard Thomas Karsner, John Brooks Kaufman, Charles Douglas Kayser, James Anthony Kearney, David H. Keller, Alexander Ralph Kennedy, Norman Leslie Knipe, Victor John Koch, Oscar Landauer, Mauro R. Fernandez Le Cappellain, Walter Crispin Lippincott, William Humphrey Mackinney, Jere Francis McAvoy, Samuel McClary, 3d, Donald Gilbert McCaskey, Dennis Ralph McElhinney, Harrie Brenneman Martin, Fred Lee Roy Mattern, Ralph Kleckner Mead, James Charles Mevay, John Andrew Murphy, Louis Bernhard Nielsen, Edward Irvine Noble, Harry Zebulon O'Brien, Benjamin Stuart Paschall, Sumner Chadbourne Pattee, Alexander Hamilton Peacock, Ralph Pemberton, Edward Roberts Plank, Francis Davenport Pringle, Howard Alden Reed, Albert Whipple Rew, William Dickie Richmond, Joseph England Roberts, Jr., Napoleon Bertrand Ross, Frank Garfield Runyeon, John Semple Sharpe, Frederic C. Sharpless, Andrew J. Sherwood, Penn Gaskell Skillern, Jr., William Daniel Snicely, Jacob Daniel Snyder, Edwin McDonald Stanton, Charles Christian Stauffer, George William Stimson, Charles Irvin Stiteler, Elwood Palmer Spencer, Merrill Alpheus Swiney, Henry Russell Tarbox, Horace Furness Taylor, Benjamin Abraham Thomas, Wellington Andrew Thompson, Linton Turner, Joseph Smith Van Dyke, Jr., William Berry Whetstone, William Whitaker, William B. Wilcox, Herbert Heisler Wilson, Arthur Roy Woods, Fred James Wort, Jr., George Austin Wyeth.

CHICAGO AND ILLINOIS.

The Faculty of the College of Physicians and Surgeons of Chicago.—Dr. W. L. Ballenger has been elected to the chair of otology, rhinology and laryngology, to fill the vacancy made by the resignation of Professor M. R. Brown.

Medical Students as Waiters.—The waiters' strike in Chicago made it necessary for the alumni of the Northwestern University Medical School to conduct its own annual banquet at the college building, instead of holding it in the Auditorium as in former years. A hundred sophomores volunteered their services as waiters.

The Ozone Treatment of Water.—The Chicago health department suggests a trial of the ozone system in use in Germany for purifying the water. It is said that the system has passed the experimental stage and should be tried here. The germs of typhoid fever, Asiatic cholera and dysentery are said to be unfailingly killed by ozone.

The Chicago Health Department and Fourth of July Tetanus.—The Chicago health department's bulletin again cautions the public on the care of "Fourth of July" wounds. It suggests a thorough surgical treatment of blank cartridge wounds, supplemented by prophylactic injection of tetanus antitoxine when possible, and that all wounds be kept open until thorough medical treatment has been secured.

The Chicago Medical Society.—The annual meeting of the society took place in Chicago, on June 17th. For the first time in its history the society elected two women physicians as members of the board of councilors. Dr. Frances Dickinson and Dr. Rachel Hickey Carr were elected councilors for one year in addition to Dr. W. L. Ballenger, Dr. William Harsha, Dr. N. S. Davis, Jr., Dr. Weller Van Hook, Dr. A. E. Halstead, Dr. C. F. Bacon, Dr. W. A. Evans, Dr. Frank Billings, Dr. A. R. Edwards, and Dr. Adolph Gehrmann.

Rush Medical College Honors.—Dr. Phillip Arthur Reppert, of Chicago, was awarded the Benjamin Rush medal for the highest scholarship during the last four years at the Rush Medical College graduation exercises, in Chicago, on June 17th. He was selected for the honor from a class of 227. In 1901, Dr. Reppert was awarded the Freer medal, it being the first time in the history of the institution that one student has won both medals. On entering the Rush College five years ago at the age of thirty-eight, the dean feared Dr. Reppert would fall behind in the classes, but the event proved the contrary.

A Modified and Pasteurized Milk Plant for Chicago.—The Pure Milk Commission in Chicago, comprising the names of some of the most prominent physicians of Chicago and Illinois, as well as those of women philanthropists, among others Miss Jane Addams, of Hull House, after a series of investigations have formulated plans

for the establishment of Pasteurized and modified milk stations throughout the city. The Pasteurizing apparatus is the gift of Nathan Straus, of New York, who has established a similar plant in that city. The milk will be furnished to mothers at the cost of production, in feeding bottles of various proportions, each bottle being furnished with a nipple, both bottles and nipples being thoroughly sterilized on being returned to the station before being refilled. It is hoped by this means to reduce the enormous rate of infant mortality that prevails in summer in Chicago, as in all large cities.

A Chicago Surgeon Dies of Blood Poisoning.—Owing to an imperceptible defect in a rubber glove used during an operation, on May 14th, and a slight abrasion due to a hangnail on the finger, Dr. Nelson H. Henderson contracted blood poisoning, in consequence of an operation that he performed for virulent septicæmia, on a hospital patient from Whiting, Ind. The patient died within twenty-four hours, and three days later a soreness manifested itself on Dr. Henderson's finger, and on June 24th he died from blood poisoning.

The Chicago Health Department and the Milk Supply.—The Chicago health department in its weekly report contains points for which the department has been contending for eight years. The most essential amendment provides that pouring cans for skimmed milk shall be painted bright red. The color of the can thus will give due notice to the purchaser and greatly aid the work of inspection. Other amendments require the sterilization of all vessels and other articles used in handling milk or cream; forbid the storage of milk or cream in the farmer's delivery cans, hotels, restaurants and bakeries, and make more elastic the character of the punishment for violations of the ordinance. The department calls attention to three things that should be considered by purchasers: 1. All vessels, pitchers, bowls and bottles should be scalded before milk is put into them. 2. Never mix new and old milk or cream together. 3. If milk be intended for children, pasteurize enough for the last part of the day by putting it into a freshly scalded bottle, stoppered with a wad of clean cotton-wool or covered with two or three thicknesses of cheesecloth.

Illinois State Board of Health.—Springfield, Ill., June 24.—Under the provisions of a law enacted by the last General Assembly, which will be in force on and after July 1st next, physicians and midwives are required to report births to the county clerks, except in the cities of Chicago and Peoria, in which reports will be made to the commissioner of health. A fee of twenty-five cents will be paid for each birth reported.

The State burial permit law of 1901 has been repealed, to take effect the first of next month. Under the new law, physicians, midwives, and coroners are required to report deaths direct to the State board of health, except in cities which have burial permit ordinances. In these the local authorities are required to send each month to the State board of health all certificates of death presented to them. A fee of twenty-five cents will be paid to physicians and midwives for each report of death

made. It is the duty of the State board of health to forward all certificates of deaths to the county clerks for final record.

Eighty seven thousand, two hundred and thirty-six births were reported, a rate per 1,000 of 17.90. The greatest number was reported from Lawrence county, where the rate was 31.09 to the 1,000. Johnson and Wabash followed closely with a rate of 29.62 and 28.41 respectively. Cass county boasts of the lowest record 10 to the 1,000. The rate in Cook county was 16.17 per 1,000. It is not asserted by the State board of health that these figures represent the actual number of births occurring in the State during 1902. It is well known that many physicians and accoucheurs fail to report births. The results are considered satisfactory, however, for the first year of the registration law. These births were reported under a voluntary system of notification.

The State board of health has just issued its report of the births and deaths in the State during the year 1902. In concert with all other registration States, Illinois has adopted the Bertillon classification of deaths. The total number of deaths registered during 1902 was 61,144, a rate of 12.54 per 1,000. The ten counties showing the maximum death rate are Massac 19.08, Alexander 17.93, Pulaski 17.05, White 16.61, Union 16.21, Morgan 15.05, Franklin 14.97, Adams 14.48, Sangamon 14.49, Crawford 14.30. The minimum is found in the following ten: Ogle 7.19, Ford 7.22, Kendall 7.30, Henderson 7.61, Brown 8.18, Jo Daviess 8.29, Tazewell 8.40, Jackson 8.52, Livingston 8.67, Woodford 8.72. The Cook county rate is 13.84 to the 1,000 based on an estimated population of 1,968,097.

The ten principal causes of deaths in the order of their importance are as follows: tuberculosis, pneumonia, organic heart disease, accidents, kidney disease, gastroenteritis in infants, cancer, typhoid, cerebral congestion and hæmorrhage, diphtheria.

The statistics show that 6,868 persons died of tuberculosis, this number being 11.23 per cent. of all deaths or 1 in every 8.90 deaths. By age the destruction from this disease was greatest from twenty to forty years, 51.2 per cent. of the deaths being reported during this period. It is the opinion of the State board of health that the reported death rate from tuberculosis is too low, and that many deaths reported as pneumonia, bronchitis and influenza were due to tuberculosis.

GENERAL.

Wisconsin College of Physicians and Surgeons.—At a meeting of the board of directors of the Wisconsin College of Physicians and Surgeons on June 15th, Dr. A. J. Burgess was chosen to fill the chair of clinical gynæcology, made vacant by the resignation of Dr. Thomas Fitzgibbon.

Smallpox in Bordentown, N. J.—The State Board of Health in Trenton, N. J., has been called on to assist in checking the spread of smallpox in Bordentown, the disease having apparently got beyond the control of the local authorities. There are now twelve cases, and a number of suspects owing to lack of isolation, when the disease first appeared.

Medical Library Association.—The Medical Library Association, newly organized in Cincinnati held its second meeting in the library of the City Hospital, in Cincinnati, on June 17th.

New Ward in Grady Hospital, Atlanta.—The order of Old Fashioned Women have erected an annex to the Grady Hospital in Atlanta containing thirty beds for maternity cases, in addition to handsome operating rooms.

The Burrage Hospital, Boston.—A hospital for sick children under the name of the Burrage Hospital, was opened on June 17th on Bunkin Island, in Boston Harbor, by the superintendent, Dr. T. M. Strong. Patients will be received daily until September 15th.

Railway Surgeons Convene.—The fourteenth annual convention of the Baltimore and Ohio Association of Railway Surgeons took place in Cleveland, Ohio, on June 15th. Business was transacted and technical papers discussed. One hundred and fifty surgeons were present.

The Tazewell Co., Va., Medical Society.—The annual meeting of the society took place on June 16th. Dr. J. A. Painter, of Liberty Hall, was elected president for the ensuing year, and Dr. George Ben Johnston, of Richmond, was made an honorary member.

A Finsen Light Hospital for Chicago.—An institute for phototherapy, or healing by light, will shortly be opened in Chicago by Dr. Wellington T. Stewart and Dr. H. J. Stewart, who have been in Copenhagen, Denmark, studying Dr. Finsen's discovery and methods.

The Garfield Memorial Hospital, Washington, D. C.—The District Commissioners have concluded transactions for the purchase of 67,000 square feet of the Schneider tract adjoining the grounds of the Garfield Memorial Hospital, the property to be used as an addition to the hospital grounds.

A Doctor his own Surgeon.—Dr. John F. Wilson, of Poughkeepsie, while examining a rifle five years ago, accidentally discharged a bullet which entered his head to the left of the nose. Dr. Wilson latterly felt a soreness of the throat and with the aid of a mirror discovered the cause in the protruding bullet, which he at once removed with a forceps.

A Health Officers' School.—An official notice is being sent out by the Indianapolis State Board of Health, stating that a health officers' school will be held in Indianapolis, on June 25th and 26, at the Medical College of Indiana, and all county and city health officers of county seats are summoned to attend. A similar school will be held for the town officers not herein mentioned, on December 17th and 18th, 1903. It is expected that Dr. Walter Wyman, surgeon-general of the Public Health and Marine Hospital Service; Dr. Arthur Rey-

nolds, Health Commissioner of Chicago, and Mr. M. O. Leighton, United States hydrographer, will be members of the teaching corps.

The Medical Society of New Jersey held its one hundred and thirty-seventh annual meeting in Asbury Park, on Tuesday, Wednesday, and Thursday of this week, under the presidency of Dr. T. L. B. Godfrey, of Camden. After the reports of various officers and committees had been received, the president delivered the annual address, on The Educational Standards of the Medical Profession of New Jersey, Past and Present.

Reports on progress in various departments of medicine were made by Dr. J. L. Leal, of Paterson; Dr. R. B. Fitz Randolph, of Trenton; Dr. Charles Young, of Newark; Dr. Talbot R. Chambers, of Jersey City; Dr. W. H. Ireland, of Camden; Dr. J. M. Rector, of Jersey City, and Dr. B. A. Waddington, of Salem.

Papers were presented as follows: Serum Therapy in the Treatment of Tetanus, by Dr. B. C. Pennington, of Atlantic City; "Osteopathy," by Dr. R. C. Newton, of Montclair; The Organization and Operation of Hospitals and Other Charitable Institutions in the State of New Jersey, by Dr. Walter B. Johnson, of Paterson; An Operation for Complete Epispadias by Transplantation of the Urethra, by Dr. Frank V. Cantwell, of Trenton; Mosquitoes and Malaria, by Dr. J. J. Kinyoun, of Glenolden; Infantile Colic, by Dr. Alexander McAlister, of Camden; The Alexander Operation in the Treatment of Retrodisplacements of the Uterus, by Dr. Frank M. Donahue, of Trenton; Retrodisplacements and their Treatment, by Dr. J. M. Baldy, of Philadelphia; Some Practical Methods of Hydrotherapy for General Practice, by Dr. Eliot Gorton, of Fair Oaks, Summit; Some Diseases of the Eye Due to Nasal Infection, by Dr. S. Zeigler, of Philadelphia; Two Cases of Transient Complete Blindness of Both Eyes, by Dr. C. J. Kipp, of Newark; Acute Inflammation of the Accessory Sinuses of the Nose, by Dr. N. L. Wilson, of Elizabeth; A Clinical Contribution to the Knowledge of Tubular Disease of the Female Urinary Tract, by Dr. Edward J. Ill, of Newark; Pneumonia Simulating Appendicitis, by Dr. J. P. Crozer Griffith, of Philadelphia; The Advisability of Surgical Interference in Abdominal Contusions, by Dr. E. A. Y. Schellinger, of Camden; Unusual Malformation in the Female Generative Organs, by Dr. Emery Marvel, of Atlantic City; Court Testimony of Medical Experts in Mental Diseases, by Dr. B. D. Evans, of Morris Plains; Extensive Fracture of the Skull, by Dr. John C. McCoy, of Paterson; Exsection of the Scapula, by Dr. Edwin Field, of Red Bank; A Case of Amœba Coli Dysentery, by Dr. Philip Marvel, of Atlantic City; and A Case of Cæsarean Section for Pelvic Deformity, also The Relation of Medical Education to Preventive Medicine, by Dr. George H. Balleray, of Paterson.

Appropriate action was taken to so change the organization of the society as to conform to the new requirements of the American Medical Association. The annual dinner, followed by a reception and ball, was given on Wednesday evening.

Pith of Current Literature.

LANCET.

June 6, 1903.

1. The Perils and Complications of Fibroids After the Menopause. By J. BLAND SUTTON.
2. Mental Unsoundness Amounting to Certifiable Insanity, and its Diagnosis. By ROBERT JONES.
3. The Treatment of Gangrenous Herniæ by Enterectomy. By A. E. BARKER.
4. On the Relation Existing Between Uric Acid Excretion and the Breaking of White Corpuscles. By O. K. WILLIAMSON.
5. A Form of Removable Deep Suture. By F. R. S. MILTON.
6. A Case of Typhoid Pancreatitis. By B. G. R. MOYNIHAN.
7. Some Observations on Movable Kidney. By T. E. GORDON.
8. Appendicitis. with Profuse Intestinal Hæmorrhage Closely Resembling Typhoid Fever. By C. R. BOX and C. S. WALLACE.
9. Soil Nitrification *v.* the Incidence of Malaria and other Mosquito-borne Diseases. By A. R. WADDELL.

1. **Postclimacteric Fibroids.**—Bland Sutton points out that though uterine fibroids, as a rule, cease to grow after the menopause, they are frequently sources of great peril to life, not only because they often coexist with other serious diseases of the uterus and ovaries, but because the very fact that they tend to diminish in size is a source of danger. The fibroid may be so big that its size prevents it from falling into the pelvis, but after the shrinking consequent upon the menopause, such a fibroid may fall into the true pelvis and become impacted. But the most frequent and the greatest danger connected with uterine fibroids after the menopause, is the occurrence of necrotic and septic changes. Such changes are probably due to (a) the marked diminution in their nutritive blood supply consequent upon the menopause; and (b) their attempted extension by the uterus. The fibroids which give rise to most trouble after the menopause are those of the submucous variety, and when the uterus passes into its resting stage and the fibroid is shrinking and dying, it attempts to get rid of them. The mouth of the uterus is widely dilated, and ready ingress is afforded to putrefactive organisms.

When a woman with uterine fibroids has passed the menopause and begins to have irregular profuse uterine hæmorrhages, it is extremely probable that she has cancer of the body of the uterus.

2. **Mental Unsoundness.**—Jones concludes that when a case of mental unsoundness is presented to us, we have to consider the import of delusions, not only as to their content, but also as to their systematization, the question of psychical weakness in the abstract, abnormal irritability, defect or perversion of will power, and changes in the emotional states; confident that we are doing right by the patient in sequestering him from managing himself or his affairs if he is suffering from the acute form of any variety of insanity, for all

such persons are potential suicides; if he is suffering from confirmed systematized delusions of a persecutory character—for all such paranoiacs are potential homicides; if he is suffering from the early symptoms of general paralysis, or if there are great violence, noise, excitement, and sexual trouble; and that we are doing right in not certifying if the insanity is in a young person of either sex, is due to toxines, or is of a mild or subacute and temporary variety.

3. **Gangrenous Herniæ.**—Barker holds that the most imminent danger to the patient with a greatly damaged or actually gangrenous loop of intestine, lies in the condition of the bowel for the three or four feet above the constriction. If this is simply put back or an artificial anus made, the risks are enormous. In either case the evacuation of the damaged bowel will be slow, for the distended and sodden intestine is in a state of paralysis, often for days after the relief is given. In cases where the patient is in a reasonably good condition, the author thinks that to excise this dangerous portion of paralyzed or sodden or ulcerated gut *en bloc*, together with all its virulent contents, is relatively the safest course. At one sweep the three or four feet of gut with pints of toxic material can be cleanly removed. The great point is to remove at once the *contents* as well as the diseased bowel, and to make the suture junction in relatively sound and clean gut. The author reports four cases of gangrenous hernia treated by enterectomy with most satisfactory results.

4. **The Effect of Uric Acid Excretion on the White Corpuscles.**—Williamson has studied the output of uric acid and the quantitative and qualitative changes in the leucocytes in eleven cases of disease where there was leucocytosis (nine cases of pulmonary tuberculosis, one of lymphadenoma, and one of mediastinal tumor). In every case evidence of increased destruction of the white blood corpuscles was accompanied by a marked increase in the output of uric acid, thus confirming the observations of Horbaczewski, Kütman, and others.

6. **Typhoid Pancreatitis.**—Moynihan reports the case of a boy, aged thirteen years, who had had typhoid fever and was apparently recovering satisfactorily. During his convalescence, however, he began to have attacks of severe abdominal pain, accompanied by nausea and gradually deepening jaundice. A diagnosis of gall stones was made, and the abdomen opened. No gall stone or adhesions were found, but the head and body of the pancreas were twice as large as normal, and almost as hard as stone. The case is the first in which inflammation of the pancreas due to typhoid fever has been recognized.

7. **Movable Kidney.**—Gordon's conclusions are: (a) That in neurasthenic cases nephropexy may do good. (b) Vomiting and other gastric symptoms can certainly be cured, but if dilatation of the stomach is present, a guarded prognosis must be given. (c) One must be most cautious in concluding that a movable kidney is the cause of ob-

scure abdominal symptoms. (d) Movable kidney occasionally causes symptoms which exactly simulate those due to gall stones, but, seeing that the coincidence of movable kidney and gall stones is not uncommon, it would be unwise merely to fix the kidney without a preliminary examination of the gall bladder and ducts. Finally, while granting that many cases of movable kidney cause no symptoms and require no operation, there remain many which do cause symptoms, and in a fair proportion of these an excellent result from nephropexy may confidently be looked for.

8. Appendicitis Resembling Typhoid.—Box and Wallace report a case of appendicitis occurring in a man aged fifty-one years. The signs (pain, tenderness, etc.) all pointed to appendicitis, yet a free hæmorrhage occurred on the sixteenth and succeeding days of his illness. This, together with fever, nocturnal delirium and extreme prostration, led them to think that it was a case of typhoid fever. The patient died on the twenty-first day of illness. At the autopsy a large appendicular abscess was found in the right iliac fossa, the appendix having sloughed away. There was no typhoid ulceration of the bowel.

9. Soil Nitrification and Malarial Disease.—Waddell calls attention to the deadly poisonous effect which ammonia, even in very weak solution (1 to 4000), has upon mosquito larvæ. Ammonia is poisonous in all its combinations, the nitrogen unit being the index of effectiveness. Here we have a force of enormous potentiality against malaria, and one capable of practical application. It consists in the effective nitrification of the surface waters and vegetation through the medium of the soil, the former checking the existence of the larvæ, and the latter being inimical to the adult mosquitoes. Nitrification of the soil may be brought about in two ways—by the direct application of nitrogenous manures, and by fostering the growth of certain plants belonging to the leguminosæ, which are known by their peculiar root action to add to the nitrogen in the soil. Soil nitrification has this advantage over the majority of hygienic applications, it is *per se* directly profitable, the increased yield of produce more than compensating for a proper expenditure in carrying it out.

BRITISH MEDICAL JOURNAL.

June 6, 1903.

1. Remarks on the Red Light Treatment of Smallpox.
By NIELS R. FINSEN.
2. Recent Electrotherapeutics, with Special Reference to Malignant Disease.
By JOHN MACINTYRE.
3. The X Rays in the Treatment of Lupus, Rodent Ulcer, and Other Skin Diseases.
By MALCOLM MORRIS and S. E. DORE.
4. Further Observations upon the Treatment of Rodent Ulcer by the X Rays.
By J. H. SEQUEIRA.
5. Treatment of Lupus by X Rays and Ultra-Violet Rays.
By H. E. GAMLEN.
6. Tuberculosis of the Conjunctiva Cured by X Rays.
By SYDNEY STEPHENSON.

7. Further Work on Amœbic Dysentery in India. The Mode of Formation of Secondary Amœbic Abscess of the Liver, with a Note on the Serum Test for Dysenteries.
By LEONARD ROGERS.

1. Red Light Treatment of Smallpox.—Finsen states that it may be considered an irrefutable fact that daylight, and especially the chemical rays, has a most injurious effect on the course of smallpox, as the suppuration of the vesicles is due to the effect of light. Consequently, it is possible to avoid the suppuration and its consequences by protecting the patients from the action of light. On the other hand, light seems to have no action on the smallpox infection itself, and death caused by the latter cannot be prevented by excluding the chemical rays; but the avoidance of suppuration is of the greatest importance, as the suppuration stage is most dangerous, and the greatest number of deaths are due to suppuration. Further, the numerous complications and sequelæ due to suppuration may be avoided, as well as the disfiguring pitting. Since smallpox is a disease in which the public health authorities oblige the patient to go into a particular hospital, he has a right to ask that he shall not there be unnecessarily exposed to dangers that may be fatal, or are at least liable to disfigure him for life. It must be considered absolutely unwarrantable on the part of the public health authorities to treat serious cases of smallpox, in which suppuration might be expected, in hospitals where patients are exposed to daylight. As to the private physician, it must be considered a gross shortcoming if, as soon as he diagnosticates smallpox, he does not make preparations to prevent the patient from being exposed to daylight. It is everywhere possible to darken the windows by curtains, and a candle will supply all the necessary light.

3, 4, and 5. X Rays in Lupus, etc.—Morris and Dore sum up their experience of the x ray treatment in the general statement that, while it has a well-defined sphere of usefulness, it is in the case of lupus vulgaris much inferior in curative efficacy to Finsen's light treatment. The use of the rays, however, supplies certain shortcomings of the light treatment, as they can be applied to cavities inaccessible to the latter. In dealing with lupus of mucous membranes the x rays are more effective. For the healing of ulcerated surfaces and for the relief of pain they are especially indicated. The combination of the two methods, reinforced, if need be, by the use of salicylic, pyrogallic, or carbolic acid, may be twisted to give good results in lupus, where the disease is not too extensive to be overtaken in its development by the therapeutic agencies. Positive statements cannot be made as to the permanency of these results, but there is good reason to believe that the disease may be kept under control, if the case is watched and treatment applied as soon as there is any appearance of recurrence. Practically the same may be said of rodent ulcer as of lupus, but here relapse after a varying period of time is the rule, and in some cases the most that can be done is to hold the disease in check.

Sequeira (4) does not advise the use of x rays in cases of rodent ulcer where the growth is very

small, and where it can be completely removed without much deformity. In such cases complete excision with a fair margin of healthy skin affords a rapid and successful method of treatment. But where the disease is extensive, where entire removal is impracticable, or where the patient shrinks from operation, the x rays give most satisfactory results. Those cases in which there is the greatest destruction often do the best; large ulcers fill up, leaving only the hard rolled edge to treat. Cases in which the cartilage is involved are, as a rule, difficult to heal up completely. In nearly half the author's cases there have been slight recurrences. Small ulcers will heal after ten or twelve exposures; large cavities may require months. He applies the rays daily, or on alternate days, using tubes which spark at from four to six inches. Actual "burning" is not necessary.

Gamlen (5) thinks that the advantages of x rays over operative treatment in lupus, are principally cosmetic in effect. After healing they leave the skin soft and pliable. He reports twelve cases of lupus successfully treated by x rays. From his experience of these and many others, together with cases of cancer, rodent ulcer, lupus erythematosus, and various skin diseases, curative treatment is dependent upon the following points: The character of the coil; the voltage used; the condition of the tubes; the distance of the target from the patient; the duration and frequency of sittings, with the interval between each; and, finally, whether or not any other treatment is concurrently applied.

6. X Rays in Tuberculous Conjunctivitis.—

Stephenson reports a case of tuberculosis of the conjunctiva, occurring in a girl aged four years, which was cured by the use of the x rays. The disease had lasted two months. The palpebral conjunctiva was bestrewn with miliary granulations and folds of cockscomb-like tissue. The sub-maxillary glands on the same side were enlarged. Tubercle bacilli were found in sections of the granulations, and inoculation into a rabbit's eye resulted positively. The affected conjunctiva was exposed to the x rays at a distance of six to ten inches from the focus tube, for an average period of ten minutes at each sitting. Nine such exposures were made in the course of a month, when the conjunctival malady was practically cured. The enlarged glands, however, became larger and were eventually removed.

7. **Amœbic Abscess of the Liver.**—Rogers's summary and conclusions are as follows: (a) Amœbic dysentery is most frequently found in patients dying from large tropical liver abscess, in the walls of which amœbæ can always be found, unless they have been opened for some time. The disease is chronic, and often latent, and not very often fatal by itself, but usually through complications. (b) Amœbic dysentery has naked-eye and microscopical characters which enable it to be easily distinguished from the more common bacillary type of the disease. (c) Its most important complications are large abscess of the liver, chronic or acute peritonitis, and postperitoneal abscess. (d) Amœbic abscess of the liver secondary to this form of

dysentery may be produced (1) by infection across the peritonæum, with or without previous adhesions; or (2) through infection by the portal vein, producing sufficient clotting in its branches to cause a focal necrosis in one or more parts of the liver, concentric extension taking place by means of a similar process. (e) If staphylococci reach the liver with the amœbæ, as especially occurs when gangrenous sloughing of the bowel wall complicates amœbic dysentery, then multiple small abscesses in the interlobular branches of the portal vein containing both amœbæ and staphylococci result. (f) The bacillary form of dysentery is much commoner in Calcutta than the amœbic one, and is due to Shiga's bacillus, which is clumped by the blood of cases of ordinary dysentery, although not by that of the amœbic form, thus furnishing a means of differentiating between them clinically.

BOSTON MEDICAL AND SURGICAL JOURNAL.

June 11, 1903.

1. Dermatomyositis. By F. FORCHHEIMER.
2. Polienccephalomyelitis and Allied Conditions. By E. W. TAYLOR.
3. Congenital Inspiratory Stridor. By D. CROSBY GREENE.
4. Avulsion of the Tibial Tubercle Occurring in a Girl of Thirteen. By FRANCIS D. DONOHUE.

June 18, 1903.

5. The Need of an Institution for the Education of Nurses Independent of the Hospitals. By FRANCIS P. DENNY.
6. Hæmostasis by Compression and Heat. By JOHN W. KEEFE.
7. Polienccephalomyelitis and Allied Conditions. By E. W. TAYLOR.

[The abstract of the *Boston Medical and Surgical Journal* in our issue for June 20th was that of June 4th, not June 11th, as erroneously stated.]

1. **Dermatomyositis.**—Unverricht first called attention to this condition, as a clinical entity, in 1887. Since then a number of cases have been reported, some of which, however, have not been accepted as true cases of dermatomyositis by some authorities. The author reports one case of his own, which, he believes, fulfills all the diagnostic requirements as laid down by the most exacting authorities. The chief symptoms of the disease are: Urticaria-like or erysipeloid eruptions of the skin; sweats; local inflammatory œdemas; swollen and painful muscles; fever; enlarged spleen and a variety of other symptoms consecutive to the muscular swelling and tenderness.

3. **Congenital Inspiratory Stridor.**—Green says that the ætiology of this condition is not well understood. Although deformity of the epiglottis is not the cause of the stridor, yet such deformity is always present. The diagnosis of this affection is based on the following distinctive features: (1) Its appearance at birth; (2) the limitation of the sound to inspiration; (3) the absence of continuous cyanosis; (4) the constancy of the sound independent of the position of the child; (5) the laryngoscopic appearance of the epiglottis and ary-

epiglottic fold. The prognosis is good. The treatment is purely prophylactic. In very rare cases tracheotomy or intubation may be indicated.

5. **The Education of Nurses.**—Denny says that the defects of the present system for the teaching and training of hospital nurses are a natural consequence of the attempt to teach practice and theory simultaneously. The author advocates the establishment of independent schools at which undergraduate nurses can be systematically grounded in the principles of anatomy, physiology, hygiene, chemistry, pathology, and bacteriology. The practical training should come after this preliminary training, and it should be acquired, as at present, in the wards of general or special hospitals. The undergraduate nurses in our present training schools lack: (1) leisure for study; (2) instruction in the principles of nursing before beginning practical work; (3) instruction by those who are specially fitted to teach; (4) improved methods of instruction.

6. **Hæmostasis.**—The present paper completes the report of a series of fifty cases in which Keefe has used the electrothermic aneiotribe of Downes, instead of ligatures. The operations reported include fifty-five cœliotomies, one amputation of the thigh, and one of the leg, and two vaginal hysterectomies. The author is heartily in favor of this new method, for which he claims, among other advantages, the following: (1) The exclusion of ligatures and of the dangers consequent upon their use; (2) reduction in the danger of septic infection from the escape of contaminated material; (3) absence of painful and irritable stumps and decrease in the tendency to postoperative adhesions; (4) less postoperative pain. The present paper gives the histories of the author's last thirty-eight cases.

7. **Poliencephalomyelitis.**—(*Concluded from No. 24, page 638.*) Taylor's main object is to call attention to the possible identity (chiefly of a pathologicoanatomical character) of a group of cerebrospinal affections. Their causation is as yet unknown, but a probable common exciting cause is toxic in character. The resulting lesions may, provisionally, be regarded as inflammatory in character. This group of cerebrospinal affections includes the following diseases: encephalitis, poliencephalitis (superior and inferior), poliencephalomyelitis, poliomyelitis, encephalomyelitis, and, with reservations, Landry's paralysis, and possibly myasthenia gravis and certain apparent peripheral nerve infections.

AMERICAN MEDICINE.

June 20, 1903.

1. Sudden Death and Unexpected Death in Early Life, with Especial Reference to the so-called Thymus Death. By J. P. CROZER GRIFFITH.
2. The Toilet of the Peritonæum in Appendicitis. By G. R. FOWLER.
3. The Anatomy of the Pancreas. By EUGENE L. OPIE.
4. Management of Malignant Disease of the Uterus. By GEORGE ERETY SHOEMAKER.

5. A New Method of Treatment for Chronic Anterior Urethritis, and for the Declining Stage of Acute Urethritis. By WILLIAM WARREN TOWNSEND.
6. Man's Responsibility in Sterile Marriages. By W. H. PRIOLEAU.

1. **"Thymus Death."**—Griffith characterizes as sudden, a death occurring in from a few seconds up to a few hours at the utmost, while as unexpected he designates deaths taking place somewhat more slowly, and yet entirely unexpectedly, in patients who had previously shown no alarming symptoms. We cannot even enumerate the many causes of sudden and unexpected death considered by the author. We call attention only to those forms of death supposed to be due to spasm of the glottis and to the so called "thymus deaths": (1) Spasm of the glottis has appeared to be one of the most important causes of sudden death. Deaths from this cause certainly do occur, the direct cause of the spasm being great irritability of the nervous system. Possibly, however, a large number of the deaths that *seem* to be due to laryngospasm are in reality due to syncope. (2) Thymus death, so called, has been frequently reported, and much has been written both for and against the possibility of death from enlargement of the thymus. The author does not believe there is any clinical evidence to support the theory of hyperthymization of the blood or of some other form of autointoxication arising from a hyperplastic thymus. It seems possible that an enlarged thymus can, through pressure, produce death, but such an occurrence is certainly exceedingly rare. It has been *assumed*, in some cases, that the enlarged thymus was the cause of death simply because the gland was found to be hypertrophied. It is characteristic of truly sudden "thymus death" that the child has previously been in good health, or at least free from any alarming symptoms, and has then died quite suddenly, as though from laryngospasm or heart failure. With regard to the so called status lymphaticus and its relation to sudden death, this only can be said, that in a large proportion of cases, dying supposedly from laryngospasm, the thymus gland has been found enlarged. The enlargement is not, as a rule, great. If we apprehend the author's meaning clearly, his conclusions are, that while sudden deaths may at times be due to either laryngospasm or thymus enlargement, yet the majority of deaths attributed to either of these two causes are in reality due to cardiac syncope, neurotic in origin, which may or may not be associated with a lymphatic overgrowth.

2. **Peritoneal Toilet in Appendicitis.**—Fowler advances the following propositions, some of which are abridged: (1) In cases in which the infection is confined to the appendix the surrounding peritonæum should be carefully guarded from infection from the opening left in the cæcum by the excision of the organ. (2) In cases in which suppurative collections are present, the cavity of the peritonæum should be carefully guarded by gauze pads, which may be advantageously wetted in 1-2000 sublimate solution, before breaking down limiting adhesions in approaching the appendix. (3) As soon as a pus cavity is opened the septic

material should be rapidly sponged away and the neighborhood cleansed with hydrogen dioxide. Following this, the appendix should be removed, after which the parts are subject to a second cleansing process. (4) Outlying infection of the peritonæum may, as a rule, be left to take care of itself after the removal of the appendix and local cleansing. (5) In peritonitis, more or less generalized in the pelvic and enteronic areas, the method of procedure will depend on the presence or absence of markedly septic seropurulent material. (6) In diffuse septic peritonitis the conditions are usually such as to prohibit prolonged interference, and the surgeon will, in the majority of cases, be justified in interfering only to the extent of removing the appendix and cleansing locally. (7) Drainage when instituted, should be by glass or smooth rubber tubes.

MEDICAL NEWS.

June 20, 1903.

1. The Need of Public Toilets in American Cities.
By EDWARD H. WILLIAMS.
2. The Morbid Anatomy and Pathology of Tabes.
By JOSEPH COLLINS.
3. The Proper Recognition of Electrotherapeutics.
By A. R. RAINEAR.
4. A Contribution to the Pathology and Prognosis of the Diseases of the Bladder.
By ROBERT HOLMES GREENE and HARLOW BROOKS.
5. "Impressions of the Non-heredity of Acquired Characters." A Rejoinder.
By LAWRENCE IRWELL.

2. **Pathology of Tabes.**—The present paper is the last of a series of five communications on the subject of locomotor ataxia. Collins has based his study on a collection of one hundred and forty cases of tabes. Some of the articles are illustrated and the case histories have been adequately reported. The whole series of articles forms a notable contribution to the current literature of tabes.

3. **Electrotherapeutics.**—Rainear writes to urge the value of electricity as a therapeutic measure. He believes that if its possibilities were better understood it would be more frequently employed. Unless, however, electrotherapeutics is made a part of the regular medical course in our colleges, there is little immediate hope of its being intelligently applied, and hence becoming popular with the general practitioner.

4. **Pathology and Prognosis of Vesical Disease.**—Greene and Brooks append the following conclusions to their article: "(1) The most frequent causes of diseases of the bladder are: (a) lesions of the central nervous system, causing dilatation; (b) septic processes of various varieties; (c) hypertrophy of the prostate. (2) In all conditions in which the spinal cord or central nervous system is involved, frequent and early catheterizations should be resorted to, to prevent the bad effects of overdistention, or the possibility of cystic rupture. (3) Conditions of the bladder must greatly modify the prognosis of operative procedures for the relief of obstructions of the urinary flow; therefore the importance of cystoscopic and other ex-

aminations cannot be too strongly insisted upon. (4) Hypertrophy of the bladder wall is due to four different processes, separate or combined: (a) inflammatory infiltration; (b) increase of the fibrous connective tissue; (c) smooth muscle hyperplasia; (d) infiltration by new growth. The clinical symptoms in hypertrophy of the bladder depend on which of these factors predominate.

MEDICAL RECORD.

June 20, 1903.

1. Infantile Insanity in its Relations to Moral Perversion and Crime.
By ALLAN McLANE HAMILTON.
2. Gastric and Intestinal Crises.
By C. A. EWALD.
3. Intravenous Infusion in Puerperal Septicæmia.
By EDWARD WAITZFELDER.
4. The Correlation of Alcoholism, Crime, and Insanity.
By C. A. DREW.
5. The Medical Officer of the United States Navy.
By GILBERT TOTTEN McMASTER.

2. **Gastric and Intestinal Crises.**—Ewald draws his conclusions, chiefly, from a study of the 89 cases of gastric crises, due to disease of the central nervous system, that have come under his observation. In all the cases that have come under his observation he has been able to demonstrate, either singly or in greater number, the early symptoms of tabes. In the author's series, a history of syphilis was positive in 16 cases out of 26, was denied in 7 cases, and was doubtful in 3. Syphilis was therefore present in about 62 per cent. of these 26 cases. The disease lasted, on an average, two years and ten months. He has known it to last ten years, while the shortest duration in his experience was only two months. It is characteristic of the attacks that the interval between them gradually decreases. The course of each attack also varies in character. In the early stages, diagnosis will, for the most part, be a difficult matter. The greatest difficulty will arise in attempting to distinguish tabetic vomiting from so called paroxysmal or idiopathic vomiting. With regard to treatment, nothing very favorable can be said. It is well to emphasize the fact that no means are known of cutting short the attacks. In grave cases we must resort to morphine. In a number of cases the author has resorted to the epidural injection of cocaine hydrochloride. In no case has he noted disadvantageous after effects.

3. **Intravenous Infusion in Puerperal Septicæmia.**—Waitzfelder reports two cases in which the injection treatment was used. In both the streptococcus was demonstrated in the patient's blood. The injections were used repeatedly and were either 1-5000 formalin solution or plain normal salt solution. The quantity of fluid injected was either 750 or 1,000 cubic centimetres. The first patient died, the author believes, of pneumonia, and the second one recovered. In the majority of instances there was, within twelve hours, a marked fall of temperature following the intravenous injections, both of the normal salt and of the formalin solution. The temperature charts of both the cases are given. The author does not express, formally, his convic-

tions regarding the value of this method of treatment. He concludes his paper by calling attention to the fact that while a fall of temperature followed nearly every injection, the extreme falls in the temperature occurred after the normal salt solution injections.

MUENCHENER MEDICINISCHE WOCHENSCHRIFT.

April 21, 1903.

1. Comparative Investigations upon the Blood of the Mother and Child, and the Amniotic Fluid, with Remarks upon the Fœtal Secretion of Urine.
By W. ZANGEMEISTER and T. MEISSEL.
2. The Treatment of Hæmatocele and Extrauterine Pregnancy.
By F. SCHENK.
3. The Sterilization of Small Dressings
By K. HOLZAPFEL.
4. The Heart and Apex Beat in Insufficiency of the Aortic Valves.
By G. GALLI.
5. Observations upon the Changes of the Blood in Extirpation of the Spleen.
By E. RAUTENBERG.
6. Two Cases of Pernicious Anæmia.
By K. V. HÖSSLIN.
7. Ventilation.
By K. WOLF.
8. Formulary for the Preparation of Mixtures of Various Concentrations.
By GOSSNER.
9. Poisoning with Potassium Bichromate.
By F. BERKA.
10. A New Syringe for Injecting Paraffin.
11. The Danger of Infection with *Ankylostoma duodenale* in Mine Work.
By TENHOLTS.
12. The Treatment of Tuberculosis of the Larynx.
By E. KRONENBERG.

1. **Comparative Examination of Maternal and Fœtal Blood and Liquor Amnii.** By W. Zangemeister and T. Meissl.—Abstracted in *New York Medical Journal* for June 6th, p. 1045.

2. **Hæmatocele and Extrauterine Pregnancy.**—Schenk, after a discussion of the different methods for treatment of hæmatocele in extrauterine pregnancy, reports the material of Saenger's clinic. There were 32 patients upon whom operations were performed; 26 were treated conservatively. The operations were performed 7 times for rupture of the pregnant tube; 25 times for a tubal abortion. In 18 cases the annexa of one side were removed; in 9 on both sides. In 4 cases total extirpation of the uterus was performed. All the operations were performed through the abdominal wall. One patient died after total extirpation, but she had a high fever when she was brought to the hospital, and the autopsy revealed fatty degeneration of the heart. The average period between the appearance of the clinical symptoms and the operation was five weeks. In 11 cases in which this period was exceeded it was necessary 4 times to remove both annexa, and 3 times the uterus. The indications for operations were in 14 cases persistent pain and uterine hæmorrhage; in 7 cases, pain alone, and in 4 cases hæmorrhage alone. In the other cases there were repeated attacks of collapse, and twice, increase of temperature. In 17 cases in which it was possible to determine the subsequent results the patients were able to work. In only once case is it known that subsequent conception with normal pregnancy occurred. Of the 26 patients that were treated expectantly 15 were subsequently examined, and 13

of these were entirely able to perform heavy work. Two still had occasional pains. Therefore the results of expectant treatment are practically the same as those of operative treatment.

3. **Sterilization of Small Dressings.**—Holzapfel describes an ingenious apparatus for sterilizing small quantities of dressings. It consists essentially of a steam generator with an alcohol lamp, and a small tube through which the steam is allowed to pass. Experiments have shown that there is very little loss of heat during the passage of the steam, and that exposure for fifteen minutes is usually sufficient for thorough sterilization.

4. **The Cardiac and Apex Beats in Aortic Insufficiency.** By G. Galli.—Abstracted in the *New York Medical Journal* for June 6th, p. 1039.

5. **Blood Changes after Splenectomy.** By E. Rautenberg.—Abstracted in the *New York Medical Journal* for June 6th, p. 1045.

6. **Pernicious Anæmia.**—Von Hösslin reports two cases of pernicious anæmia. In the first, a woman, aged fifty-six years, had suffered from loss of appetite for several years. There was an attack of jaundice and finally obstinate vomiting. An examination of the stomach showed complete absence of HCl, complete absence of digestion, and a small quantity of lactic acid. On a second occasion, three hours after the administration of a test meal, nothing was found in the stomach, but a small benign polyp was caught in the opening of the sound. The patient was discharged improved, returned with slight icterus, the blood had deteriorated considerably, the hæmoglobin being from 15 per cent. to 20 per cent., the red blood cells, 1,500,000. Later, she developed persistent diarrhœa, and there was obstinate vomiting. She recovered from this, but the blood was still worse. She had various attacks and finally died. An autopsy was performed, but aside from some dilatation of the stomach and a small benign polyp in its mucous membrane, nothing was found. The second case was also that of a woman, fifty years of age. There was pernicious anæmia, and from time to time attacks of unconsciousness. She frequently vomited, the vomitus never containing free HCl. The patient grew worse and finally died. There was a minute pneumonic focus in the left lung; otherwise merely the changes characteristic of progressive pernicious anæmia. Von Hösslin calls attention to the importance of careful gastric analysis in these cases.

7. **Ventilation.**—Wolf considers the most efficient method to be the old open fire-place. He mentions several forms of artificial ventilation, and calls attention to the errors in construction. For ordinary dwelling houses these artificial methods are unnecessary.

9. **Potassium Bichromate Poisoning.**—Berka reports the case of a girl, aged twenty-two years, who had had hysterical psychosis for many years, and had made fifteen attempts to commit suicide. She finally poisoned herself with from 20 to 25

grammes of potassium bichromate. About three or four hours after taking the drug she felt some pain, and two hours later she was brought to the hospital. There was a greenish mucus coming from the mouth, the pupils were dilated, the pulse was rapid, the respirations were more frequent, but there was no vomiting. The stomach was washed out and contained a greenish fluid. During the washing there was an involuntary evacuation of the bowels that was not particularly characteristic. Later, the patient began to vomit; there were persistent diarrhoea and extreme nervousness. She gradually grew weaker and finally died. There was a considerable amount of chromin in the bowel movement, the vomitus, and the liquid obtained by washing. At the autopsy the mucous membrane of the intestine was red. The salt was taken enclosed in figs, and this accounts for the absence of any change in the mucous membrane of the mouth.

10. A Syringe for Paraffin Injections.—Kantorowicz has constructed a syringe for hypodermic injection of paraffin, which consists essentially of one barrel enclosed within another, the outer barrel containing a salt which when melted, gives off heat during consolidation. This keeps the paraffin in the central portion of the liquid.

12. Laryngeal Tuberculosis.—Abstracted in *New York Medical Journal*, June 6th, p. 1042.

NEUROLOGISCHE CENTRALBLATT.

March 1, 1903.

1. The Acromial Reflex. By W. VON BECHTEREW.
2. The Carpometacarpal Reflex. By W. VON BECHTEREW.
3. Contributions to the Physiology of the Tendon Reflexes: A Preliminary Communication.
By A. E. STCHERBAK.
4. Incontinence of the Bladder and Paralytic Manifestations in the Extremities in Focal Softening in the Subcortical Ganglion.
By A. HOMBURGER.
5. Further Communications upon the Embryonal (Myelogenetic) Areas in the Human Cerebral Cortex.
By P. FLECHSIG.

1. The Acromial Reflex.—Von Bechterew says that by percussion of the acromial portion of the scapula and the coracoid process there is produced a slight flexion of the forearm associated with a slight rotation of the hand inward, and in some cases, when the reflex is pronounced, a flexion of the fingers. This reflex is produced by contraction of the coracobrachialis and biceps, and when it is exaggerated, also by contraction of other muscles. It is probably periosteal in character, and is most pronounced in those conditions which cause general increase in reflex activity, as for example, hemiplegia, amyotrophic lateral sclerosis, etc. It is rarely increased in functional conditions.

2. The Carpometacarpal Reflex.—Von Bechterew says that if the hand of the patient is placed upon the hand of the observer, the back up, and the second and third phalanges of the fingers hanging freely down, and then a blow is struck with a percussion hammer upon the carpus or metacarpal bone, there is slight flexion of all the fingers excepting the thumb. This reflex occurs practically

only in cases in which the reflex activity is enormously exaggerated. It is a true reflex, the centripetal portion of the arc commencing in the tendons of the back of the hand, passing through the first dorsal and lower cervical roots, and returning to the flexors of the phalanges of the fingers. It does not occur in functional conditions, and therefore is valuable for the purpose of differential diagnosis.

3. Physiology of the Tendon Reflexes.—Stcherbak records some very interesting experiments. By means of a tuning fork he applied rapid vibration to the hind leg of a rabbit, and found that in a short time it was possible to produce spasticity, so that there was increase in the knee jerk, knee clonus, and even clonus, when the opposite knee was tapped. If one of these animals was held in a rigid position for some time the spasticity reappeared. Rapid passive movements—1000 or 1500—also caused the spastic condition. If the spinal cord was cut in the dorsal region, local vibration caused a permanent unilateral increase in the knee reflex, but clonus did not occur. The loading of the animal with vibrations had no essential influence upon its general condition, or upon the muscle tone. If vibrations were applied to the spinal column, a spastic condition of all the muscles of the hind extremities occurred. These experiments apparently show that by means of vibration we can so influence the lower, or somatic, portion of the nervous system, that phenomena are presented that formerly were supposed to be due merely to changes in the higher, or psychical, portions of the nervous system, and that these phenomena leave traces which may for a long time remain latent.

4. Focal Softening in the Subcortical Ganglion.—Homburger describes some of the symptoms in ten cases in which numerous minute areas of softening were found in the corpus striatum and the thalamus. Micturition was of the automatic type, that is to say, in approximate periods, similar quantities of urine were discharged. Residual urine always remained. The act occurred suddenly and was beyond the control of the patient. At the same time there was usually slight power after voluntary micturition. There is spastic paraparesis of the legs in these cases, the movements of the knees are restricted; those of the feet free. The patient cannot get up when lying down; cannot sit upon a stool without support; can sit upon the floor, however, for a short time, after which he usually falls. The movements of the upper extremities are free, but there is lessening force, and lessening certainty. The tendon and periosteal reflexes are increased; ankle clonus is not present; there is imperative laughing and weeping, and occasionally hemichorea and hemiathetosis. He reaches the following conclusions regarding the significance of these lesions in the corpus striatum and thalamus. That unilateral areas of softening cause transient incontinence of urine; permanent increased desire for urination; bilateral areas of softening have persistent incontinence not essentially different from the spinal form. Therefore, the subcortical innervation of the bladder is bilateral. If the lesions are superficial they do not cause incontinence. The double-sided lesions

caused disturbance of station and paralyses which differed considerably from the picture of those that occur after lesions of the cortical fibres of the internal capsule.

5. **The Embryonal Areas in the Human Cerebral Cortex.**—Flehsig, as a result of his studies upon fifty-two series of sections of foetal and infantile brains, is now able to determine the course of development of the medullary sheaths. At present he recognizes thirty-six cortical areas, and he believes that this opinion, although not certain, will not be changed greatly. He recognizes three areas in the parietal convolutions. He is not certain that fibres from the corona radialis enter the gyrus supracuneus. The upper portion of the occipital convolution he now separates from the cuneus. There is reason to believe that the fibres to the uncinate gyrus develop above those to the central convolutions. This, however, is not conclusively proved. He believes that for every group of motor fibres there is a corresponding group of sensory fibres, and that the fissures of the surface of the brain bear a certain definite relation to these fields.

LYON MEDICAL

May 31, 1903.

1. Indications for Gastrointestinal Anastomosis; choice of operation. BY M. VALLAS.
2. Coexistence in the Digestive Tract of Two Primitive Cancers of the Same Histological Type (Cylindrical Epithelioma). BY DEVIC and L. GALLAVARDIN.

1. **Gastrointestinal Anastomosis.**—Vallas concludes this to be one of the happiest conquests of abdominal surgery. First advocated in France by Maisonneuve, it has been perfected in Germany by Wolfler and Von Hacker, and is now routine practice, the author being an enthusiastic advocate, owing to his 60 cases in the last four years, upon which he bases the following conclusions. The principal indication for gastroenterostomy is pyloric stenosis. In most cases, unhappily, a neoplasm is found, and therefore only a palliative operation is possible. However, the temporary results are excellent: the painful vomiting of great gastric dilatation ceases immediately, thirst is assuaged, appetite returns, marasmus is arrested, and the patients enjoy a surprising gain in weight and a general euphoria. This intermission in the fatal course of cancerous cachexia varies, but twelve to fifteen months is the average; a striking case is a survival of over two years in one patient of the author's, a man aged seventy-six years.

If the pyloric stenosis is a simple cicatrix, the gastroenterostomy is naturally curative; but the author has found but four such cases in sixty. Gastroenteroanastomosis is allowable simply to rest the stomach; during the growth of ulcers; in insupportable pains of dyspepsia; in abundant or frequent hæmorrhage; the operation corresponds to cystotomy in giving physiological repose to a contractile organ. Twice the author has performed gastroenterostomy in perigastritis. In cases which showed incomplete stenosis, but in which there was considerable suffering, the stomach was found surround-

ed, as if in a net, by adhesions wide apart but spread over the entire surface of the organ. Such a condition might well be called a "symphysis of the stomach." The author's first case was supplied by Dr. Tournier, who diagnosed perigastritis, and the adhesions were easily detached, with recurrence, however, in a month, when the operation of posterior gastroenteroanastomosis had to be performed, as it must be, so Vallas states, under all such circumstances.

As to contraindications, the author recognizes none. One of his first cases submitted by Professor Bard, had a profound cachexia with œdema of the lower limbs and ascites of the peritoneal cavity. This patient survived but one month, owing to the progress of the cachexia, but the vomiting disappeared, and anything is justifiable in the face of cancer. Relative benignity, moreover, is proved by statistics. Out of 60 cases, the author lost 12, none being rejected. There was never postoperative peritonitis. Death resulted from internal hæmorrhage (1), pneumonia (3), shock (3), and from the persistence of cachexia and marasmus. Where emaciation preexisted, there was no hope. A young man aged thirty-one years, who had weighed 85 kilogs. and at the time of operation weighed but 53, and a woman who had dropped from 56 to 30 kilogs., died the evening of the respective operations. Another woman aged forty-six, who weighed but 35 kilogs., gradually faded away and died within an month without stoppage of the progress of cachexia. Rapid, progressive emaciation, therefore, is an important item in prognosis.

Vallas thinks his mortality of 20 per cent. should be reduced. Eliminate those cases where cachexia or shock are likely to be factors. He considers this proved by the fact that in the 20 cases submitted to him, in 1902, by Josserand, Mouisset, Tournier, and P. Courmont, he lost but one, and that through pneumonia.

On the choice of operation, the author is brief. The surgeon may perform anterior gastroenteroanastomosis, posterior or transmesocolic, the "Y" operation of Roux, or the gastroduodenostomy of Villard. The last is the best as best reestablishing the gastroduodenal functions by passing the contents of the stomach into the duodenum above the ampulla of Vater, but unhappily it is generally impossible where the stenosis is cancerous. In cicatricial stenoses, the operation is ideal.

Next in order of merit is the "Y" operation of Roux, the author having performed it successfully four times, the first at Lyons, April 30, 1898. It is a long operation and, therefore, in feeble or cancerous cases, the author prefers the gastroenteroanastomosis or the transmesocolic of Hacker. In this last, there is no "vicious circle," no compression of the colon and no obstruction to the passage of the biliary and pancreatic fluids.

Wolfler's anterior gastroenterostomy should be used only as a last resort. The author used it once in a case where the posterior operation had already been performed with the result of producing a neoplastic growth of large extent on the mesocolon, causing a narrowing of the new pylorus. In another case, it was done because respiratory and cardiac syncope supervened immediately on manipu-

lation of the mesocolic region. As to technics, the author prefers suture to the anastomotic button. He urges early operation in all such cases.

REVISTA CRITICA DI CLINICA MEDICA-

May 23, 1903.

1. A Small Amount of Uric Acid Eliminated in a Case of Leucæmia probably of Traumatic Origin.

By S. BRUGNOLA (*Concluded*).

2. The Present Status of Electrodiagnosis.

By CIARANFI.

3. On the Disturbances of Respiration.

By L. SICILLIANO.

1. **Uric Acid in Leucæmia.**—Brugnola reports a case of leucæmia of the classical type which was probably due to a traumatism. The noteworthy feature of this case was that, contrary to the usual excess of uric acid found in these cases, there was a very small amount of this substance eliminated. The organism of the patient was therefore capable in this case of transforming the mother substances of uric acid. Another noteworthy fact in this particular case was the prevalence of multinuclear leucocytes in the blood of this patient, so that there was a leucæmia with multinuclear leucocytosis. It is possible that the scarcity of the uric acid eliminated was due to the fact that the leucocytes were predominantly multinuclear, as uninuclear leucocytosis is usually allied with the classical excess of uric acid in the urine of leucæmics. One case, however, is not sufficient to prove this theory, and further observations are needed.

RIFORMA MEDICA.

May 13, 1903.

1. Abscess of the Spleen. By ANGELLO CIPOLLINO.
2. On the Diagnosis of an Abdominal Tumor.

By G. ZAGARI (*Continued*).

3. On Hyperchloruria in Pneumonias and on the Presence of Organic Chlorine in the Tissues.

By A. SANTINI.

4. A Gunshot Wound of the Abdomen.

By E. BARDELLINI.

1. **Abscess of the Spleen.**—Cipollino reports the history of a case of splenic abscess in a man aged twenty-two years. This condition is rare, and but few cases are on record. In almost all instances the abscess is secondary. The splenic arteries, being, as is well known, terminal, there is a liability to infarcts and necrosis of circumscribed areas of the organ. The case here reported is of special interest because it shows that splenic abscess may sometimes be of tuberculous origin, for tuberculosis was produced in animals by the injection of pus from the spleen of the patient. The *Bacillus coli* was, however, found on examination in this pus. The most important general symptom of splenic abscess is fever. This may be continuous or remittent, but in most cases it is typical of pyæmia. A pyæmic fever which develops during convalescence from an infectious disease, and which is accompanied by other symptoms of local character points to suppurative process somewhere in the body. The other general symptoms are allied to the fever, and consist in the typhoid state, weak and

rapid pulse, etc. The local signs consist of tumor in the splenic region and pain. The tumor is only diagnostic when it is of considerable size, and when fluctuation is to be detected in it, otherwise it cannot be distinguished from an enlarged spleen. The pain varies in intensity and may not appear until late, when the abscess is large. The characteristic position of the patient is upon the back, with the trunk flexed laterally.

3. **Chlorides in Pneumonia.**—Santini draws the following conclusions, as the result of his investigations on the subject of the chlorides of the urine in pneumonia and the organic chlorine of the tissues. The quotient of the alkaline mineral chlorides remains invariably or almost constant in the tissues of a patient with pneumonia, as well as in a healthy individual, or it is slightly diminished. During the infectious process the amount of chlorides not eliminated by the organism enters into combination with the organic substances which are abnormally produced during the disease, and which are impermeable to the kidneys. During physiological conditions there is also a constant and definite portion of the chlorides which remains in the tissues as alkaline mineral combinations, while another portion of the chlorine is in combination with organic substances.

4. **Gunshot Wound of Abdomen.**—Bardellini concludes from a study of a case of gunshot wound of the abdomen that, even when there are no signs of perforation or other visceral lesions of grave character, the patient's life may be in immediate danger, and that in cases of gunshot wounds of the abdomen it is not wise to wait till such signs develop, but it is imperative to operate at once, and to seek to ascertain all the damage done by the bullet. In the case cited, the patient was in good condition and did not show any signs of perforation when admitted, but owing to the nature and localization of the wound (in the mesogastrium, to the left of the umbilicus) there was no doubt as to the fact that the wound had penetrated through the intestines. On laparotomy, six perforations were found and closed. A portion of the intestine had to be resected and a Murphy button was used to unite the ends. The patient made a good recovery.

REVISTA MEDICA CUBANA.

June 1, 1903.

1. A Case of Amyotrophic Lateral Sclerosis of Long Duration.

By J. A. VALDES ANCIANO.

2. A Case of Double Gastric Ulcer.

By G. COCCHI and L. CUERVO.

1. **Amyotrophic Lateral Sclerosis.**—Valdes Anciano reports a case presenting some unusual features: For example, entire absence of bulbar symptoms, notwithstanding the ten years' duration of the disease; the commencement of the symptoms of sclerosis in the lower limbs rather than in the upper, as is the general rule; and, finally, the long duration and slow evolution of the disease as compared with its usual, rapid (two to five years') course.

2. **Double Gastric Ulcer.**—Cocchi and Cuervo describe the case of a man, giving a history of previous malarial attacks, who came under hospital treatment for gastric ulcer. But little could be done for his relief, and death from perforation of the ulcer and consequent peritonitis followed shortly after his admission. Autopsy revealed a second, healed ulcer in the stomach, from the existence of which and the development of the ulcer which caused the patient's death, the authors believe a practical lesson is to be drawn. In view of the fact that gastric ulcer occurs most frequently in the anæmic, and that malaria is a fruitful source of impoverishment of the blood, they hold that the patient should not be considered cured when quinine has done its work in breaking up the malarial seizures; but that a vigorous tonic treatment should follow, in order that the patient may be guarded against its after effects. In the case reported, gastric ulcer is believed to be a late manifestation of the former paludal state, which might have been obviated by appropriate postmalarial treatment.

JOURNAL AKOUSHCHERSTVA I CIENSKIKH BOLIESNEY

January, 1903.

1. Gynæcology Among the Other Medical Sciences.
By Professor V. N. MASSEN.
2. On the Treatment of Narrow Pelves.
By N. I. PRIEDINSKY.
3. The Diagnosis of Gonorrhœa in Women.
By G. A. GREIFFE.
4. A Case of Cancer of the Ovary in a Girl Aged Fourteen Years.
By D. P. KOUZNETSKY.
6. On the Technics of Laparotomies.
By P. T. SADOVSKY.
7. The History of Puerperal Sepsis.
By P. G. BONDARIEFF.

4. **Early Ovarian Cancer.**—Kouznetsky reports a rare case of carcinoma of the ovary in a girl who had barely reached puberty. Gussenbauer and Olshausen each have observed similar cases in girls of about eight years of age, and Brown has reported an instance of carcinoma of the ovary in a girl aged nine months. The usual age for this disease is between thirty and fifty years, according to Pfannenstiel. The scirrhus form occurs in old age, but the other forms, especially the medullary, are seen in women during menstrual life or at the climacteric, and grow very rapidly. The diagnosis of a primary carcinoma of the ovary in a young girl is, according to the author, absolutely impossible, although the rapidity of the growth may give a hint as to its malignancy. The treatment is, of course, solely operative, but the prognosis is not so bad as might be supposed, for in three cases on record there was no recurrence in from seven to eight years, and in another case over eight years elapsed without recurrence. Papillary carcinomata of the ovary give the worst record for relapses. In the present instance the patient was a girl, aged fourteen years, who entered complaining of a swelling in the abdomen which had grown larger during the preceding six months. She noticed the "lump" accidentally, but afterward shooting pains developed in it, which recurred in paroxysms. She had never

menstruated. The tumor was of the size of one fist and a half, very movable, and situated at the lower part of the abdomen. It was found to involve the right ovary, and was removed, the pedicle being tied with reindeer tendon. The left ovary was found enlarged to the size of a walnut and nodular, and was therefore also removed. On microscopical examination, a medullary carcinoma of both ovaries was found. The patient made a good recovery.

6. **The Technics of Laparotomy.**—Sadovsky says that the majority of gynæcologists in removing the uterus or annexa ligate the stumps *en masse* by means of stout ligatures passed with blunt needles. In the after-treatment, there are many cases which show a painful thickened stump on palpation or a stump that gives rise to constant and distressing pain, which compels the patient to ask for another operation if needed, to relieve the patient of the painful conditions. This pain in the stumps may be explained by the presence of inflammatory changes in the ligated structures or by the formation of dense adhesions in the surrounding peritonæum. In three cases in which the author has had occasion to perform secondary laparotomies for painful stumps, he has found these structures very much thickened and surrounded by dense adhesions. In one case the stump after an ovariectomy was found adherent to a loop of small intestine, and the remains of a silk ligature were found on separating the loops. In the other cases no traces of the ligatures could be found, the ligatures having been evidently absorbed completely. The author thinks that the trouble lies with the method of ligature employed, and that the structures of the stump should be tied separately, and the peritoneal stump closed by suture afterward. This method takes more time, but that does not matter under present aseptic conditions when we know how to protect the peritonæum by means of sponges. The author applied one or two hysterectomy clamps to the stumps, then dissected the structures, caught the ovarian vessels with artery clamps, and took off the hysterectomy clamps. The remaining bleeding points were then caught with artery forceps. All the vessels were now ligated with catgut and the clamps and forceps removed. The peritoneal stump was closed with continuous or interrupted catgut sutures. In removing the tubes the same method was pursued, the tubes being caught in separate clamps and tied separately. The advantages of this method are that the peritoneal cavity contains only a continuous suture instead of thick ligatures; that the stumps do not project into the peritoneal cavity, and present a smooth surface everywhere covered by the peritonæum; and that the formation of adhesions, especially to the small intestines, is avoided.

ROUSSKY VRATCH.

Saturday, April 26, 1903.

1. The Röntgen Rays and Other Methods of Early Diagnosis in Pulmonary Tuberculosis.
By D. I. VIERUZHISKY.
2. The Sensation of Rhythmical Vibrations at the Periphery of the Body; significance in Diagnosis.
By F. I. IVANOFF.

3. The Action of Copper Citrate in Some Diseases of the Eye.
By A. G. KROTOFF.
4. On So-called Surgical Scarlatina.
By V. P. GERASIMOVITCH.
5. Essentucki. The Season of 1902. Report of the Physicians in Charge of the Health Reports Constituting this Group.
By V. A. STANGE, V. F. ORLOFSKY, and V. V. HOMOLITZKY; with a description of the Zander Institute by Dr. S. I. EINHORN.

1. **Röntgen Rays in Pulmonary Tuberculosis.**—Vieruzhsky, physician to the Nikolas Military Hospital, St. Petersburg, where Russian soldiers affected with tuberculosis are regularly sent, reports the results of a long series of observations in various methods of diagnosing tuberculosis. Speaking of tuberculin as a diagnostic test, he concludes that it has proved disappointing and states that it has been abandoned at the Nikolas Hospital on account of the dangers connected with its use. He does not, however, present a detailed report on this subject, but refers to previous publications by two of his colleagues (Bertenson, in 1891, and Tchigaieff, in 1897). The author is enthusiastic concerning the merits of Röntgen rays in the diagnosis of early stages of consumption. Measurement of the respiratory capacity of the lungs by means of the spirometer, which has been recommended as a method of diagnosis in tuberculosis, has not given him satisfactory results, the figures obtained being uncertain and variable. The use of the Potain sphygmomanometer to determine the blood pressure of tuberculous patients did not give definite information, as blood pressure varies within wide limits in early stages of the disease. The Ehrlich diazo-reaction was obtained in some cases, but was not present constantly, and could not be used as a diagnostic aid. As regards the Röntgen rays, the author realizes the deficiencies and limitations of this means of diagnosis, but says that very frequently skiagraphy offers a means of controlling and confirming the data of physical examination. As such, it is of great value in the early diagnosis of tuberculous lesions. The presence of consolidation at the apices of the lungs, or elsewhere was evident on x ray examination, and the presence of fluid in the pleura could always be made out.

3. **Copper Citrate in Eye Diseases.**—Krotoff has used copper citrate in 109 cases of eye disease, and presents the results of his investigations. Copper citrate was discovered in 1832, by Gay-Lussac, and occurs as a green powder devoid of odor or taste, soluble in water in the proportion of one part in 9143, and in salt solution in the proportion of 1-7700. It contains 35.69 per cent. of copper. In order to determine the bactericidal properties of this substance, the author experimented with various germs, and found that a solution of 1-9143 killed the *Staphylococcus pyogenes* in from three to six and a half hours; the *Bacillus pyocyaneus* in seven hours, etc. Ointments containing copper citrate in use for a month were found sterile. The remedy was used in the following forms: (1) A 5 or 10 per cent. powder with sugar. (2) A 5

to 20 per cent. ointment with vaseline, lanolin, or glycerin, according to Arlt's formula (copper citrate 5-20, and glycerin ointment enough to make 100). (3) In the form of pencils, containing from 10 to 20 per cent. of the active substance in gum Arabic, starch, dextrin, sugar, distilled water, and glycerin to make a mass. (4) In the form of washes, in water, 1-9143. The author has employed this remedy in fresh trachoma, in pannus tenuis, in pannus crassus, in corneal opacities, and in chronic conjunctivitis. He obtained good results in 62.5 per cent, 35.2 per cent. of the cases giving no results, while in 2.02 per cent. the disease became worse. In 12 cases of fresh trachoma [the word *fresh* meaning trachoma in the earlier stages] 3 were without result, and one got worse after the use of copper citrate pencils. The best and most satisfactory results were obtained in pannus tenuis, in which ointments of from 5 to 20 per cent. of copper citrate in glycerin caused disappearance of the pannus in from one to three days. Photophobia, lachrymation and discharge from the conjunctiva diminish very rapidly under this treatment. In pannus crassus also it proved of great value, but not in those cases complicated with xerosis. Trichiasis also interfered with its action, and the lids had to be epilated. In corneal opacities the pencils proved of considerable value, especially in the earlier stages. In fresh trachomata the pencils secured a diminution and even a disappearance of the granulations. In only 12.36 per cent. of all the cases did application of the ointment produce acute exacerbation of the disease, especially in pannus, but this was temporary and was followed by relief. The author concludes that copper citrate is a very valuable remedy in ophthalmic practice. In the rapidity of its effect upon pannus and corneal opacities, it surpasses all other remedies of its class.

AMERICAN JOURNAL OF OBSTETRICS AND DISEASES OF WOMEN AND CHILDREN.

May, 1903.

1. A Method of Determining the Internal Dimensions, Configuration, and Inclination of the Female Pelvis.
By HUGO EHRENFERT.
2. The Rational Treatment of Puerperal Infection,
By H. G. WETHERILL.
3. The Treatment of Gonorrhœa of the Uterus,
By GEORGE W. NEWTON.
4. The Surgical Treatment of Uterine Fibroma,
By BROOKS H. WELLS.

1. **Measurement of the Female Pelvis.**—Ehrenfert briefly narrates the history of internal pelvimetry and mentions the instruments of Van Huevel, Skutsch, and Hirst as best adapted to the purpose, all being based upon the principles suggested by Willenbergh.

He proposes a method based upon a new principle which appears (if we understand him correctly) to be similar to that which is involved in the axis traction forceps.

In conjunction with Dr. J. Neumann, of Vienna, he has devised for the purpose two instruments, the pelvigraph and the kliseometer.

The pelvigraph consists of a cylindrical rod, hollow at the end contiguous to the patient, with a

graduated disc, marker, and spirit level at the end contiguous to the operator. This is for registration purposes. Into the hollow end is attached a rod called an exploring arm, for introduction into the vagina. This arm is made in five different shapes or curves, each being of the same length in a line from the point to the attachment, and each being intended to reach a different portion of the pelvis. By applying the five different arms in succession, moving each until the spirit level is horizontal, the marker will register on a suitable piece of paper five points, which, when joined, will furnish a graphic expression of a vertical mesial plane of the interior of the pelvis.

The kilseometer, for determining the inclination of the pelvis, consists of a metallic arch or bow with a knob at one end and a cylinder carrier at the other. A rod which slides through the carrier always moves upon an axis running through the centre of the carrier and the knob. The inner end of the sliding rod is a knob, while a disc provided with a thumbscrew and a spirit level is at the outer end.

The angle of inclination is obtained by turning the disc until the spirit level is horizontal, a pointer on the disc indicating on the scale the angle of inclination.

These instruments were shown to the Chicago Gynecological Society at its meeting, February 19, 1903, and were discussed by the society. The discussion is in the May number of the *American Journal of Obstetrics*, from which this article has been prepared.

2. Puerperal Infection.—Wetherill laments the discrepancy between the present day teachings in regard to puerperal infection and the results in practice. To be sure the results in the first class maternity hospitals are all that could be desired, but the same is not true in private practice, whether among the poor or the rich. He believes that rational preventive and curative measures are possible even under most unfavorable conditions, and he desires to make a plea for the application of surgical methods, and to urge that they be universally applied in every-day obstetric practice.

He refers the most frequent and serious infection to streptococcus invasion, the source being usually the hands or the instruments of the accoucheur; less frequently the patient or her environment. Infection is possible without fault on the part of the accoucheur when disease of the vagina, uterus, tubes, or ovaries has existed, and it is also possible when one is called so suddenly and at so advanced a period of labor that there is not time for carrying out the necessary details of asepsis.

He believes that hospital treatment for those who are unable to provide suitable surroundings for the parturient woman should be heartily encouraged. He makes two suggestions in regard to prophylaxis: the fewest possible vaginal examinations; and the systematic use of rubber gloves. External palpation is usually sufficient for an experienced obstetrician, without any vaginal examination whatever. The rubber gloves have everything in their favor, and their routine use will reduce both morbidity and mortality. The limitations as to the usefulness of the curette and the uterine douche are throngly in-

sisted upon. The abuse of the curette is properly termed monstrous. The use of the anæsthetic for the curetting is in itself often an element of grave danger for the septic puerpera. The uterine douche, unless cautiously and judiciously used, may do great harm.

The antistreptococcic serum and the unguentum Credé are believed to be ineffective and the former is often harmful. Laxatives and purgatives given indiscriminately may also deplete and weaken when the indications are to stimulate and support. The instillation of normal saline solution into the depleted veins may be life-saving. Other helpful drugs are whiskey, strychnine, caffeine, sparteine, quinine, digitalis, and adrenalin chloride. Intrauterine irrigations of alcohol, as advocated by Carossa, in 1896, and drainage by means of suitable tubes are recommended; also irrigation of the stomach if nausea is present. As to surgical procedures in general in the presence of puerperal sepsis, the rule is given by the author that one should never operate during the acute stage, except as a last resort, and then always with the worst possible prognosis.

3. Gonorrhœa of the Uterus.—Newton says that the treatment of gonorrhœa of the uterus varies with the location and duration of the disease. If the disease is limited to the cervical canal, the discharge should first be removed with a suitable brush, after which a mixture containing 40 per cent. of carbolic acid and 60 per cent. of tincture of iodine is carefully applied on a cotton-wrapped applicator. If the os is eroded, a vaginal tampon moistened with a 1 per cent. creolin solution should then be inserted. These applications are to be made once or twice a week and vaginal douches with a weak solution of creolin should be used daily.

If the disease has passed the os internum and is subacute, the patient should be kept in bed, and for treatment the uterine canal should be dilated, irrigated with four ounces of a 2 per cent. solution of protargol, then lightly packed with gauze moistened with 2 per cent. protargol. The gauze should be removed in twenty-four hours, and the uterus again irrigated with the protargol solution. This should be repeated daily for a week or ten days.

If the disease is chronic the same treatment should be used; and, in addition, the uterus should be curetted after the dilatation.

If salpingitis is already present no local treatment of the uterus can be expected to produce a cure.

4. Uterine Fibromata.—Wells says that the surgical treatment of uterine fibromas may be palliative or radical, the former being accomplished by curetting as frequently as the situation may require; the latter by the vaginal or abdominal removal of the tumor, and the uterus, also, if necessary. The vaginal operation is indicated if the tumor is in the cervical region. If the tubes are diseased, uterus and tumor, with the diseased appendages should all be removed. An abdominal incision may be required to complete the operation. If the tumor is more than three inches and a half in diameter the abdominal operation is to be preferred.

The ideal abdominal operation is myomectomy, but this is not always feasible. Hysterectomy is

always a formidable operation and should not be performed by those who are inexperienced and who are not prepared to meet the complications which may arise.

The patient should be carefully prepared and placed in the Trendelenburg position. The abdominal incision should be a long one, and care must be taken to avoid injury to the bladder. Adhesions must be separated with great caution. The tumor, when freed, should be lifted out of the abdominal cavity. The abdominal contents should be protected with gauze pads. The ovarian arteries and veins are then tied, then the round ligaments. The uterine vessels are then compressed with clamps. The bladder is next dissected away, and the uterine arteries exposed and ligated. The cervix is then divided, and tumor and uterus removed. All bleeding points having been secured the peritoneal edges are united and the abdominal wound closed. If the cervix is to be removed, the arteries having been tied or clamped, the uterus is drawn away from the vagina and the dissection carried down to the cervicovaginal junction, the scissors being then pushed through the tissues and into the vagina. Section around the cervicovaginal junction is then completed, gauze is inserted through the wound into the vagina, and the peritoneal and abdominal wounds closed. The gauze is removed gradually through the vagina during the following six days.

After the operation a rectal enema of a pint of saline solution is given, and this is repeated every three to six hours as occasion may require. Small quantities of hot water with a few drops of lemon juice may be given after six or eight hours, at short intervals. Should there be nausea, an abundance of hot water may be given which can be vomited and the stomach thus be relieved. A high enema of a quart of hot water with an ounce of alum may be given should the bowels become distended. Strychnine in suitable doses may be injected if indicated. After the bowels have been moved the patient may lie on the back or side as she chooses, and the food may be cautiously increased. The urine may be drawn by catheter if there is difficulty in passing it naturally. Injuries to the bladder, ureters, and intestines are possible. The principal causes of death are hæmorrhage and sepsis.

THE EDINBURGH MEDICAL JOURNAL.

April, 1903. (Vol. XIII, No. 4.)

1. On Streptococcus Infection of the Lungs.
By DAVID LAWSON.
2. Retinal Hæmorrhages as a Diagnostic Feature in Fracture of the Base of the Skull and in Subarachnoid Hæmorrhage.
By R. A. FLEMING.
3. The Treatment of Psoriasis.
By W. T. FREEMAN.
4. On Hand Disinfection.
By ROBERT PURVES.
5. Ascites in Early Alcoholic Cirrhosis of the Liver.
By F. PARKES WEBER.
6. The Nervous Affections of the Heart.
By G. A. GIBSON.

1. **Streptococcus Infection of Lungs.**—Lawson reports a case of pure streptococcus infection of the lungs and pleura and comments upon the following points: (1) The low diet treatment in this case at least failed to reduce temperature or to im-

prove the general condition of the patient. (2) No tubercle bacilli were found in the sputum, although the physical signs at the apex of the left lung were pronounced. (3) The exocardial murmur was due to compression of the air contained in the pulmonary cavity by the cardiac systole and not to any purely cardiac factor. (4) The author found inspections of the cavity in the apex of the left lung through the upper wound by laryngoscopic mirror and small electric hand-lamp quite practicable. (5) In regard to the physical sign it was noticed œdema of the chest wall was clearly demonstrated by pressure of the stethoscope over its lower one third behind. The breathing signs over this region never became entirely occluded. They were faintly heard and gave an impression of distance.

2. **Retinal Hæmorrhage in Diagnosis of Skull Traumatism.**—Fleming reports a number of cases of fracture of the skull and from them concludes that subarachnoid hæmorrhage, if sufficiently rapid in its development, will cause retinal hæmorrhage, and that if the effusion is unilateral the hæmorrhage will be confined mostly to the affected side. It may be supposed that the sudden increase of pressure in the subarachnoid space may, if unilateral, tend to pass up the intersheath space of the same side, while the opposite intersheath may be occluded by the distorting force, which must be associated with the production of flattening.

3. **Psoriasis.**—Freeman's treatment for psoriasis is: The acute condition is benefited by salicin, or by the salicylates more than by any other drug. If itching appears the administration of full doses of nux vomica with the salicin is advised. Salicin may be given in doses of sixty grains. When there is much neurosis, combine the treatment with bromides. *Do not use the more powerful remedies.* Absolute rest in bed should be required. Alkaline warm baths are advantageous, but in the oily type of a case, sulphur is to be substituted for or combined with alkali. For external application chrysartobin is the best to employ. Avoid its use about the neck, and do not use it anywhere in an inflammatory type of the disease. Its strength should be regulated and the drug should be used twice a day. If the traumaticin is used, it may be left on for three or four days and some keratolytic agent should be previously used. Thyroid extract is advised but should not be used in old people. Arsenic internally is useful in some cases.

MISCELLANEOUS.

Some Points in the Prognosis and Treatment of Puerperal Eclampsia. Dr. W. E. Fothergill (*The Medical Chronicle*, March, 1903) points out that in cases of threatened eclampsia the prognosis practically depends upon the results of prophylactic treatment. Apart from this, a point worthy of note is the frequent absence of œdema in serious cases. In attempting to forecast the end of a case of actual eclampsia, it is not wise to attach too much importance to the number or severity of the fits. The irritability of the nervous system determines to a large extent the number and

the severity of the symptoms. The use of morphine and other sedatives may so check convulsions and increase coma that neither of these features can be relied on in forming an opinion as to the gravity of the case. The author does not put too much reliance in the generally accepted statement that the mildest cases are those in which convulsions begin after labor is over. The most favorable cases are doubtless those in which fits occur actually during labor and are initiated by some definite external stimulus, such as obstetric manipulations. The quantity of albumin in the urine is, according to the author, a false guide, and he asserts that the reduction in the quantity of urea excreted forms a much more reliable criterion.

When there are symptoms and physical signs of toxæmia during pregnancy, active treatment should never be omitted. Rest in bed, copious drinks of water, milk diet, purgatives (especially calomel and magnesium sulphate), rectal lavage, hot baths, hot wet packs, are all useful. The use of thyroid substance for increasing metabolism and promoting diuresis appears well worthy of an extended trial. When there are no symptoms there may still be albumin in the urine. Although there is no albumin, the daily output of urea may be seriously lessened. The medical attendant should examine the urine periodically during pregnancy, and if the output of urea is low, he should take simple measures to increase it. If these fail, his treatment must become more active. Should albumin appear his care must be redoubled, and should the patient still fail to respond to treatment, it becomes a duty to terminate the pregnancy whether the child is viable or not. The simplest way of viewing the treatment of actual eclampsia is to regard it as an extension of the treatment of threatened eclampsia. Morphine to reduce the irritability of the nervous system, or with the further intention of relaxing arterial spasm, is of use. Rectal lavage and the hot wet pack can be used before or after the attack. Large doses of calomel and Epsom salts can be given as soon as the patient can swallow. *Accouchement forcé* is coming to be regarded as removing the cause in the wrong way, and at the wrong time. On the other hand, slow induction of labor before any attack has occurred or after one attack has been tided over, is daily becoming more popular. Obstetrical treatment should be merely secondary to medical treatment during actual eclampsia. If labor begins before or during the attack, it should be conducted with the same care and patience as if the patient were in health.

Ætiology of Epidemic Dysentery.—M. Vailard and M. Dopter (*Presse médicale*, May 16th) conclude that in France in all epidemic dysenteries, a bacillus identical with that of Shiga is always found. It is agglutinated exclusively by the serum of patients affected with mucosanguinolent dysentery, while the serum of patients with so called tropical dysentery does not cause agglutination. By inoculation of the bacillus or of its toxins into animals, these are affected with symptoms characteristic of epidemic dysentery. The authors say that the bacillus discovered and described by Chantemesse and Widal in 1888, differing from that of

Shiga, should be considered the exciting cause of epidemic dysentery in moderate as well as in tropical countries. The blood of animals immunized against this bacillus possesses certain prophylactic qualities, and it should be tried as a curative agent in the disease.

The Treatment of Purulent Conjunctivitis.

By Edgar S. Thomson, M. D. (*Medical Record*, May 30th).—The first thing to do is to determine the nature of the infection, either by a cover slip preparation, or by a culture. The importance of this lies chiefly in the fact that gonorrhœal conjunctivitis demands a much more heroic line of treatment than does a conjunctivitis due to one or other of the numerous pus germs. The author divides practically all purulent forms of conjunctivitis into gonorrhœal and non-gonorrhœal. The treatment recommended we summarize as follows: (1) General treatment applicable to all cases. (a) Cleanliness. This is imperative and is best accomplished by cleaning the eyes with boric acid solutions. The cleaning should be carried out every ten minutes night and day if necessary. (b) Control of the inflammation. For this iced cloths are the best. They keep down the swelling and to a certain extent inhibit the growth of the infecting microorganisms. (c) Treatment of complications. Protargol and argyrol are the most generally useful drugs for the treatment of corneal complication. Chemosis, when severe and when the discharge is not free, can often be treated with advantage by scarification. Corneal ulcers, under suitable conditions, are best treated by cauterization with pure carbolic acid. After the cornea has become infected hot water applications should be used. (2) The treatment of gonorrhœal conjunctivitis. Nothing can compare in efficiency with solutions of silver nitrate. It should be applied as soon as the diagnosis is made. In adults, if the case is seen in the first few hours after the infection has occurred and before there is much swelling, a two per cent. solution, applied thoroughly with a cotton swab on an applicator to all parts of the conjunctiva, will be sufficient. The reaction which invariably follows can be controlled with iced cloths. If the case is seen later, about the second day, when the discharge and swelling are about at their height, then it is often well to try and abort the attack by applying solutions as strong as three or four per cent. If this is done the applications should always be neutralized with salt solution. When the disease is well developed, as on the third or fourth day, two per cent. solutions of silver nitrate will give the best results. In children the silver can only be dropped in the eye, as they will not tolerate the applications. However, the results are generally good. In ophthalmia neonatorum protargol is often of great use. When the solutions of silver are found to be too irritating a six per cent. solution of protargol may be used. (3) The treatment of conjunctivitis due to the ordinary pus germs. Silver nitrate should not be used in these cases. Six per cent solutions of protargol will be sufficient. If it is used for too long a period it will stain the conjunctiva. Argyrol, in twenty-five per cent. solution, may be used in place of protargol. It has the advantage of being absolutely non-irritating.

Letters to the Editor.

ICE IN THE TREATMENT OF MINOR BURNS.

NEW YORK, June 10, 1903.

To the Editor of the NEW YORK MEDICAL JOURNAL
AND PHILADELPHIA MEDICAL JOURNAL:

Sir: Concerning the ice treatment of minor burns, reported in the March, 1903, number of the *Postgraduate*, the following case would seem to offer a good illustration in all probability of sufficient interest to some of your readers.

M. M., æt. twenty-three, on May 19th, by an accidental spilling of a large kettle with boiling green peas and other ingredients, had her thinly clothed right arm burned from about two inches above the elbow to the tips of the fingers. As customary in the house, an attendant at once smeared the burn with salad oil and put on ice as best she could. At my arrival, no vessels large enough for the immersion of the entire lower arm being at hand, packings with ice or ice in some water to every part of the burnt surface did not proceed satisfactorily for about an hour. Shock also had to be overcome. Then two large pieces could be obtained which could be grooved out, the one to place the arm lengthwise into, the other to serve for covering. Partly because of the intensity of the burn, but probably more through the protracted primary delay, complete and permanent freedom from pain except for a returning narrower slightly itchy area about two inches posteriorly above the elbow, did not ensue until five hours from the beginning, a very unusual length of time. Now, ready for the dressing, a salve was prepared of about three parts of petrolatum and two parts of olive oil, with 2 per cent. of iodoform, the latter replaced on the fourth day by a small percentage of balsam of Peru, which, thickly smeared upon a double thickness of absorbent gauze, was placed next to the skin, with careful avoidance of the pricking of the blisters to utilize the very efficient properties of the serum within them. These dressings were renewed once daily, with the result that on June 3rd, the fifteenth day after the injury, the formation of new skin was complete, so that except at a few very small places the burnt tissues could be lifted off in large, continuous sheets. At some places, especially over the belly of the supinator longus and around the elbow, the new cuticular tissue was as yet thin enough to allow the vascular layer to shine through brightly, but after four more days, when the dressing could be simplified to anointing the arm with the salve directly with an absorbent bandage for a cover, healing was complete, and the patient could again resume her daily labor. The new skin was entirely normal, no scar or other deforming tissue; sleep natural after the second night; spirits and appetite good throughout.

C. AM ENDE, M. D.

Herrick on Conservative Surgery.—In the *Hesperides* of Robert Herrick (number 809) the poet sings:

'Tis the Chyrurgions praise, and height of Art,
Not to cut off, but cure the vicious part.

Book Notices.

The Diagnosis of Diseases of Women. A Treatise for Students and Practitioners. By PALMER FINDLEY, B. S., M. D., Instructor in Obstetrics and Gynecology, Rush Medical College, in affiliation with the University of Chicago; Assistant Attending Gynecologist to the Presbyterian Hospital, Chicago. Illustrated with Two Hundred and Ten Engravings in the text and Forty-five Plates in Colors and Monochrome. Philadelphia and New York: Lea Brothers & Co., 1903. Pp. v-494. (Price, Cloth, \$4.50; Leather, \$5.50 net.)

Dr. Findley has done a real service to the profession in writing this book. Textbooks and manuals of gynecology abound, and all of them dwell upon the necessities and methods of diagnosis. But a work devoted to diagnosis has long been needed, and this need is well filled by the book before us. Its conception is proper in that the author bases his diagnostic procedures, first, on examination, and then on pathological findings, while ætiology is considered in its proper light, the diseased or abnormal conditions being traced to their pathological origin or to embryological defects. It is, therefore, a scientific book, and in its clinical features it is no less worthy. The development of the clinical history, and the methods of gynecological examination, together with the broad view taken of the genital diseases of women as related to occupation, mode of life, and other diseases, are very admirably set down. It constitutes, therefore, a serviceable and safe book for the student in his gynecological studies, and an excellent work for the practitioner to have at hand.

If the book lacks one element, it is the absence of the philosophy of gynecology. The subjects are presented in a somewhat disjointed manner, and their manifest and proper relation to each other is not brought forward with the clearness with which it might be. Each topic is discussed by itself rather independently, although, as a rule, the subjects are all thoroughly treated. Especially good we consider the chapters on tubal pregnancy, on uterine displacements, and on the neoplasms of the uterus and the ovaries. It is evident that, while trying to be as thorough as possible, the author endeavored also to be concise and terse.

Here and there are omissions which we hope to see filled in the next edition. No mention is made of the value of blood examinations, especially in the purulent conditions in the pelvis. Uterine atrophy is not discussed at all. No distinction is made between cysts of the vulvovaginal gland and abscesses of the organ. Transverse septa of the vagina, important in their gynecological aspects, are only mentioned, whereas a description and a means of diagnosing them seem called for in a book of this character. These are a few of the important omissions. Opinions will probably not agree as to some of the author's statements. Thus, he gives as the cause of the habit of abortion—which does not exist—in cases of retroversion, the congestion of the uterus. It is much more probable that the inability of the uterus to rise out of the pelvis at the end of the third month is responsible for the repeated abortions seen in women who suffer from

this form of displacement. At any rate the author's dogmatic statement is scarcely warranted. Again, his dictum that Jewish women reach the menopause earlier than others in the same climate does not agree with the facts in the case.

We note a few typographical errors. The illustration on p. 153 is labeled ". . . of a chorionic villi," when the singular should have been employed. Kreutzmann is spelled Krentzmann (p. 148). The author spells Bartholinian with a terminal "ean," which is, we think, unique.

These minor criticisms, however, are merely from the skimming of the milk. The cream of the book is excellent, and we do not doubt that it will be speedily absorbed. The illustrations, some of them in color, set off the book handsomely, and many of them are original. The work is useful, modern, and a worthy contribution to medical literature.

Surgical Anatomy. A Treatise on Human Anatomy in its Application to the Practice of Medicine and Surgery. By JOHN B. DEEVER, M. D., Surgeon in Chief to the German Hospital, Philadelphia. In Three Volumes. Illustrated by 499 Plates, nearly all Drawn for this Work from Original Dissections. Volume III. Abdomen; Pelvic Cavity; Lymphatics of the Abdomen and Pelvis; Thorax; Lower Extremity. Philadelphia: P. Blakiston's Son & Company, 1903. Pp. xii-17 to 816.

The third volume, dealing with the abdomen, pelvic cavity, lymphatics of the abdomen, pelvis, thorax, and lower extremity, completes this work, characterized by the abundance, exquisiteness, and accuracy of the illustrations. It is offered in an artistic form, exemplifying a high type of workmanship in book making to the attainment of which no less the skill of the artist than the judgment of the author have largely contributed.

The illustrations depict the regional anatomy to be considered in the area of surgical activity, but there are altogether too few pictures that set forth the limited anatomical region encountered and exposed by surgical incisions. Thus, there is portrayed an instance of pyloroplasty under conditions which we do not meet with on the operating table. The operative procedures are interwoven with descriptive anatomy, commendable for its terseness, but the narrative of the surgical facts is very fragmentary. In the case of the gall bladder the surgical considerations for the attack on this viscus in disease are wholly wanting.

The sympathetic plexus, which is for practical purposes *hors de combat* during operations, is most fancifully pictured, whereas we have nowhere observed a single illustration of the lymphatic glands. Concerning the latter we must dissent from the unsurgical advice to remove glandular enlargements in the vicinity of the larger vessels with the sharp spoon. These deficiencies are not singled out as instances of errors of commission or omission, nor in a spirit of hypercriticism, to detract from the excellence of the work, whose usefulness impresses us, not so much as offering applied surgical anatomy, but as presenting an anatomy infused with the life born of surgical intervention. Viewed in this

light, we see a distinct *raison d'être* for the production of still another anatomy.

Upon the completion of this vast work we wish to congratulate the author on having provided us with an anatomy *in vivo* seen through the eyes of an active surgeon. So splendid a work augurs well for the future of surgical teaching in America, since the refinement of surgery is more and more dependent upon a thorough groundwork in anatomy.

The Practical Medicine Series of Year Books. Under the General Editorial Charge of GUSTAVUS P. HEAD, M. D., Professor of Laryngology and Rhinology, Chicago Post-Graduate Medical School. Volume IV. Gynecology. Edited by EMILIUS C. DUDLEY, A. M., M. D., Professor of Gynecology, Northwestern University Medical School, etc., and WILLIAM HEALY, A. B., M. D., Instructor in Gynecology, Northwestern University Medical School. Chicago: The Year Book Publishers, 1903. Pp. 5 to 242. (Price, \$1.25).

One can easily see the advances made in the various branches of medicine in the series of books of which this is one. In the present volume gynecological literature down to February of the present year has been threshed out, and it is interesting to note how the specialists in this field of work vary their work from year to year. Not so much of operating and a variance of technics is noted as finer and more accurate methods of diagnosis. This is especially true, in this volume at least, of the diagnosis of vesical diseases. The series is valuable and useful, and this volume is no exception to the rule.

The Surgery of the Head. By BAYARD HOLMES, B. S., M. D., Professor of Surgery in the University of Illinois, etc. New York: D. Appleton & Company, 1903. Pp. xv-569.

A series of books dealing with surgical emergencies is in course of preparation, of which this is the first volume, which treats of the surgery of the head exclusive of the eye, ear, nose, and throat.

The manner of the presentation of the subject is radically different from that of other text books of surgery. It is a clinical narrative of the surgical exploits of a surgeon who has made the most of a large experience. As stated in the preface, the very commonplace, the less frequent but exigent, and the extremely important yet greatly theoretical conditions, are the basis of this quasi-emergency surgery. Unlike other emergency surgeries, this does not impress one as being purposely designed in a patronizing spirit to reach the "country doctor" or the surgical neophyte by offering first aid advice. The nineteen chapters which make up this book are excellent essays, not rendered in the time-honored didactic style, but colloquially set down, so that in reading these pages we are successively taken into the confidence of the surgeon consulted in his office, visiting at the bedside, operating in hut or hospital, epicritically considering his work in the laboratory, and finally summarizing his results under the red lamp.

Fourteen full-size plates and ninety other illustrations, well selected, materially aid in the understanding of the book. This monograph is written

on the lines of the *études cliniques*, so favorite a form of literature in France. It is worthy of much imitation, since the deeds of the surgeon are thus preserved as a unit, and do not exist as fragmentary and scattered writings. The educational value of this book is of a high order, since it furnishes the very best kind of supplementary or collateral reading to the medical student.

BOOKS, ETC., RECEIVED.

The Refraction and Motility of the Eye. For Students and Practitioners. By William Norwood Suter, M. D., Assistant Surgeon, Episcopal Eye, Ear and Throat Hospital, Washington, D. C. Illustrated with 101 engravings in the text and 4 plates in colors and monochrome. Philadelphia and New York: Lea Brothers & Co., 1903. Pp iii-390. (Price, \$2.00.)

Arteria Uterina Ovarica. The Utero-Ovarian Artery, or The Genital Vascular Circle. Anatomy and Physiology, with their Application in Diagnosis and Surgical Intervention. Byron Robinson, B. S., M. D., Chicago, Ill. Author of "Practical Intestinal Surgery," "Landmarks in Gynecology," "Life-Sized Chart of the Sympathetic," "Abdominal Brain," "Colpoperineorrhaphy and the Structures Involved," "The Ureter," "Gynecologic Charts of Genital Circulation." Chicago, Ill.: E. H. Colegrove, 1903. Pp. iii-182. (Price, \$1.00.)

The Surgical Treatment of Gastric and Duodenal Ulcers. By B. G. A. Moynihan, M. S. (Lon.), F. R. C. S. Eng., Senior Assistant Surgeon, Leeds General Infirmary; Consulting Surgeon to the Skipton Hospital and to the Mirfield Memorial Hospital; Member of the Board of Examiners in Anatomy for the Fellowship, and formerly Arris and Gale Lecturer, Royal College of Surgeons of England. Illustrated. Philadelphia, New York, London: W. B. Saunders & Company, 1903. Pp. 5-83. (Price, \$2.50.)

Proceedings of the Nebraska State Medical Society. Thirty-fourth Annual Session. 1902.

Transactions of the American Roentgen Ray Society. Third Annual Meeting. Chicago, Ill.

Proceedings of the New York Pathological Society. December, 1902.

The Economic Proceedings of the Royal Dublin Society. July, 1902. Vol. I., Part 3.

A Contribution to the Study of Malignant Endocarditis. By F. J. Poynton, M. D., M. R. C. P. and Alexander Paine, M. D. (From Vol. 8, of the Medico-Chirurgical Transactions). London: 1903. H. K. Lewis, 1903.

A Further Contribution to the Distribution of Cancer. From the *Practitioner* for May, 1903. By D'Arcy Power, F. R. C. S. (Eng.). Senior Surgeon to the Victoria Hospital for Children, Chelsea; Assistant Surgeon at St. Bartholomew's Hospital, E. C. London: *The Practitioner*. Limited, 30 Holborn, E. C.

The Scientific Transaction of the Royal Dublin Society. September, 1902. With title-page and index to Vol. vii. Vol. viii. (Series ii.), Part I. Part I. On the Magnetic and Electric Properties of an Extensive Series of Alloys of Iron. Part III., by W. F. Barrett, F. R. S.; W. Brown, B. Sc.; and R. A. Hadfield, M. Inst. C. E. With plates, i-iv. Dublin: 1902. Pp. i-22.

The Scientific Transaction of the Royal Dublin Society. April, 1902. Vol. vii. (Series ii.) Part XIV. The Results of an Electrical Experiment, Involving the Relative Motion of the Earth and Ether, Suggested by the late Professor Fitzgerald. By Fred. T. Trouton, D. Sc., F. R. S., University Lecturer in Experimental Physics, Trinity College, Dublin. Dublin: 1902.

The Scientific Transactions of the Royal Dublin Society. Vol. vii. (Series ii.) Part XVI. Some Sedimentation Experiments and Theories. By J. Joly, D. Sc., F. R. S., F. G. S., Honorary Secretary R. D. S., professor of Geology and Mineralogy, Trinity College, Dublin. Dublin: 1902.

The Scientific Transactions of the Royal Dublin Society. May, 1902. Vol. vii. (Series ii.) Part XV. Some New Forms of Geodetical Instruments. By Sir Howard Grubb, F. R. S., Vice-Pres. Roy. Dub. Soc. Plate xxxiv. Dublin: 1902.

Miscellany.

Surgery of the Heart.—By Benjamin Merrill Ricketts, Ph. B., M. D. (*concluded* from p. 1149).

ANGEIOMA.
1887-1903.

Angeiomata are infrequent, erectile or vascular and cancerous when the alveolar spaces communicate with one another. They develop, on the external or internal surfaces of the heart alike, and in the same manner. They may rupture into one or all the chambers of the heart, and may enter the general circulation, producing death by embolism or otherwise.

There have been ten contributions to this subject.

PARASITIC DISEASE OF THE HEART: ECHINOCOCCUS.
1717-1903.

The echinococcus may attack any portion of the heart. The cysts may rupture into the pericardial or pleural cavity, or into any one or all of the chambers of the heart, and thereby enter the general circulation.

Kortholt (1717) was the first to describe this form of cardiac cysts.

There have been about sixty contributions to this subject.

CYSTICERCUS.
152-1903.

Cysticercus is of two forms, *saginata* and *solum*. It is found more frequently in India and England, but it has been discovered in all parts of the civilized world. The urinary bladder is the most usual location, but it has been found in the heart by Lendet, in 1852, since which time there have been nine other contributions to this subject.

TRICHINA SPIRALIS

is very rarely found in the heart. The female is larger and more numerous than the male, and when found in the heart the condition is of secondary origin.

PARAGONIMUS WESTERMANI

is a trematode found in Asia, and is known as a lung fluke. It is occasionally found in the heart, and when there found is probably secondary.

MYCOSIS

of the heart consists of fungoid neoplasms showing an abnormal growth of lymphatic glands. It is caused by pathogenic microbes (bacterial or parasitical) in the organism.

They were described by Julia, in 1846.

ACTINOMYCES

was discovered by Langenbeck. It is a vegetable parasite occasionally found in the heart; may be primary or secondary. The infection of the heart

is usually from the left lung, which is more frequently affected than the right lung. The nodules are thread-like, pearly or yellow, and from one half to two millimetres in diameter. They undergo fatty degeneration and cause abscess, which may rupture into the cardiac chambers or pericardial sac. Carnivorous animals seem to be immunized to this disease.

ASPERGILLUS

is a vegetable parasite discovered by Virchow, in 1856. It is of three varieties: *Aspergillus fumigatus*; *Aspergillus niger*; *Aspergillus flavus*. Of these, *Aspergillus fumigatus* is the most dangerous; it is green in color, and grows best in an atmosphere from 37° to 40° C.

OIDIUM ALBICANS

is a vegetable parasite seldom found in the heart. It forms delicate horizontal filaments which are apparently homogeneous in structure, and from which short articulated pedicles take their rise.

There have been fifteen contributions to this subject.

BACILLUS ANTHRACIS

has become generally distributed over the world, but seldom affects man. It was found in the human heart by Davaine and Rayer, in 1850. Koch, however, was the first to discover the spores.

It may be primary or secondary in the heart, and the period of incubation is from a few hours to four days.

BACILLUS ŒDEMATIS MALIGNI

causes a progressive gangrenous œdema and emphysema resembling that caused by the bacillus anthracis. It is found on all serous surfaces, internal organs being but slightly affected. It is often associated with the bacillus of tetanus and originates in foul and faecal matter, garden earth, and filth in general. It is one of the rare bacilli found in the heart.

BACILLUS TUBERCULOSIS

may be primary or secondary in the heart; it is more frequently secondary. It is found in the form of nodules, miliary abscesses, or ulcers varying in size. It may invade the endocardial or pericardial surfaces or the muscular structures, in part or as a whole. It may occur in childhood, but is more frequent between the fifteenth and thirtieth years.

Macmichael (1826) found tuberculous deposits in the cardiac cavities. Post (1830), Hache (1832), Gillman (1842), Banks (1850), and Gros (1859), each record a case of cardiac tuberculosis.

There have been seventy-five contributions to this subject.

BACILLUS ÆROGENES CAPSULATUS (GAS BACILLUS)

has been found in the heart muscles of rabbits, by Ohlmacher, who says that it was not found in the smears from the blood of the heart.

It was first described by Welsh, who thinks that it practically dominates the whole field of pneumato-

pathology. It is extremely virulent, but dies at about the end of the fourteenth day.

BACILLUS TYPHOSUS

Vincent. So far as known such lesions are secondary, and their effect is not understood.

CONCLUSIONS.

1. The heart may have only one auricle and one ventricle, or it may have five cavities.

2. The heart may be in the right thoracic cavity or in the abdominal cavity.

3. Removal of the pericardium does not of itself cause death.

4. It may, however, cause death subsequently, as the result of extensive cardiopneumonic adhesions.

5. Exploration of the walls and chambers of the heart with a knife or needle for foreign bodies or pathological conditions should be done, but only after the pericardium has been opened for ample space. It is rational, justifiable, and safe.

6. Not all wounds of the myocardium will require suture, but the pericardium should be opened to remove clots and make drainage available.

7. A myocardial abscess or cysts of any character can be incised by knife or needle and drained through an open pericardium.

8. Gangrene of the heart demands incision of the pericardium and drainage of the pericardial cavity.

9. Malignant disease of the heart at this time resists treatment of any kind.

10. Aneurysm, mitral stenosis, hypertrophy and dilatation of the heart may be more or less successfully dealt with by surgical methods yet to be determined.

11. The injection of hot water or gelatin into aneurysmata of the heart may add to the solution of their treatment.

12. Aneurysm of the coronary artery should be treated by proximal ligation.

13. Ligation of one coronary artery at its origin or elsewhere will not of itself produce death.

14. Rupture of the heart, spontaneous or otherwise, demands suturing (immediate death does not always occur).

15. Pedunculated tumors upon the external surface of the heart can be successfully removed.

16. Pedunculated tumors within the cardiac chambers may also be removed.

17. Lacerated, incised, and punctured wounds (penetrating or nonpenetrating) of the heart can be successfully sutured.

18. Suture of wounds in the aortic arch can be successfully done.

19. Interrupted sutures of fine silk and the smallest practical needle are preferable for suturing the heart and ligating the coronary artery. Continuous sutures should not be used; if one breaks all are lost.

20. Suturing or any other surgical procedure should not be discontinued because of the heart ceasing to pulsate. The work can and should be completed in a much shorter time on a quiescent heart.

21. Divulsion of the sphincter ani and all methods

of resuscitation should be persistently followed while operation is being conducted.

22. The removal of cardioliths (intramyocardial or within the chambers) is possible, and should be attempted when they cause serious trouble.

23. The x ray will greatly aid in determining their presence.

24. They are usually in the apex of one of the ventricles of bipeds.

25. When found in the myocardium they are usually in the ventricular wall (most frequently that of the left, which is thicker) and as a rule are contained within a cyst.

26. There have been about fifty-three operations upon the heart for injury, with eighteen recoveries.

Swallowed a Tube of Ergotine Tablets.—We have all heard of the case in which the label on the bottle of medicine, "to be shaken before taken," was understood by the attendants to apply to the patient instead of to the medicine. Dr. Herbert Gregory reports, in the *Lancet* for May 23rd, a parallel case. Being called to a premature labor at a place some miles distant from his residence, and in view of possible hæmorrhage, he left behind a tube of hypodermic ergotine citrate ($1\frac{1}{100}$ of a grain), with instructions that the patient was to "take two of these," meaning the tablets, if necessary. The necessity thus provided for arose. On being subsequently summoned to the patient, Dr. Gregory asked for the tube of ergotine, and to his astonishment learned that a neighbor in attendance had mistaken the instructions and given the one tube bodily, with all its contents, and had looked in vain for a second. Castor oil was administered, and four days later the tube was passed entire, fortunately with its cork *in situ*, and the contents unaffected.

The Hour of Death.—The *Gazette médicale de Paris* for May 30th says that according to a daily paper, a physician has noted the hour of death of 2,880 persons of all ages in a mixed population, and during a period of several years. The maximum hour of death is from 5 to 6 a. m.; the minimum from 9 to 11 a. m. In the first case the mortality is 40 per cent. greater than the average, and in the latter, $6\frac{1}{2}$ per cent. less. From 10 a. m. to 3 p. m. in the day, the mortality is not high, and the most fatal hours are from 3 to 6 in the morning.

It seems to the *Gazette* that these observations are easily explained. In 1864 Haviland presented statistics to the British Medical Association to the effect that in the 5,000 to 6,000 cases he had noted, death had resulted in the great majority of cases between 1 and 8 a. m.; the practical deduction from which fact is that death generally comes when the sick are least nourished and cared for. If care were taken, death could be postponed in many cases. More recently, in 1888, Féré, investigating the subject at the Salpêtrière and at Bicêtre, found the fewest deaths between 7 p. m. and midnight, and the most fatal hour between midnight and 1 a. m. This would seem simply to show that the nurses going off duty at mid-

night left as much work as possible to their successors.

Twin Pregnancy with a Complete and Almost Closed Hymen.—Dr. C. K. Bowes reports in the *British Medical Journal* for May 9th the case of a primipara, thirty-eight years of age and married five years, in whom he found the pains strong, prolonged, and frequent. On attempting to make a vaginal examination, he could find no orifice, but with the aid of a light he found that the hymen was unruptured; it had a hole in it about three-tenths of an inch in size. He could not get his little finger through the hole, as it was so small and the hymen so sensitive. He gave the patient chloroform, ruptured the hymen, and found a head presenting with the membranes ruptured and the os fully dilated. He delivered her with forceps, and as the uterus seemed very large, he examined again, and felt another bag of membranes, which he ruptured, and found a breech presentation, and had no difficulty in delivering the twin. There was one large placenta. The husband, when questioned, afterward said he did not think he had ever penetrated.

A Serial on Cereals.—*Puck*, for June 10th, gives the following suggestion for a "breakfast food" advertisement. It certainly contains more truth than many advertisements on the same subject:

Secgrohic!

Something entirely new! The greatest discovery of the age!

A revolution in breakfast foods!

All the wood that's fit to eat!

Secgrohic is the sawdust of second-growth hickory. It sells at the same price as do the ordinary breakfast foods made of dead and down timber.

Why not have the best when it costs no more?

Every package sterilized.

An English Physician's Experience at the Madrid Congress.—The correspondent of the *British Medical Journal* for May 9th humorously relates his experience with his landlady, when leaving Madrid, as follows:

"Then came the question of paying. I had arrived there on Thursday afternoon, and I left on Monday afternoon, and this, at ten pesetas a day, made, according to my calculation, forty pesetas. I therefore laid eight new silver cart-wheel pieces of five pesetas on the table. These she counted over, and then claimed ten pesetas more, insisting that from Thursday to Monday was *five* days. She affirmed that I should not leave her house until I paid what she demanded, and rushing off to the main door of her flat she shut and bolted it, and stood with her back against it. It was necessary for me, therefore, to carry her away from the door before I could open it and escape with my portmanteau. With the help of a messenger the portmanteau was then put on the box of an open cab. The lady having disappeared I thought that I was all right, and I told the *cochero* to drive to the Estación del Norte. But before we were under way the lady reappeared with a policeman, and practically gave me in charge for attempting to defraud her!

"The Calle Montera leads down into the Puerta del Sol, a splendid open space about four times the size of Piccadilly Circus, and as the lady kept on

accusing me and gesticulating, a crowd was collecting. Then two more policemen arrived and stood over me as I sat in the victoria. They asked me for my version of the affair, and I told them I had agreed to pay the lady ten pesetas a day for a small room, and I ended by saying, "*Aun he pagado demasiado, y no pagaré mas!*" (I do not quote this as classical Spanish; I merely repeat what I kept saying to the police—I had already paid her too much and I did not intend to pay her any more.) By this time the lower end of the Calle Montero was chokefull of people who were interesting themselves in the altercation, and a crowd was beginning to surge up from the Puerta del Sol. The electric tram-line was blocked, and all traffic rendered absolutely impossible. I never saw a crowd collect so quickly, and I certainly never occupied so central a position in one.

"In the height of all this excitement a gentleman wearing the Congress badge came up to me and asked me if I were an Englishman. He assured me that he was immensely amused at the scene, and, having heard my story, told me that his landlady had done him out of 100 pesetas. I then asked him to beg the cabman to try his best to hurry away; but he replied he could not do this as he did not know the Spanish word for *hurry*. However, it did not matter, for so anxious had I been to leave my miserable lodging that I had ordered the cab two hours before it was wanted, and "I had all the time," as the French say. Eventually, perhaps because it was the simplest and the easiest way of clearing the street for traffic, the police allowed me to go, and as I left I saw the lady still holding out that handful of new silver, and violently gesticulating against what she pretended to think was deliberate fraud. As the crowd made way for me I waved them a triumphant, and, I hope, graceful *adios*, thankful to have got away."

An Ancient Greek Epitaph on a Physician.—Empedocles, who was born at Agrigentum, in Sicily, about 455 B. C., has left us, among other epigrams, an epitaph on a physician named Pausanias. It contains a pun on the physician's name, the word *παύω* signifying "to cause to cease." A rendering is given in Abraham Mill's *Poets and Poetry of the Ancient Greeks*, as follows:

Pausanias—not so named without a cause,
As one who oft has given to pain a pause—
Blest son of Æsculapius, good and wise,
Here, in his native Gela, buried lies;
Who many a wretch once rescued by his charms
From dark Persephone's constraining arms.

Ferments in the Amniotic Fluid.—Dr. Josef Bondi (*Zentralblatt für Gynäkologie*, May 23d) concludes from his studies that the amniotic fluid regularly contains ferments, especially diastase and pepsin. The serum of an adult contains the same ferments, while the serum of the new-born child contains them only in traces or not at all. This would lead to the conclusion that the amniotic fluid is derived from the maternal serum. These ferments have no influence in determining the maceration of dead fetuses; autolytic processes appear to play some rôle in the changes of the internal organs.

Official News

Infectious Diseases in New York:

We are indebted to the Sanitary Bureau of the Health Department for the following statement of cases and deaths reported for the two weeks ending June 20, 1903:

DISEASES.	Week end'g June 13.		Week end'g June 20.	
	Cases.	Deaths.	Cases.	Deaths.
Measles	413	17	331	13
Diphtheria and Croup.....	443	44	433	57
Scarlet fever.....	315	15	225	19
Small-pox.....	1	0	0	0
Chicken-pox.....	102	0	90	0
Tuberculosis	343	14	283	112
Typhoid fever.....	59	6	50	7
Cerebrospinal meningitis.....	0	3	0	0

Public Health and Marine Hospital Service Health Reports:

The following cases of smallpox, yellow fever, cholera and plague, have been reported to the surgeon-general, Public Health and Marine-Hospital Service, during the Week ending June 20, 1903:

Smallpox—United States.

Place.	Date.	Cases.	Deaths.
California—Los Angeles	May 30-June 6 ..	1	
California—San Francisco	May 31—June 7 ..	1	
Colorado—Denver	May 2-23	70	
Florida—Baker County	June 6-13	1	
Florida—Duval County	June 6-13	3	
Florida—Escambia County	June 6-13	1	
Florida—Levy County	June 6-13	10	
Illinois—Belleville	June 6-13	3	1
Indiana—Evansville	June 6-13	2	
Louisiana—New Orleans	June 6-13	1	
Massachusetts—Holyoke	May 31-June 6 ..	2	
Michigan—Detroit	June 6-13	11	
Michigan—Flint	June 6-13	1	
Michigan—Grand Rapids	June 6-13	3	
Michigan—Port Huron	June 6-13	1	
Minnesota—Winona	May 30-June 13 ..	2	1
New Hampshire—Nashua	June 6-13	7	
Ohio—Cincinnati	June 5-12	3	
Ohio—Dayton	June 6-13	6	
Ohio—Hamilton	June 6-13	1	
Pennsylvania—McKeesport	June 6-13	2	
Rhode Island—Warwick	June 8-15	4	
South Carolina—Charleston	June 6-13	2	
Tennessee—Nashville	May 23-30	1	
Utah—Salt Lake City	May 31-June 6 ..	23	
Wisconsin—Milwaukee	June 6-13	16	

Smallpox—Foreign.

Brazil—Rio de Janeiro	May 3-10		5
Canada—Amherst, N. S.	June 12	3	
Canada—Fredericton, N. B.	June 12	5	
Canary Islands—Las Palmas	May 9-16	18	
Colombia—Barranquilla	May 24-31	1	
Colombia—Bocas del Toro	June 2		Epidemic.
France—Paris	May 8-16		1
France—Paris	May 23-30		1
Great Britain—Birmingham	May 23-30	7	
Great Britain—Bradford	Mar. 30-May 23 ..	100	5
Great Britain—Bristol	May 23-30	1	
Great Britain—Dublin	May 23-30	14	
Great Britain—Dundee	May 23-30	5	
Great Britain—Leeds	May 23-30	21	3
Great Britain—Liverpool	May 23-30	33	4
Great Britain—London	May 23-30	10	
Great Britain—Newcastle-on-Tyne	May 23-30	1	1
Great Britain—Nottingham	May 16-23	2	
Great Britain—Sheffield	May 23-30	1	
Great Britain—South Shields	May 23-30	1	
Great Britain—Sunderland	May 23-30	1	
India—Bombay	May 5-19		111
India—Calcutta	May 2-16		3
Japan—Kobe	Apr. 25-May 2 ..	6	
Mexico—City of Mexico	May 17-31	31	13
Russia—Moscow	May 16-23	4	
Russia—Odessa	May 16-30	4	1
Russia—St. Petersburg	May 16-30	71	14
Russia—Warsaw	May 2-16		5
Straits Settlements—Singapore	Apr. 18-May 2 ..		1

Yellow Fever.

Brazil—Rio de Janeiro	May 3-10	8	
Costa Rica—Limon	May 28-June 4 ..	4	1
Mexico—Tampico	June 1-8	16	9
Mexico—Vera Cruz	May 31-June 6 ..	26	8

Plague—United States.

California—San Francisco June 5 1

Plague—Foreign.

Africa—East London	Apr. 12-25	2	
Africa—King Williams Town	Apr. 12-25	5	
Africa—Port Elizabeth	Apr. 12-25	15	
China—Hongkong	May 1-8	95	83
India—Bombay	May 5-19		740
India—Calcutta	May 2-16		171
India—Karachi	May 3-17	332	292
Japan—Yokohama	May 8-16		2
Peru—Callao	May 3-10		2

Cholera.

China—Canton	May 8		50
China—Hongkong	May 1-8	2	
India—Bombay	May 5-19		1
India—Calcutta	May 2-16		125
Turkey—Damascus	to May 15	94	84

Army Intelligence:

Official List of Changes in the Stations and Duties of Officers serving in the Medical Department of the United States Army, for the Week Ending June 20, 1903:

EDIE, GUY L., Major and Surgeon. Assignment to Camp Monterey, Cal. revoked. Ordered to remain at Columbus Barracks, Ohio.

HUNTINGTON, P. W., First Lieutenant and Assistant Surgeon. Will proceed from Vancouver Barracks, Wash., to Boise Barracks, Idaho, to accompany the 17th U. S. Infantry to Manila, P. I.

WHITCOMB, C. C., First Lieutenant and Assistant Surgeon. Will proceed from San Francisco, Cal., to Governor's Island, N. Y., for duty with army and navy manoeuvres.

Naval Intelligence.

Official List of Changes in the Medical Corps of the United States Navy, for the Week Ending June 20, 1903:

ANDERSON, F., Medical Inspector. Commissioned medical inspector from January 31, 1903.

DESSEZ, P. T., Assistant Surgeon. Appointed assistant surgeon from June 10, 1903.

DICKSON, S. H., Medical Inspector. Ordered home to wait orders.

KEENE, W. P., Acting Assistant Surgeon. Detached from the *Truxton* and ordered to duty with the second torpedo flotilla.

MANCHESTER, J. D., Assistant Surgeon. Appointed assistant surgeon from June 10, 1903.

MORRIS, L., Passed Assistant Surgeon. Detached from the *Puritan* and ordered to the *Florida*.

PARKER, J. B., Medical Director. Retired from active service, from June 20, 1903, under provisions of Section 1454, R. S.

TAYLOR, J. S., Passed Assistant Surgeon. Commissioned passed assistant surgeon from November 8, 1902.

WOODWARD, J. S., Assistant Surgeon. Appointed assistant surgeon from June 10, 1903.

Public Health and Marine Hospital Service:

Official List of the Changes of Station and Duties of Commissioned and Non-commissioned Officers of the Public Health and Marine Hospital Service, for the Seven Days Ending June 18, 1903.

GLENNAN, A. H., Assistant Surgeon-General. Detailed as Assistant surgeon-general in charge of the Domestic Quarantine Division in the Bureau of Public Health and Marine Hospital Service.

STONER, J. B., Surgeon. Granted leave of absence for one month, from June 30.

ROSENAU, M. J., Passed Assistant Surgeon. To proceed to Greenpoint, N. Y., for special temporary duty.

RYDEGGER, J. A., Passed Assistant Surgeon. Relieved from duty at Cincinnati, Ohio, and directed to proceed to Sault Ste. Marie, Mich., as inspector of immigrants.

STRATHE, E. K., Passed Assistant Surgeon. Granted leave of absence for seven days, from June 4, 1903, under paragraph 191 of the regulations.

GRUBBS, S. B., Passed Assistant Surgeon. Bureau telegram of May 13, 1903, granting Passed Assistant Surgeon Grubbs leave of absence for one month, amended so that said leave shall be for one month from May 23d.

DECKER, C. E., Assistant Surgeon. Granted extension of leave of absence, on account of sickness, for twenty-two days, from June 9th.

LORD, C. E. D., Assistant Surgeon. Relieved from duty at Galveston, Texas, and directed to report to medical officer in command at San Francisco Quarantine for assignment to special duty.

SIBREE, H. C., Acting Assistant Surgeon. Granted leave of absence for six days, from June 16th.

CARLTON, C. G., Pharmacist. Granted leave of absence for thirty days, from June 1st.

Boards Convened.

Board convened for the examination of Assistant Surgeon M. K. GWYN, to determine his fitness for promotion to the grade of passed assistant surgeon. Detail for the board: Assistant Surgeon-General L. L. WILLIAMS, chairman; Assistant Surgeon-General W. P. PETTUS; Assistant Surgeon V. G. HEISTER, recorder.

Board convened for the examination of Assistant Surgeon W. C. HOBBS to determine his fitness for promotion to the grade of passed assistant surgeon. Detail for the board: Assistant Surgeon-General L. L. WILLIAMS, chairman; Assistant Surgeon-General W. J. PETTUS; Passed Assistant Surgeon L. E. COFER, recorder.

Births, Marriages and Deaths.*Born.*

HERBST.—In Kansas City, Missouri, on Friday, June 5th, to Dr. and Mrs. Philip Francis Herbst, a son.

Married.

BOYLE—DOSTER.—In Ridley Park, Pennsylvania, on Monday, June 8th, Dr. Morris Parker Boyle and Miss Estelle Doster.

GILES—VANDERBEEK.—In Englewood, N. J., on Thursday, June 18th, Dr. J. Edward Giles and Miss Mary Courtland Vanderbeek.

MOORE—PURDOM.—In Kansas City, Missouri, on Monday, June 1, Dr. Frederick Everett Moore and Miss Hezzis Purdom.

ORELLA—SCHWEITZER.—In San Francisco, California, on Wednesday, June 10th, Dr. Farmin Orella and Miss Albertine Schweitzer.

SANKEY—NEWHARD.—In Lansdowne, Pennsylvania, on Wednesday, June 17th, Dr. Thomas Morton Sankey and Miss Anna S. Newhard.

VAN HORNE—HUNTOON.—In Waterford, Michigan, on Wednesday, June 10th, Dr. James Apthorp Van Horne and Miss Lutie Huntoon.

Died.

ARMSTRONG.—In Atlantic City, N. J., on Thursday, June 11th, Dr. Leon Armstrong, in the fifty-second year of his age.

BOAL.—In Lacon, Illinois, on Friday, June 13th, Dr. Robert Boal, in the ninety-seventh year of his age.

HALSTED.—In New York, N. Y., on Wednesday, June 17th, Dr. John C. Halsted.

HEATH.—In Syracuse, N. Y., on Wednesday, June 10th, Dr. Delos Heath, in the seventy-sixth year of his age.

JONES.—In Jacksonville, Illinois, on Tuesday, June 16th, Dr. Hiram K. Jones, in the eighty-second year of his age.

LOVE.—In New York, N. Y., on Thursday, June 18th, Dr. I. N. Love, in the fifty-fifth year of his age.

LYON.—In Washington, D. C., on Thursday, June 11th, Dr. William A. Lyon.

MAYO.—In Coleman's Falls, Virginia, on Saturday, June 13th, Dr. Littleton Upshur Mayo, in the seventy-eighth year of his age.

SCOTT.—In Lawrence, Massachusetts, on Wednesday, June 10th, Dr. Chester W. Scott, in the seventy-second year of his age.

